

EXPLORING THE ROLE OF PLAY-BASED LEARNING IN SHAPING EARLY LITERACY SKILLS AMONG KINDERGARTEN CHILDREN IN CAMBODIA

By

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A thesis submitted to the BRAC Institute of Educational Development in partial
fulfillment of the requirements for the degree of
Master of Education in Educational Leadership & School Improvement

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Declaration

It is hereby declared that

1. The thesis submitted is my own original work, while completing my degree at BRAC University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through complete and accurate referencing.
3. The thesis does not contain material that has been accepted or submitted for any other degree or diploma at a university or other institution.
4. I have acknowledged all primary sources of help.

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Approval

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Ethics Statement

I, Sumaia Islam Shumi, hereby affirm that the manuscript entitled-

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- This manuscript is my own original work and has not been previously published, submitted, or accepted elsewhere.
- All sources of information, ideas, and data used in this manuscript are fully acknowledged and appropriately cited. Any text that is literally copied has been identified as such by using quote marks and providing suitable references.
- All participants in this research provided informed, voluntary consent to participate.
- The identities of all participants are strictly confidential and have been protected throughout the research process. Personal identifiers have been removed from transcripts and will not be disclosed at any stage of publication or dissemination.
- The study complies with ethical standards for research involving human participants, including respect for autonomy, beneficence, and confidentiality.
- All findings are presented honestly and are appropriately contextualized with reference to previous and current research.

I confirm that I have acted in accordance with the ethical principles and guidelines of academic research and integrity throughout the preparation and conduct of this study.

Abstract

This qualitative study explores the role of play-based learning in developing early literacy skills among kindergarten children in Cambodia. It focuses on how play activities support literacy, drawing on Vygotsky's socio-cultural theory and the idea of emergent literacy. The research also considers teachers' views on using play in literacy lessons, their teaching methods, and the level of student involvement during play. It highlights the challenges teachers face when using play-based methods in their classrooms. Data was collected from kindergarten classrooms in both urban and rural areas of Cambodia through semi-structured interviews with teachers and observations of literacy activities. The study aimed to find common trends, challenges, and opportunities related to play in learning using thematic analysis. The results show that play-based learning improves children's phonological awareness, vocabulary, storytelling, and understanding of print concepts. However, factors such as large class sizes, limited resources, and inadequate teacher professional development make it challenging to use these methods effectively. Teachers said they need more support from their schools, training tailored to their specific context, and teaching materials that reflect their cultural backgrounds. The study emphasizes the importance of policy changes, increased teacher support, and evidence-based approaches to enhance play-based learning as a crucial component of early literacy programs. These findings can help improve early childhood education by addressing systemic challenges and enhancing teacher skills, particularly in resource-constrained settings like Cambodia. The research also adds to wider discussions about fair and developmentally appropriate early literacy practices.

Keywords: Play-based learning; Emergent literacy; Teacher perceptions; Guided play; Low-resource settings.

Dedication

I dedicate this paper to my family, who supported and encouraged me throughout this journey, and to all the respected teachers who tirelessly work to build a cheerful and caring learning environment for our young students.

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List of Acronyms

ECCD	Early Childhood Care and Development
MoEYS	Ministry of Education, Youth and Sports
PSTTC	Preschool Teacher Training Centre
PBL	Play-Based Learning
APA	American Psychological Association
CDA	Child Development Assessment
CNC	Cambodian National Curriculum
ECC	Early Childhood Curriculum
ECE	Early Childhood Education
ELDS	Early Learning and Development Standards
NGO	Non-Governmental Organization
SDG	Sustainable Development Goal
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund

Chapter

Introduction and Background

1.1 Introduction

Early childhood is a crucial time for building literacy skills, which support later academic success and lifelong learning. Play is a key way children enjoy and engage with the world. Numerous studies demonstrate that play is crucial for children's development, helping them navigate various life challenges (Elkind, 2015; Whitebread et al., 2017; Yogman et al., 2018; Zosh et al., 2018). Play also supports cognitive, social, and emotional development (APA Dictionary of Psychology, 2022). Through play, children build important skills in self-regulation, language, math, and social-emotional areas (Copple & Bredekamp, 2009; Sluss, 2005; Meaney et al., 2014). Because of its value for learning, well-known educational theorists like Montessori, Reggio Emilia, and Froebel have supported play as an effective teaching method (Sluss, 2005; Samuelsson & Carlsson, 2008).

Today, education often emphasizes play and hands-on learning, as young children are drawn to active, concrete experiences. In early childhood education, both what is taught and how it is taught matter. Play is a crucial component of learning, enabling students to participate in activities and demonstrate their knowledge (Sluss, 2005). Studies show that teachers and students working together during play helps connect play with learning. Still, these activities need to be planned to meet clear learning goals (Samuelsson & Carlsson, 2008). In organized pre-primary settings, teachers play a crucial role in guiding and supporting children's learning through play, which requires careful planning (The Lego Foundation, 2018). This approach to teaching helps children learn fundamental concepts and develop a positive attitude toward science and math (Henniger, 2012).

To make play-based learning work well in kindergarten, teacher training programs at colleges and universities should include courses on play-based teaching (Pyle & Danniels, 2018). Public schools often face challenges when using play-based methods to meet the needs of students from different backgrounds (Love, 2015). In Cambodia, the pre-primary curriculum considers play a key component of its education system (National Policy on Early Childhood Care and Development, 2010). Over the last decade, Cambodia has made significant progress in early childhood education, and play-based learning is now recognized as a suitable and practical approach to developing literacy skills (Ministry of Education, Youth and Sports, 2018). In this qualitative study, I aimed to gain a deeper understanding of how play-based learning affects early literacy and to learn about the experiences of Cambodian kindergarten teachers in planning and implementing play-based practices and curricula.

This study examines how play-based learning (PBL) contributes to the development of early literacy skills by investigating teachers' perspectives, classroom practices, and the challenges they encounter. The results aim to enhance teacher training, inform more effective education policies, promote equitable early literacy outcomes, and contribute to the global discourse on play-based teaching, particularly in resource-constrained settings. By sharing information about how kindergarten teachers utilize play-based methods, I aim to support changes that enhance the effectiveness of these practices and curricula for young students.

1.2 Research Topic

This research study is titled "Exploring the Role of Play-Based Learning in Shaping Early Literacy Skills among Kindergarten Children in Cambodia." Play is an indispensable element of effective teaching and learning. Play enables children to investigate, explore, experiment, create, and predict

outcomes (UNICEF, 2018). It also plays a crucial role in helping them learn to negotiate, build relationships with peers, and develop self-regulation, self-confidence, and self-motivation (Whitebread et al., 2017). Increasing evidence has connected play to the acquisition of academic skills such as literacy and numeracy (Ferrara et al., 2011; Verdine et al., 2014; Weisberg et al., 2013; Zosh et al., 2014). Consequently, the ECCE (2010) of Cambodia also emphasizes the use of teaching aids and toys for the successful implementation of the curriculum. This study aims to explore the role of play-based activities in fostering early literacy development, explore kindergarten school teachers' perceptions of play pedagogy in literacy and numeracy instruction, examine their classroom practices, and address the challenges they face when implementing play-based methods, as well as students' engagement in play in Cambodian kindergarten classrooms.

1.3 Statement of the Problem

Early childhood represents a critical period for the development of foundational literacy skills, with play widely recognized as an effective medium for fostering cognitive, social, and emotional growth in children (Elkind, 2015; Whitebread et al., 2017). Internationally, play-based learning (PBL) is regarded as a developmentally appropriate and effective approach for enhancing early literacy (Neuman & Roskos, 2005; Weisberg et al., 2013). For play-based literacy instruction to be effective, however, teachers require sufficient training, pedagogical knowledge, and access to appropriate resources (Pyle & Danniels, 2018).

In Cambodia, national education frameworks, including the Early Childhood Care and Development Policy and the Early Learning and Development Standards, officially promote child-centred and play-based approaches in kindergarten classrooms (MoEYS, 2010, 2018). Despite these policies, classroom practice predominantly relies on teacher-directed instruction, rote

memorization, and textbook-driven learning (Chea & Hach, 2020; UNICEF Cambodia, 2022). Recent studies indicate that while teachers acknowledge the value of play, many face challenges in implementation due to limited professional preparation, insufficient learning materials, and overcrowded classrooms (Chea et al., 2025; NCDD & MoEYS, 2018).

A broader research gap exists regarding how Cambodian kindergarten teachers understand and integrate play-based instruction to support children's emergent literacy, as well as how contextual barriers, such as curriculum pressure, resource constraints, and cultural expectations, influence the implementation of PBL across diverse school settings. Although international evidence demonstrates that play supports early literacy development through language-rich interaction, storytelling, and symbolic representation (Bodrova & Leong, 2007; Hirsh-Pasek et al., 2009), limited empirical research has examined how these benefits are realized in Cambodian classrooms.

This study aims to address a critical gap by investigating how Cambodian kindergarten teachers perceive and implement play-based literacy instruction, how children engage with literacy during play, and the barriers that hinder effective practice. Addressing this gap is crucial for informing teacher training, curriculum reform, and policy initiatives aimed at enhancing early literacy outcomes in Cambodia.

1.4 Research Question

This study is guided by three research questions, which intend to explore the role of play-based activities in fostering early literacy development, explore kindergarten school teachers' perceptions of play pedagogy in literacy and numeracy instruction, examine their classroom practices, and address the challenges they face when implementing play-based methods, as well as students' engagement in play in Cambodian kindergarten classrooms.

1. What are the beliefs and practices of Cambodian kindergarten teachers regarding play-based literacy instruction?
2. How do children engage with play-based literacy activities in Cambodian kindergarten classrooms?
3. How do play-based learning strategies contribute to the early literacy development of Cambodian kindergarten children?

1.5 Purpose of the Study

The purpose of this qualitative study is to investigate the role of play-based learning in supporting early literacy development among Cambodian kindergarten children and to explore their engagement in play. This study also examines how teachers implement play-based learning strategies and curricula in kindergarten classrooms, identifying the challenges they encounter in doing so. Gaining insight into both the implementation of these practices and the barriers encountered can enhance teachers' awareness of their current approaches and their future goals, once these obstacles are addressed. I highlighted the specific implementation practices and challenges that were overlooked in professional development sessions and are absent in the existing literature on play-based learning in Cambodian kindergartens. A deeper understanding of teachers' experiences with instructional methods and strategies for young learners could help school leaders and administrators create and implement effective play-based learning practices that address the academic needs of kindergarten students, ultimately improving teachers' lesson planning and delivery.

1.6 Significance of the Study

This study holds significance on multiple levels:

Educational Practice: This will provide practical insights for kindergarten teachers and academic practitioners on integrating play-based strategies to foster early literacy skills effectively. The findings will help inform teacher training and classroom practices by highlighting contextually relevant methods and materials.

Policy Development: This research will support policymakers and curriculum developers by providing qualitative evidence of the effectiveness and challenges of play-based learning within Cambodia's early childhood education system. This process can guide future revisions of the national curriculum and professional development programs.

Equity and Inclusion: By examining both urban and rural settings, the study will identify disparities and context-specific needs, contributing to more equitable literacy outcomes across diverse Cambodian communities.

Global Relevance: This study contributes to the worldwide body of knowledge on early literacy and play-based pedagogy, providing perspectives from a low-resource, non-Western context that is often overlooked in early childhood research.

Alignment with SDGs and National Goals: This research aligns with Sustainable Development Goal 4 (Quality Education), specifically targeting early childhood development and inclusive, equitable education. It also supports Cambodia's Education Strategic Plan (2019–2023), which prioritizes improved learning outcomes and holistic development in early years through context-relevant pedagogy.

In summary, this study will serve as a valuable resource for enhancing the quality, inclusivity, and effectiveness of early childhood education in Cambodia while contributing meaningful insights to the global discourse on play-based learning.

Chapter 2

Literature Review and Conceptual Framework

2.1 Introduction

In this chapter, I reviewed various types of literature, including books, articles, and documents about play pedagogy. This includes a review of the literature regarding teachers' perceptions of play pedagogy in the context of teaching literacy and numeracy, along with insights into classroom practices and relevant theories. I have also reviewed the literature on the role of play-based learning in supporting early literacy development among kindergarten children and on children's engagement in play. I conducted this literature review to support my ongoing research, which involves developing a conceptual framework, creating an interview guide, and writing discussions. The chapter is organized into several sections: Play, Play Pedagogy, Play-Related Theories, Kindergarten Education in Cambodia, Role of Play-based learning, Teachers' Perceptions of Play Pedagogy in Teaching Literacy, Children's Engagement in Play, Teaching Literacy and Numeracy through Play Pedagogy in Kindergarten, and the Conceptual Framework.

2.2 Play

Play is a concept that is challenging to define. Its definition is often vague, elusive, and subject to debate (Sluss, 2005). Friedrich Fröbel, the founder of kindergarten, was one of the first to define play, describing it as the pinnacle of human development through which children can express their innermost thoughts (Fröbel, 1887, p. 55). According to Vygotsky's perspective, play involves

make-believe scenarios in which children create imaginary situations, engage in dialogue, act out roles, and adhere to role-specific rules (Bodrova & Leong, 2015). Jean Piaget, another key theorist, proposed that play cannot be easily identified as a distinct behavior; instead, he viewed it as a manifestation of cognitive development and intelligence, where children balance assimilation (integrating new information) and accommodation (adjusting existing schemas to incorporate new experiences) (Piaget, 1999, p. 87). He emphasized the dominance of assimilation during play, as children seek out similarities and integrate new events and objects into their current mental frameworks (Nicolopoulou, 1993). John Huizinga (1955) defined play as a fundamental cultural activity, which was further elaborated by Rubin, Fein, and Vandenberg (1983), who framed play as observable behavior and a context for activity. They categorized play with the following characteristics:

- I. It is voluntary
- II. It requires active participation
- III. It is symbolic
- IV. It is free from external constraints
- V. It emphasizes actions over outcomes
- VI. It is enjoyable

However, there is still considerable disagreement in the literature regarding the specific traits or signs of play (Zosh et al., 2017). Despite this, Mardell et al. (2016) have identified indicators of the game that are frequently seen in the engagement of play: delight (which encompasses feelings such as excitement, joy, satisfaction, inspiration, anticipation, pride, and belonging); wonder (relating to feelings of pleasure, novelty, surprise, and challenge); and choice (which involves a sense of empowerment, autonomy, ownership, spontaneity, and intrinsic motivation).

Play-based learning can take many forms, including free play, guided play, and intentional teaching through play (Bredekamp & Copple, 2014). In free play, children have the freedom to choose what to play and how, without interference or direction from adults. Free play offers children opportunities to develop social, language, and emotional regulation skills, while also allowing them to explore their interests and express their creativity (Bergen, 2002).

Guided play is a more structured form of play in which adults provide some direction or guidance to children's play. Guided play can be used to introduce new concepts or skills, or to support children's learning in specific areas, such as literacy, numeracy, or science (Christie & Roskos, 2013).

Intentional teaching through play involves using it as a deliberate, purposeful teaching strategy. In intentional teaching through play, adults actively engage in play with children, using play activities to teach specific skills or concepts (Bredekamp & Copple, 2014). Intentional teaching through play can be particularly effective in promoting children's language development, as adults can use play activities to model language use and provide opportunities for children to practice their language skills (Lillard et al., 2013). Recently, the understanding of play has evolved to view it as a spectrum or continuum encompassing child-directed, adult-directed, and adult-guided activities (Parker et al., 2022).

2.3 Play Pedagogy

To begin with, play is a natural and essential part of childhood. From building with blocks to pretending to be superheroes, children engage in play every day. However, play is not just a fun and entertaining activity; it is also a powerful tool for learning and development. Research has shown that play-based learning can have a significant impact on children's cognitive, social-

emotional, language, and physical development (Bergen, 2002; Christie & Roskos, 2013). By engaging in play-based learning activities, children are better equipped to learn and retain new information, develop problem-solving skills, foster strong relationships with their peers, and cultivate a positive sense of self (Bodrova & Leong, 2012; Lillard et al., 2013).

Play pedagogy is commonly associated with concepts such as 'play-based learning', 'playful learning', and 'intentional teaching' (Parker et al., 2022; Fler, 2018). A key figure in this field, Daniel Elkonin, who was a colleague of Vygotsky, developed a comprehensive theory of play that laid the groundwork for play pedagogy in preschool and kindergarten settings. Elkonin emphasized that the fundamental aspects of play in early childhood include role-playing, pretend play, the use of props, and relationships among playmates (Bodrova & Leong, 2015). Many countries, including Australia, incorporate play pedagogy into their pre-primary curricula, where it is seen as a contextual framework that allows children to organize and understand their social environment through active participation and interaction with objects (Department of Education, Employment and Workplace Relations [DEEWR], 2009). In Singapore, the play pedagogy approach is viewed as a means for children to engage with and explore their surrounding world (Ministry of Education, 2013). A comprehensive definition of play pedagogy should consider contemporary experiences of play, the interactions between adults and children during play, and the learning outcomes that result from these interactions. Research has identified five key characteristics of play pedagogy: it is meaningful, actively engaging, joyful, iterative, and socially interactive (Parker et al., 2022).

2.4 Children's Engagement in Play and the Role of Play-based learning in Early Childhood Education

Play-based learning (PBL) is a highly effective and developmentally appropriate approach that nurtures children's overall growth across cognitive, social-emotional, language, and physical domains (Bodrova & Leong, 2012; Bredekamp & Copple, 2014). This approach invites children to explore, experiment, and collaborate, helping them develop essential abilities such as problem-solving, creativity, self-regulation, and communication (Bergen, 2002; Christie & Roskos, 2013; Lillard et al., 2013).

Cognitive Development: Engaging in hands-on PBL activities boosts children's problem-solving, critical thinking, memory, attention, and early literacy skills (Christie & Roskos, 2013; Lillard et al., 2013). It also enhances language and print awareness, which lays the groundwork for strong vocabulary and phonological skills essential for reading (Bodrova & Leong, 2012).

Social-Emotional Development: PBL fosters cooperation, empathy, and self-control as children participate in shared activities and meaningful interactions (Bergen, 2002; Lillard et al., 2013). This approach helps build their confidence, resilience, and a strong sense of community (Christie & Roskos, 2013).

Language Development: Playful environments provide children with rich language experiences that help them expand their vocabulary, communication skills, and storytelling abilities (Göncü & Gaskins, 2013; Christie & Roskos, 2013). Exposure to diverse cultural and linguistic backgrounds further develops their multilingual and multicultural skills (Lillard et al., 2013).

Physical Development: Active play enhances gross and fine motor skills, coordination, and sensory integration, all of which contribute to children's overall health and well-being (Pica, 2012; Pellegrini, 2012; Bodrova & Leong, 2012).

Equity and Inclusion: PBL is particularly beneficial for disadvantaged and special-needs children, providing inclusive, engaging, and low-cost learning opportunities that help bridge access and outcome gaps (Christie & Roskos, 2013; Bredekamp & Copple, 2014).

By incorporating play into their teaching strategies, early childhood educators can effectively support children's cognitive, social-emotional, language, and physical development in enjoyable, meaningful, and culturally relevant ways (Bodrova & Leong, 2012; Lillard et al., 2013). Moreover, play-based mathematical education significantly enhances the development of personal and social skills, language abilities, and both fine and gross motor skills among young learners.

2.5 Theories Related to Play Pedagogy

Children learn best through the natural process of inquiry that happens during play (Whitebread, 2012). A long time ago, John Dewey suggested that the exploration that takes place in play is closely related to the scientific inquiry process (Dewey, 1910). Vygotsky emphasized that play has a significant impact on various aspects of a child's development, including language skills, cognitive abilities, self-regulation, and self-awareness (Parker, Thomsen, & Berry, 2022). Meanwhile, Piaget highlighted that children's intellectual growth is expressed through their play (Sluss, 2005).

In addition to these foundational theories, Marilyn Fleer's research-based approach to teaching STEM (Science, Technology, Engineering, and Mathematics) through imaginative play offers a modern perspective. Her "conceptual play world," rooted in Vygotsky's sociocultural theory, finds that engaging in play can significantly enhance girls' interest in STEM education and motivate all children, especially those from disadvantaged backgrounds, to learn and develop better problem-solving skills (Fleer's Conceptual PlayWorld, 2021).

Next, I will discuss various theories related to play pedagogy and a research-based model to highlight their influence on the use of play in educational settings.

2.5.1 Cultural-historical Concept of Play by Vygotsky

According to Vygotsky, play is the most important activity for preschool-aged children, providing a meaningful way for them to connect with the world. During play, children create imaginary scenarios that reflect real-life situations (Vygotsky, 1967). This process promotes what he called the "zone of proximal development," where children often perform beyond their usual abilities. When children engage in pretend play, they explore actions they might not be able to accomplish in real life (Sluss, 2005).

By crafting imaginary situations with various play objects, children transform these items from their usual meanings into something new and concrete. Distinguishing between imaginary play and reality helps them to enhance their ability to manage their actions, which in turn nurtures their self-regulation and responsibility (Berk, 2018). Vygotsky argued that play is essential for early childhood development, as it enables children to tackle challenging skills and cultural understandings, ultimately enhancing their self-regulation abilities (Berk, 2018).

2.5.2 Piaget's Stages of Play and Children's Cognitive Development

Piaget's theory emphasizes that children's play is a reflection of their cognitive development (Johnson, Christie & Wardle, 2005). He outlines four stages of play (Sluss, 2005):

1. **Functional Play:** In this initial stage, young children explore objects through their senses, engaging with them through touch, sight, hearing, and other sensory modalities. They

engage in activities that require physical movement, which aids their physical and cognitive growth. This type of play helps children meaningfully connect with the world around them.

2. **Constructive Play:** Here, children begin to use materials like blocks, Legos, or crafting supplies in more intentional ways. For instance, rather than just banging or tossing blocks, they begin to stack and build, which encourages creativity and problem-solving.
3. **Symbolic/Fantasy Play:** In this stage, kids let their imaginations run wild, engaging in role-playing and make-believe scenarios. This type of play allows them to bring their imaginative ideas into a more tangible form.
4. **Games with Rules:** The final stage involves understanding and adhering to different rules during play. This aspect teaches children about cooperation and competition, essential skills for social interaction.

Each stage plays a crucial role in helping children develop their cognitive and social abilities as they grow.

2.5.3 Fler's Conceptual PlayWorld

Formalizing early childhood education often raises concerns about limiting children's playtime. Marilyn Fler's Conceptual PlayWorld framework addresses this by creating practical situations that allow play and learning to thrive together. Fler emphasizes that children are naturally driven to explore both tangible objects and imaginative concepts that mirror real-life experiences. By moving in and out of these imaginary scenarios, children not only enhance their play but also build essential skills by navigating between reality and imagination (Fler, 2018). She believes that imagination plays a crucial role in linking play with learning, suggesting that play-based programs that encourage creativity can significantly boost children's abilities, particularly in literacy and numeracy (Fler, 2011).

Fleer outlines five key steps to create a conceptual playworld that facilitates learning STEM concepts. Here is a brief overview of these steps:

1. **Selecting a Story:** Choose a complex and engaging narrative with multiple characters to capture children's attention.
2. **Designing a Space:** Utilize a variety of materials to create an environment that reflects the chosen story. Educators should adapt this space to align with their lessons.
3. **Entering and Exiting the PlayWorld:** Educators can use magic wands as a fun tool to spark children's imagination, signaling when they are stepping into or out of the playworld.
4. **Planning the Problem to Be Solved:** Introduce a challenge that children will tackle within the conceptual play world.
5. **Defining the Educator's Role:** Teachers can either join in as play partners who collaborate with the children to solve the problem, or they can take on a guiding role that helps steer the children toward finding solutions.

This approach not only makes learning enjoyable but also deeply engages children in the educational process.

2.6 Current Scenario of Play-Based Learning in Cambodia

In Cambodia, play-based learning is recognized as a vital educational approach, particularly for young children. The Ministry of Education, Youth, and Sport (MoEYS) has implemented national policies, such as the Early Childhood Care and Development (ECCD) policy and the Education Strategic Plan (2019–2023), which promote a child-focused approach to learning. However, a significant disparity remains between these policies and what actually occurs in classrooms (MoEYS, 2019).

Recent reports indicate that many kindergarten classrooms in Cambodia are predominantly teacher-centered, emphasizing rote memorization and providing few opportunities for children to engage in exploratory or imaginative play (UNESCO, 2021; Save the Children, 2020; Bennet & Tayler, 2006). Many educators lack the necessary training and resources to implement play-based strategies effectively. This challenge is compounded in rural areas, where classrooms are often overcrowded, poorly equipped, and constrained by strict curriculum requirements (World Bank, 2018; Rao & Sun, 2010; Penn, 2008).

Despite these obstacles, pilot programs led by NGOs like Save the Children, Plan International, and Room to Read have shown promising results by integrating play-based methods. These initiatives focus on building teachers' capacities, utilizing affordable learning materials, and involving the community in recognizing play as a vital part of education. Evaluations indicate that these programs have led to improved vocabulary development, enhanced social interactions, and increased enthusiasm for learning among children (Plan International Cambodia, 2021; Room to Read, 2019; Woodhead, 2006).

However, the broader implementation of play-based learning across the country remains limited. A 2022 report from UNICEF Cambodia highlights that while 75% of pre-primary teachers are aware of the importance of learning through play, only about 35% regularly incorporate it into their literacy instruction. Some of the challenges include inadequate teacher training, high student-to-teacher ratios, and a disconnection between national curriculum standards and playful teaching methods (UNICEF Cambodia, 2022; Chea & Hach, 2020; Tucker, 2014).

Cultural attitudes also play a significant role in this landscape. Traditional beliefs about education in Cambodia often emphasize discipline and structure, which can lead to viewing play as un-

academic (Ng & Rao, 2010). Teachers who attempt to adopt more playful approaches may face pushback from parents or school administrators who equate learning with silence, order, and test preparation (Rao et al., 2003; Wood, 2013).

The current situation underscores the need for further qualitative research into how educators in Cambodia practice and perceive play-based learning. By exploring teachers' experiences and children's engagement in play-centered classrooms, this study seeks to bridge the gap between the theoretical potential of play-based learning and its practical application in schools.

2.7 Teachers' Perceptions of Play Pedagogy in Teaching Literacy and Numeracy

Play-based learning is particularly suited for preschoolers because it taps into their natural curiosity. This approach is valuable, as it fosters inclusion, supports holistic development, and enhances student engagement (Parker, Thomsen, & Berry, 2022). However, perceptions of play-based learning can vary significantly due to social and cultural factors, which shape educators' beliefs and values about the role of play in education.

In Japan, for instance, play-based learning is highly esteemed among young children. Japanese teachers prioritize social skills over academic performance, viewing play as a vital means of gaining knowledge through interaction. This perspective aligns with their focus on cultivating a caring, community-oriented environment.

In contrast, many educators in the United States view play as the most effective method for children to learn, considering it a pathway for engaging in collaborative, intellectual, and stimulating activities. Meanwhile, Swedish teachers associate play-based learning with creativity

and opportunities, regarding it as an essential aspect of a child's development. They believe that play serves as the foundation for learning mathematics.

Similarly, in Taiwan, play is recognized as a crucial element in early childhood education, influenced by Western educational philosophies such as those of Piaget, Montessori, Froebel, and Reggio Emilia (Izumi & Taylor et al., 2014). Mathematics educators also see play as an effective bridge for learning math concepts (Meaney et al., 2014). A study conducted by Holton et al. (2001) emphasizes the importance of incorporating play in math instruction, highlighting it as a necessary part of the learning process that encourages creativity and experimentation. Furthermore, play pedagogy helps children develop an understanding of quantities and spatial relationships in their world (Oers, 2014).

2.8 Teaching Literacy and Numeracy through Play Pedagogy in Kindergarten Classrooms

Play-based learning practices have been described as an instructional method for academic learning in which students collaborate, explore, experiment, solve problems, and engage with one another (Mraz et al., 2016). Play creates a natural and engaging environment for exploring language, symbols, and math concepts. It fosters early literacy and numeracy skills, especially when teachers mix clear objectives with opportunities for children to take charge of their own learning (Hirsh-Pasek et al., 2009; Bodrova & Leong, 2007). Guided play has been shown to produce significant cognitive benefits and can easily adapt to settings with fewer resources (Weisberg et al., 2013; Christie & Roskos, 2006; UNESCO, 2021).

Teachers play a vital role as creators of enriching environments, mentors, and keen observers. They design spaces filled with print and math materials, ask open-ended questions like, "Can you

tell me about your story?” or “How many more do you need?”, and track student progress through notes, checklists, and portfolios (Bodrova & Leong, 2007; Owocki & Goodman, 2002; Pyle & Danniels, 2017).

There are several key principles for effective learning. It is essential to strike a balance between free exploration and guided play (Weisberg et al., 2013). Learning needs to incorporate reading and math into everyday activities, such as shopping, cooking, and role-playing, and support vocabulary development, reshape conversations, and extend what children say (Dickinson et al., 2003; Roskos et al., 2003). Moreover, there is a need to revisit concepts across different play scenarios and to use everyday objects to promote fairness and accessibility, thereby reinforcing learning (Neuman & Roskos, 2005; Christie & Roskos, 2006).

Teachers can set up various corners (e.g., a literacy corner, a math table, a dramatic play area, a construction zone, and an outdoor activities area) in the classroom and arrange engaging activities (e.g., story and pretend play, sound or number hunts, puzzles, and bookmaking) to facilitate teaching. They can have a literacy corner filled with books, puppets, and recycled paper for creative expression, or utilize various resources, such as stones, bottle caps, and sorting trays, for hands-on counting and sorting activities. Students can also engage in various activities, such as bringing a book to life by acting it out, which helps develop narrative skills (Dickinson et al., 2003; Roskos et al., 2003), or use play money for counting and addition during a fun shopping experience (Christie & Roskos, 2006).

2.9 Challenges and Solutions in Implementing Play-based Strategies

Play-based strategies can be challenging to implement due to limited resources, time constraints, and educators' limited knowledge and experience. However, several solutions can be implemented to overcome these challenges.

Implementing play-based learning (PBL) comes with significant hurdles, including limited resources, tight schedules, and inadequate teacher training. Many parents and educators tend to emphasize academic skills over play, which often leads to a lack of enthusiasm for PBL (Blakemore & Choudhury, 2006). The scarcity of proper materials can limit compelling play experiences (Pyle & Bigelow, 2015), and without sufficient professional development, teachers may feel ill-prepared to lead these activities (Barbour & Barbour, 2014). Additionally, high-stakes testing and strict academic standards often sideline PBL (American Academy of Pediatrics, 2018).

To overcome these challenges, providing targeted professional development can help teachers gain the skills and confidence needed to implement PBL successfully (McNay, 2015; Copple & Bredekamp, 2009). Ensuring access to age-appropriate materials and setting aside specific time and space for play are crucial for creating valuable play opportunities (Bergen & Cosco, 2015). Involving families through home-school activities can help connect different learning environments (Bowman et al., 2001; Clements & Sarama, 2008). It is also essential to address broader issues, such as outdated policies and cultural biases, to foster an inclusive, culturally responsive approach (Wong, 2015).

For PBL to be successful, collaboration among educators, families, and policymakers is essential to secure the resources, training, and support needed. Balancing play with academic objectives can

significantly enhance children's overall development and readiness for school (American Academy of Pediatrics, 2018).

2.10 Summary

Research indicates that play-based learning (PBL) fosters early literacy by enhancing children's language, cognitive, social, and emotional development (Bodrova & Leong, 2012; Hirsh-Pasek et al., 2009). Theorists such as Froebel, Piaget, and Vygotsky emphasize play as a foundation for symbolic thinking, meaning-making, and intellectual growth. Contemporary studies highlight that literacy develops effectively when play is purposeful, interactive, and guided by teachers rather than fully unstructured (Pyle & Danniels, 2017; Weisberg et al., 2013).

Although Cambodia's early education policies advocate play-based pedagogy (MoEYS, 2018), classroom practices remain largely rote and teacher-centered due to limited training, resources, and overcrowded classrooms (Chea & Hach, 2020; UNICEF, 2022). There is a clear research gap regarding how Cambodian teachers perceive, implement, and experience PBL for literacy, especially in low-resource contexts. This study addresses this gap.

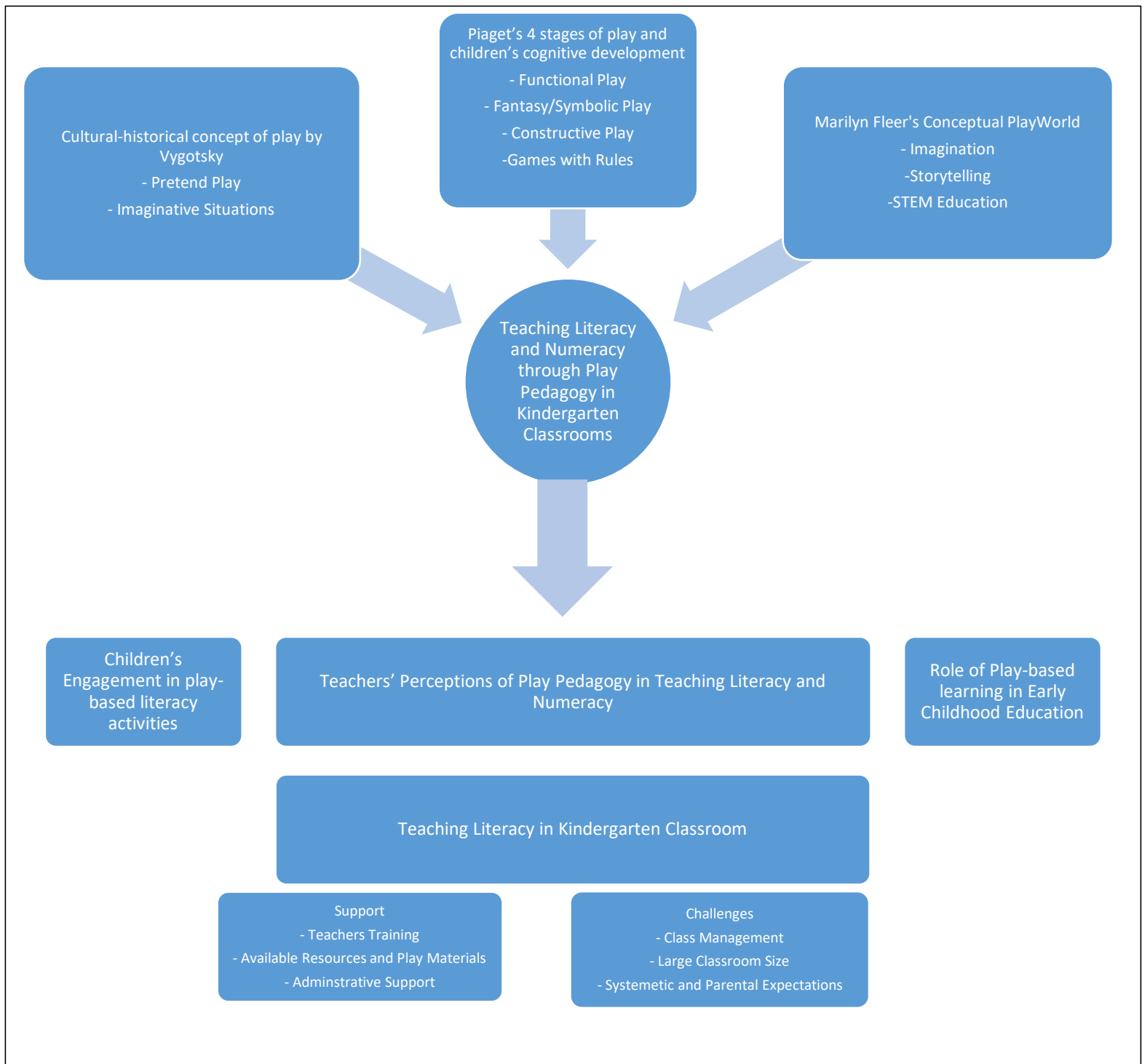
2.11 Conceptual Framework

The literature review guides the conceptual framework of this study. From existing literature, teachers' perceptions of play pedagogy in teaching literacy and classroom practice are found. Research suggests that teachers hold specific views on the use of play as a teaching method and its impact on classroom practices. Renowned figures in psychology and education, such as Vygotsky, Piaget, and Fler, have recognized that various forms of play can effectively foster skills like problem-solving, reasoning, and understanding STEM concepts (Sluss, 2005; Fler, 2018). According to Vygotsky, play is the most critical activity for preschool-aged children, serving as a

meaningful way for them to engage with the world. During play, children create imaginary scenarios that mirror real-life situations (Vygotsky, 1967). Meanwhile, Piaget's theory emphasizes that children's play reflects their cognitive development (Johnson, Christie & Wardle, 2005).

Figure 1

The conceptual framework for kindergarten teachers' perceptions and classroom practice of play pedagogy in teaching Literacy-



Chapter 3

Methodology

3.1 Overview

This chapter outlines the research design for investigating how play-based learning strategies impact children's early literacy development, how children engage with play-based literacy activities in Cambodian kindergarten classrooms, and teachers' perceptions of play pedagogy, classroom practices, and scope. The following sections discuss the research approach, sample and sample size, sampling technique, data collection methods, analysis, study limitations, ethical considerations, and trustworthiness.

3.2 Research Approach

The study employs a qualitative case study approach because this method enables us to grasp issues from a fundamental and in-depth perspective, leading to a more grounded understanding of the phenomenon (Creswell & Puth, 2017). To address the research concern, I conducted my study in a natural setting to gather comprehensive data. In doing so, I chose kindergarten classrooms in Cambodian schools, where I found teachers using play pedagogy in a natural setting. Additionally, I selected the research site to gather multiple forms of data for triangulation.

3.3 Rationale for Choosing the Qualitative Research Approach

The study employs a qualitative approach because this type of information enables us to grasp issues from a fundamental, in-depth perspective, which helps us develop a detailed understanding of the issue (Creswell & Poth, 2018, p. 84). The present research also aimed to gain an in-depth understanding of how play-based learning strategies contribute to children's early literacy development, how children engage with play-based literacy activities in Cambodian kindergarten

classrooms, and teachers' perceptions, support, and challenges regarding play pedagogy in teaching. The research questions of this study aimed to explore teachers' perceptions and practices of play pedagogy in kindergarten classrooms, which demands an in-depth understanding of teachers and their context. Qualitative research is conducted in a natural setting, where investigators attempt to make sense of phenomena by gathering intensive information through in-depth interviews with participants (Creswell & Poth, 2018). This is why the study employed a qualitative approach, administering one-on-one interviews with kindergarten teachers to gain an in-depth understanding of their perceptions of play pedagogy in teaching. Additionally, classroom observation provided insight into classroom practices in play pedagogy and ways students engage in play-based literacy activities.

3.4 Research Site

A qualitative investigation often requires data collected in natural settings to thoroughly understand participants' experiences. In a qualitative study, the inquirer intentionally samples participants and sites to gather in-depth information about the research problem (Creswell & Poth, 2018). The present inquiry was conducted in kindergarten schools in Cambodia. The reason behind choosing the site was familiarity with the context of the schools. I chose three schools: one in the capital and two provincial schools. The teacher-student ratio is on average 1:25-30. I have some acquaintances in those schools who helped me with access and data collection. These assisted me in getting information-rich data. Based on the interviews and class observations, materials, resources, and training are more accessible for urban schools than for rural areas.

3.5 Sample and Sampling Procedure

I employed purposive sampling for data collection to obtain information-rich data. In qualitative inquiry, researchers aim to gain a comprehensive understanding of the phenomenon. In doing so, qualitative researchers select samples that provide thorough information (Merriam & Grenier, 2019).

Kindergarten school teachers and students participated in this qualitative inquiry. Also, the kindergarten classes have been observed to explore the scope of play pedagogy. There were two criteria for choosing these schools: location and accessibility. The criteria for selecting teachers were that they must be regular kindergarten teachers, and the criteria for selecting students were based on their age. Teachers' perception of play pedagogy has been explored through interviews.

A total of 20 participants, including five kindergarten teachers, were interviewed, and 15 kindergarten students were observed in this investigation. Additionally, five classrooms were observed, including those of the 15 students from two of the interviewee teachers. Kindergarten school teachers were purposefully chosen since they are the best to inform the current practice of classroom teaching and students' engagement in play-based literacy activities. Furthermore, classroom observations were required to understand the activities that utilize play pedagogy in teaching, students' engagement in play, the scope, and the challenges of employing play pedagogy.

Table 1

Sample and Sample Size

Participants	Female	Male	Total
Kindergarten teachers	4	1	5
Kindergarten students	8	7	15
Total	12	8	20

3.6 Data Collection Methods

In data collection, qualitative research relies on multiple data sources to build common themes. Themes derived from data are constantly being checked in inductive reasoning (Creswell & Poth, 2018). The current study also attempted to gather data through interviews with teachers and observations of their classes to explore teachers' perceptions of employing play pedagogy in teaching, as well as the support and challenges they confront in this regard. Additionally, data was gathered by observing students' participation in play-based literacy activities to understand how students engage in these activities and the impact of play-based learning strategies on the early literacy development of Cambodian kindergarten children.

3.6.1 In-depth interviews with teachers

One-on-one interviews were conducted over the phone to get data through social interaction, where interviewees unfold their lived experiences. Researchers get participants' viewpoints and uncover the meaning attached to their experiences through interview (Creswell & Ploth, 2018). For this reason, I chose to do one-on-one interviews over the phone. I explored the kindergarten teachers' interpretation and their viewpoint of play pedagogy in teaching based on their classroom practices. I sought to understand how they explain their support and challenges from their classroom experiences through interviews. Five kindergarten teachers participated in one-on-one phone interviews, and their classrooms were also observed. In doing so, I developed an interview guide for in-depth interviews. The interview guide was created using a hybrid approach. First, I studied the established theories of socio-cultural learning (Vygotsky, 1978) and emergent literacy (Whitehurst & Lonigan, 1998). Second, I reviewed prior qualitative studies of play-based learning (e.g., Braun & Clarke, 2006; Christie & Roskos, 2006; Pyle & Danniels, 2017; Karim et al., 2025)

and adapted items and themes from them based on my research questions. Third, it was contextualized using Cambodian policy documents and NGO reports (MoEYS, 2019; UNICEF Cambodia, 2022) to ensure cultural relevance. The guide was then pilot tested to ensure clarity and appropriateness.

The teachers' interview guide was divided into two parts: Part 1 includes demographic information about the teachers, and Part 2 incorporates open-ended questions regarding the teachers' perceptions, classroom practices, opportunities, and challenges. The demographic information consisted of teachers' age, gender, educational qualifications, professional training/degree, training in play pedagogy, and teaching experience. In part 2, 18 open-ended questions were pre-planned based on three research questions. The interview guide was focused on three areas-

(i) Teachers' beliefs about play-based learning and early literacy in Cambodia. Sample questions are like: *What do you mean by 'play pedagogy' in your class? / What is play pedagogy? What role do you believe play has in developing early literacy skills?*

(ii) Implementation of pedagogical strategies and practices for play-based literacy. Sample questions are: *What types of play activities do you use to support children's literacy development? Could you describe a successful example where play led to noticeable improvements in a child's literacy skills? (Any specific example from the classroom).*

Moreover, (iii) contextual and systemic factors related to play pedagogy. Examples of questions are: *What challenges do you face when using play-based learning to promote early literacy? How does the Cambodian national curriculum support or limit play-based learning for literacy?*

Moreover, some probing questions were posed to get detailed information. For example, *could you provide an example? Can you explain it more?*

At the end of the interview, participants were asked if they would like to provide any additional information and if they had any questions.

3.6.2 Classroom observation

Observation is a primary instrument for collecting qualitative data, grounded in research purposes and questions. Through observation, a researcher may seek a physical setting, participants, along with their interactions and conversations (Creswell & Ploeth, 2018). In this study, I also did classroom observation to address three of my research questions. Classroom observation was conducted to investigate the procedures teachers use to incorporate play into their teaching. Kindergarten classroom activities follow a routine to conduct classes, with literacy and numeracy occupying the most significant portion. The allocated time for teaching is 45 minutes in their daily routine. On average, the class size was 25. Ten kindergarten classes were observed in three different kindergarten schools. Each classroom was observed twice. Three topics —concepts of numbers & counting (numbers 1-10), phonics (sounds of letters), and storytelling—were taught while observing the classroom activities. I followed the process of employing play pedagogy in the classroom. For the observational protocol, I prepared an observation checklist to document the implementation of play-based literacy in the school, including its opportunities and challenges. For example, the environment and materials (such as literacy-rich, culturally relevant play materials) are crucial. Types of Play-Based Literacy Activities (plays implemented in the classroom) are also important. Additionally, the teacher's role, interaction, child engagement, and

behavior (including students' attention and any unwanted behavior) are key factors. I also kept a space for special notes (if any) in the observational protocol.

3.7 Data Collection Procedure

To investigate the research problem, I conducted interviews with kindergarten school teachers, both in person (with two teachers) and over the phone (with three teachers). The telephone interview is one approach in qualitative research to elicit participants' views and opinions (Creswell & Creswell, 2018). Apart from this, it provides researchers access and flexibility (Block & Erskine, 2012). As a full-time professional, I found it challenging to conduct in-person interviews for all teachers while managing participants' schedules. Hence, I found telephone interviews feasible for my data collection. Since the teachers gave me their time for the interview, I had the flexibility to maintain their schedule due to the telephone interview. Before calling the teachers for the interview, I pre-scheduled the interview time and sent them the consent letters via email. I called the interviewee and explained the interview procedure and the purpose of my research. I asked about their overall well-being, e.g., 'How are you? And your family?' for ice breaking. I then began the interview by asking about their demographic information. After that, I asked questions about play pedagogy following the interview guide. However, when asking the questions, I did so in a less formal manner to make the interview more natural and conversational. For example, I asked, 'What do you understand by learning through play?' instead of 'What do you mean by 'play pedagogy' in kindergarten class?' The duration of each interview was 45 minutes on average. After conducting their in-depth interviews, the respective teachers' classes were also observed. In doing so, I also sent them a written consent letter.

3.8 Data Analysis

Often, data analysis is synonymous with the approach of text and image analysis in a qualitative study. However, Data analysis is more than that. It involves preparing and organizing data, developing themes through coding, and finally representing the findings (Creswell & Poth, 2018). I conducted an inductive thematic analysis to identify relevant themes in the data. I followed the steps outlined by Braun and Clarke (2006) to derive themes.

1. Familiarize with the data: First, I thoroughly read and re-read the transcriptions to give a deep dive into the data. Key information related to the research questions was highlighted and extracted for analysis. This included ways in which play contributes to early literacy development, teachers' beliefs, specific examples of classroom practices, methods by which children engage in play, identified challenges, and professional recommendations.

2. Generate initial codes: The extracted data was then sorted and categorized into the four themes directly corresponding to the research questions. This involved coding segments of the text with a specific theme to ensure all relevant information was captured for each question. I systematically organized data in this phase. I used colors to highlight the small chunks of information from the transcript, linking them to my research questions. In doing so, I used color coding on the hard copies of the transcripts and gathered them under specific codes. For example-

Table 2

Generate initial codes

Interview extract	Codes
<i>Students of kindergarten are 4+. Children of this age tend to prefer playing over learning. Hence, our teacher's guide includes many activities to teach literacy. So, play is a big part of my approach, and I teach them through play in a joyful and meaningful environment. This not only makes them happy and more open to learn, but it also builds their confidence, social skills, and creativity.'</i> (T4)	Main approach Natural setting Cheerful Meaningful Cherished activity Active participation Attentive Easy to learn
<i>I am familiar with PBL as it is a key component of my teaching. I usually use play to create a meaningful learning experience, as this helps children be more attentive and retain more concepts. Especially during pretend play, they became more curious and enthusiastic.'</i> (T5)	Engaging Resources Social and Collaborative Types of play
<i>Children always love to play. I have 23 children in my class. Every day, they have 15 minutes of structured play and free play in the afternoon, which allows them to use vocabulary more naturally and creatively. Each one of them enjoys and stays more engaged without even realizing they develop listening and speaking skills.'</i> (T2)	
<i>Everyone Likes to sing, and it helps them remember more easily. I teach one letter for the whole week with different materials like toys, alphabet blocks, and real-life materials (sand, play dough).'</i> (T1)	

3. Search for sub-themes: I separated the codes into broader sub-themes. I scrutinized the codes and organized them by the specific sub-themes. For example-

Table 3

Search for sub-themes

Codes	Sub-themes
Main approach Natural setting	Play pedagogy is regarded as the key approach for learning.
Meaningful Cherished activity Cheerful	Play pedagogy is regarded as a meaningful and joyful activity.
Active participation Engaging	Play pedagogy is regarded as an engaging and active participation strategy.
Attentive Easy to learn	Play pedagogy is regarded as an effective method for teaching and learning.

4. Review the sub-themes: I jotted down all the data associated with specific sub-themes to make sure the data represented the sub-themes accurately. Then I combined them into the themes. In doing so, I rechecked all the sub-themes to categorize them under the themes that were aligned with the research questions. For Example-

Table 4

Review the sub-themes

Codes	Sub-themes	Themes
Main approach Natural setting	Play pedagogy is regarded as the key approach for learning.	Teachers' perceptions of play pedagogy in teaching

5. Define themes: I refined themes to check that it is expressing the exact meaning. For example, I examined the theme of teachers' perceptions. The theme does not articulate the perception of what? Hence, I refined the theme as follows: Teachers' perceptions of play pedagogy in teaching.

Next, I explained what the theme means and rechecked the alignment of the sub-themes. Play pedagogy is regarded as a joyful activity.

6. Write-up: Finally, I wrote the themes in the result and analysis sections of the report.

3.9 Ethical Issues and Concerns

Before every interview, I made an initial phone call to obtain their verbal consent and to determine their preferred time for the interview. I also informed the participants that they would get a written consent form through email, and I collected their email addresses. Then I sent them consent letters through email. During the call, I first articulated the objectives and purpose of my study and asked if participants had any questions. I also assured the participants that they could discontinue the interview at any moment if they wanted. I informed them that consent letters incorporated all the information related to the study in an easily understandable way. For classroom observations, I followed the same procedure. I obtained consent from class teachers and showed them classroom observations to verify their accuracy. After collecting the data, I have assigned a code to each respective participant (e.g., T1, T2, S1, S2) to ensure the confidentiality of the information. I was also mindful of not imposing my own beliefs and biases on others. During the interview, I have strived to be an active listener and refrained from influencing participants' thoughts by asking guided questions. Moreover, I will use all the data from interviews and observations solely for this study.

3.10 Trustworthiness and Rigor

Qualitative research findings become trustworthy when it has reliability and validity and are conducted ethically. The Trustworthiness of a qualitative study is established through triangulation, member checks, peer review, the researcher's position or flexibility, adequate

engagement in data collection, maximum variation, an audit trail, and rich, thick description (Merriam & Grennier, 2019). In my study, I established trustworthiness through data triangulation, peer review, member checking, and audit trail.

Triangulation - I utilized multiple sources of data and various data collection methods. I collected data from kindergarten teachers, kindergarten students, and classrooms. I employed two types of data collection methods: one-on-one in-depth interviews and classroom observations, to explore teachers' perceptions of play pedagogy in teaching and the phenomenon of employing play pedagogy, as well as students' engagement in play-based literacy activities.

Peer review - I discussed the research process with one of my colleagues, who works as a staff researcher. I also engaged in a discourse regarding the alignment of the data collection methods with the research questions and the tentative interpretation of the findings in the discussion. Moreover, the study was supervised and reviewed by my supervisor.

Member checking - I sent the transcribed interview and classroom observations to the respective teachers to verify that the study accurately reflected their information and intended meaning.

Audit trail - Before starting the thesis, I conducted a literature review to identify a research gap that I could address. In doing so, I reviewed several articles, books, and documents. I developed the concept of data collection methods, including interviews to gather teachers' perceptions and classroom observations to examine their practice, through a review of several articles on play pedagogy. The literature review also helped me to develop the tools. After creating the tool, I conducted a pilot interview with participants and made the necessary adjustments to my tool.

3.11 Limitations of the Study

An in-person interview, combined with additional classroom observations, could be more effective for gathering in-depth information. As a full-time professional, I found it challenging to balance conducting in-person (face-to-face) interviews with everyone and making several classroom observations on working days. Hence, I had to take telephone interviews and fewer classroom observations.

Chapter 4

Results

4.1 Overview

The purpose of this chapter is to present findings from the analysis of data. This begins with the thematic analysis of classroom observations and teachers' interviews. I organized this chapter into three sections. The first section reports findings on the contribution of play pedagogy to early literacy development. The second section presents findings from teachers' perceptions of play pedagogy based on interviews with teachers. Classroom practice in teaching through play pedagogy is reflected in the third section. This chapter also focuses on the findings regarding the scope of employing play pedagogy in teaching, particularly in relation to classroom management and materials. Lastly, the section focuses on ways children engage in play. I triangulate data from interviews and classroom observation, presenting them thematically. The data received from the participants is divided into four themes, followed by several sub-themes.

Table 5*Themes and Sub-themes*

Theme-1 Contribution of play pedagogy to the early literacy development	Theme 2- Teachers' perceptions of play pedagogy in teaching	Theme 3- Classroom practice in teaching through play pedagogy	Theme 4- Children's engagement in play- based literacy activities
• Oral Language and Communication • Phonemic Awareness and Letter Recognition • Emergent Writing • Confidence and Motivation.	• Play pedagogy is regarded as the key approach for learning. • Play pedagogy is regarded as a meaningful and joyful activity. • Play pedagogy is viewed as an engaging and active participation strategy. • Play pedagogy is regarded as an effective method for teaching and learning.	• Environment and Materials • Types of Play-Based Literacy Activities • Teacher's Role and Assessment	• Emotional and Behavioral Engagement • Creative and Imaginative Engagement • Social and Collaborative Engagement

4.2 Contribution of play pedagogy to the early literacy development

Through classroom observation and interview, I found that play pedagogy in Cambodian kindergarten classrooms significantly contributes to early literacy development by fostering foundational skills, promoting active engagement, and providing a holistic learning environment. Teachers' beliefs about the value of play are consistently reflected in their practical classroom applications, creating a powerful link between theory and practice. Under this theme, I examined how play pedagogy contributes to children's oral language and communication, emergent writing,

builds phonemic awareness and letter recognition, and enhances children's confidence and motivation. Play is not just for fun; it is a purposeful component for teaching key literacy components.

An interviewee teacher said, *'I believe, play makes children love learning. Play is not just fun- it is a foundation for lifelong learning (T2).*

Another teacher mentioned, *'Play helps children learn language and literacy very effectively. It allows children to experiment with symbols and sounds, which makes learning natural. So, play is not just fun- it is a powerful way to develop language and literacy (T3).*

4.2.1 Oral Language and Communication

I found from both the interviews and observations that dramatic play and storytelling are key activities to language development. Teachers believe that play is a natural context for language acquisition, and their classroom observations support this belief. In classrooms, children are seen using new vocabulary in contexts like a "pretend home setup" or a "role-play shop". This practice helps children form more complex sentences and narratives.

One interviewee teacher said, *'Play is a powerful and natural way where children learn to communicate, understand the world, and build foundational language skills. Play and literacy are deeply interconnected, especially in early childhood. It provides natural context for language development, narrative understanding, and social communication- key components of literacy (T1).'*

Another teacher mentioned, *'Pretend home setup within the classroom helped my students understand vocabulary related to home more effectively. During the play, they understand and pick up new vocabulary, which makes them more curious to know more vocabulary so that they can fully communicate with others during play (T5).'*

One more teacher added, *‘through play, children naturally practice listening and speaking-whether they are role playing, telling stories, or simply talking with friends. It helps them build vocabulary as they explore new ideas, objects, and situations. During pretend play at a “restaurant”, they write or read a menu, which helps them understand real-life situations. It makes their learning natural and enjoyable (T3)’.*

4.2.2 Phonemic Awareness and Letter Recognition

Most of the time, teachers deliberately integrate literacy goals into play activities. For example, teachers mentioned using alphabet puzzles and letter hunts to make learning about sounds and letters an interactive experience.

One of the teachers said, *‘I use traditional stories, songs, and games to make learning relevant and acceptable, as children are more familiar with them. I instruct students to act out stories, allowing them to draw and label characters. Children use new words, recognize letters in games, and actively initiate writing or reading (T4)’.*

Another teacher said, *‘I use various play to support literacy development, and among them, pretend play is the favourite. Storytelling and picture book reading help children build their listening skills and vocabulary. Through letter games, such as matching sounds to letters or simple word puzzles, the alphabet and phonics are introduced (T3)’.*

In one of the teachers’ classrooms, the teacher allowed children to draw the letter 'V' in sand and create it with play-dough, directly linking play to learning letter shapes and sounds. According to the teacher, *‘Letter and Phonics, e.g., Alphabet puzzles, letter matching, and sound scavenger hunts, reinforce letter recognition and phonemic awareness. Helps children connect letters to sounds, making early reading skills fun and engaging (T1)’.*

4.2.3 Emergent Writing

The classroom observations confirm that all teachers provide ample opportunities for emergent writing. Students are encouraged to draw, scribble, trace, and write letters and words. This practice allows children to build a connection between spoken words, written symbols, and their own creative expression. One of the teachers mentioned, *'Play helps children naturally develop listening and speaking skills. When they play the shopkeeper game, they learn new vocabulary, how to speak politely, and how to listen to others. They also began to write through drawing or tracing letters during games (T2)'*.

Another teacher mentioned, *'She uses various play and games to make learning engaging and enjoyable. She uses sensory activities, such as tracing letters in sand or using play-dough to form shapes, to help connect physical movement to writing skills (T3)'*.

4.2.4 Confidence and Motivation

All the teachers agreed that play makes learning enjoyable, which in turn increases children's confidence. Creating an environment that is friendly, natural, and comfortable reduces the fear of making mistakes, encouraging them to experiment with language and literacy. One of the teachers stated that, *'When children are playing, they are relaxed and more open to learn. When children love learning, they become more confident, creative, and open to new ideas (T2)'*.

According to another teacher, *'During play, children are more engaged, curious, and motivated, which makes learning natural instead of forced. It also allows children to experiment with symbols and sounds in a low-pressure setting, building confidence and skills (T3)'*.

Another teacher mentioned, *‘Children feel relaxed and confident when playing. They are not afraid to speak or make mistakes. This natural use of language helps them absorb new words and concepts more easily (T4)’*.

Moreover, all teachers mentioned that children become more confident and outspoken while sharing their success stories. One teacher said, *‘One of the children was very shy and barely spoke. However, after engaging in puppet play regularly, she started creating her own stories and even wrote short sentences. Her confidence and vocabulary improved dramatically (T5)’*.

4.3 Teachers’ Perceptions of Play Pedagogy in Teaching

This theme explores teachers’ understanding and interpretation of play pedagogy in the teaching context. All participating teachers have received training in the play-based teaching and learning method. Teachers’ viewpoints on play pedagogy in teaching are diverse and generally positive. They perceived play pedagogy as a key approach, a meaningful and joyful activity, an engaging and effective pedagogical strategy, and a participatory approach. Based on their understanding, I organized the four sub-themes as follows: *Play pedagogy is regarded as the key approach for learning, Play pedagogy is viewed as a meaningful and joyful activity, Play pedagogy is regarded as an engaging and active participation strategy, and Play pedagogy is viewed as an effective method for teaching.*

4.3.1 Play pedagogy is regarded as the key approach for learning

Interviewee teachers mentioned that play is a key activity for all children, serving as a powerful tool that supports their literacy development. They never get bored while playing. Therefore, the kindergarten curriculum always emphasized play pedagogy. According to all participant teachers, play-based learning helps students learn in a natural setting at their own pace, which is the most

effective way of learning. Additionally, one participant teacher shared that students were not particularly keen on learning. Their leading activity was playing. This is the reason play pedagogy is emphasized in teaching.

An interviewee said- *‘Students of kindergarten are 4+. Children of this age tend to prefer playing over learning. Hence, our teacher’s guide includes many activities to teach literacy. So, play is a big part of my approach, and I teach them through play in a joyful and meaningful environment. This not only makes them happy and more open to learn, but it also builds their confidence, social skills, and creativity (T4)’.*

Another teacher mentioned, *‘I am familiar with PBL as it is a key component of my teaching. I usually use play to create a meaningful learning experience, as this helps children retain more concepts. Especially during pretend play, they became more curious and enthusiastic (T5)’.*

4.3.2 Play pedagogy is regarded as a meaningful and joyful activity

All participants regard play pedagogy as a meaningful and joyful activity in teaching. They mentioned phrases like ‘natural, meaningful and fun activity by students’, ‘rhyme, songs, and building blocks for learning numbers or letters’, ‘storytelling and pretend play’, and ‘childhood play’ while referring to play pedagogy in teaching. One of the teachers shared her experience with play pedagogy while teaching phonics,

‘They are very young, 4 to 6-year-old kids. They get delighted when I teach the sounds of the letters with rhyme or song. There are many rhymes and songs in the books and the teachers’ guidelines. In our last class, I taught them the letter “U” using a rhyme. Kids were clapping and reciting the rhyme after me (T1)’.

Another teacher said, *‘My students engage in different play, but pretend play is their favourite. They pretend to be a shopkeeper or a teacher. Last time, they played “restaurant”. I encouraged*

them to take orders and record them in their notebooks. From the play, they picked up new words, sounds, and started to communicate more fluently and naturally (T3)'.

4.3.3 Play pedagogy is viewed as an engaging and active participation strategy

All the teachers who attended the Interview perceived play pedagogy as an engaging approach where students actively participated in the learning activity. Employing play pedagogy increased the school attendance of children. It encourages students to participate and inspires them to gain a deeper understanding.

A participant remarked, *'Children always love to play. I have 23 children in my class. Every day, they have 15 minutes of structured play and free play in the afternoon, which allows them to use vocabulary more naturally and creatively. Each one of them enjoys and stays more engaged without even realizing they develop listening and speaking skills (T2)'.*

Another participant said, *'Play creates such a rich, comfortable environment where children learn to communicate, think, and explore the language naturally without the fear of being judged. Specifically, during pretend play "home", children became so curious to know more vocabulary so that they can fully communicate with others (T-5)'.*

4.3.4 Play pedagogy is regarded as an effective method for teaching.

All participating teachers unanimously deemed play pedagogy as the most suitable strategy for teaching. Children are highly engaged during play, making it easier to remember literacy content through this engaging activity. Hence, they can understand complex concepts effortlessly.

One of the teachers added, *'Children feel more relaxed and confident when playing. They are not afraid to speak or make mistakes. This natural use of language helps them absorb new words and concepts more easily (T4)'.*

Furthermore, the participating teachers observed that students became enthusiastic and attentive due to the play materials. Teachers considered toys and materials to be an integral part of teaching through play pedagogy. While discussing play pedagogy in teaching, they emphasized the use of toys and materials in both guided and free play.

Children learn to count numbers while playing during their free playtime. Teachers also used materials such as number cards, blocks, and real-life objects like balls, sticks, or leaves to teach counting while playing.

According to a participant teacher, *'through imaginative play (like playing 'house' or 'store'), children are exposed to new words and concepts. They engage in various activities, such as talking to peers, pretending to be characters, giving instructions, asking questions, and describing their actions. It also encourages turn-taking, listening, and responding- skills essential for both conversation and literacy (T1)'*.

Another interviewee said, *'I integrate literacy goals with play by designing activities that include language use in a fun and meaningful way, like- for alphabet, I use letter hunts, puzzles, and to build vocabulary, we repeat words during role-play (T5)'*.

4.4 Classroom Practice in Teaching through Play Pedagogy

Through classroom observation, the process of using play pedagogy in teaching was explored. While observing, the focused areas were teaching concepts of numbers & counting (numbers 1-10), phonics (sounds of letters), and storytelling through play pedagogy. Teachers in Cambodian kindergartens are actively implementing play-based pedagogy to support early literacy. Under this theme, I examined how teachers create a literacy-rich environment and utilize materials during

instruction. In doing so, they utilize diverse play activities in the classroom. Moreover, I also explored teachers' facilitative teaching role that includes both guidance and informal assessment.

4.4.1 Environment and Materials

During classroom observations, I have found that teachers prioritize creating an engaging environment with a variety of literacy-focused materials. All five classrooms were equipped with a range of materials that promote literacy skills. These include books, alphabet toys, puzzles, picture cards, and school supplies like pencils, scissors, and paints. Some teachers also utilize digital tools, such as projectors (PPT) and Smart TVs, to display educational videos and stories. Teachers often establish distinct learning zones, such as a literacy corner, a dramatic play area, and a storytelling corner. For example, one of the teachers (T3) uses themed play centers, such as a "market" and a "restaurant."

In addition to standard materials, teachers often integrate culturally relevant materials and activities, such as traditional Cambodian games and songs, to make learning more meaningful and relatable for the children.

Counting Numbers - In class, only one number is taught per day. The teacher uses rhymes and number cards to teach concepts of numbers. The teacher recited the rhyme with clapping first-

How many fingers are on one hand? (3 times)

Let's all count together.

1, 2, 3, 4, 5 (4 times)

How many fingers are on two hands? (3 times)

Let's all count together.

1, 2, 3, 4, 5

6, 7, 8, 9, 10 (2 times)

Clap, clap, clap your hands. (3 times)

Clap your hands with me.

(Let's count our toes)

How many toes are on one foot? (3 times)

Let's all count together.

1, 2, 3, 4, 5 (4 times)

How many toes are on two feet? (3 times)

Let's all count together.

1, 2, 3, 4, 5

6, 7, 8, 9, 10 (2 times)

Stomp, stomp, stomp your feet. (3 times)

Stomp your feet with me.

1, 2, 3, 4, 5

6, 7, 8, 9, 10

The teacher remarked, '*Students like this rhyme very much. And they remember numbers through this rhyme easily (T5)*'.

Students repeated after the teacher and clapped their hands as well. After the rhyme, the teacher gave students 10 small sticks and some seeds to count up to 10 by themselves.

In another classroom, the teacher gave students sand and play-dough while teaching the letter "V".

Children drew "V" in the sand with their fingers and made "V" and "Van" with the play-dough.

They also sang a song with the teachers to learn the sound of the letter. All the children participated actively and enjoyed the class.

The teacher remarked, *‘Everyone likes to sing, and they remember more easily like this. I teach one letter for the whole week with different materials like toys, alphabet blocks, and real-life materials (sand, play dough) (T1)’.*

4.4.2 Types of Play-Based Literacy Activities

Each teacher strategically uses a wide range of play activities to teach different aspects of literacy. Teachers often use role-playing to help children practice their language skills. This includes acting out stories with puppets or engaging in imaginative scenarios, such as a "pretend home setup" or a "role-play shop." One of the teachers uses body language and animal sounds in storytelling, encouraging children to express themselves creatively.

Additionally, teachers incorporate games such as alphabet puzzles, letter hunts, and sound-matching activities to teach phonemic awareness and the alphabet. For instance, teacher (T1) had students draw the letter "V" in sand and make it with play-dough to reinforce its shape and sound. Moreover, children are provided with opportunities for emergent writing, which includes activities such as scribbling, drawing, tracing, and coloring. For example, students trace and write the title of a story and color the picture.

4.4.3 Teacher's Role and Assessment

The teachers' role is not passive; they act as facilitators who actively guide and assess children's learning within the play context.

Teachers initiate activities with engaging icebreakers, such as songs. They encourage children to participate and praise their efforts, creating a positive learning atmosphere. They also provide support to individual students who need help during activities.

The observations indicate that teachers primarily use informal methods to assess children's progress. They observe children's interactions, noting how they use new words, recognize letters, or initiate emergent literacy tasks. Some teachers use checklists or take notes to document progress over time.

4.5 Children's engagement in play-based literacy activities

Based on the teacher interviews and classroom observation protocols, I have divided this theme into three sub-themes: children's Emotional and Behavioral Engagement, Creative and Imaginative Engagement, and Social and Collaborative Engagement. The data reveal a strong correlation between teachers' beliefs about the value of play and the observable, positive behaviors exhibited by the children in their classrooms.

4.5.1 Emotional and Behavioral Engagement

Children exhibit a high degree of emotional and behavioral engagement during play-based activities, which teachers believe enhances learning effectiveness.

Enthusiasm and Enjoyment: Through both interviews and observations, I have found that children consistently demonstrate enthusiasm for play. Teachers describe children as "eager to explore materials and try new things" (T1) and show that they "love learning" (T2). All participating teachers confirmed that all children enjoyed and engaged in the activity throughout. This high level of enjoyment serves as a powerful motivator for learning.

Active Participation: Children are not passive recipients of information during play. They are actively involved in the learning process. I have observed during activities, most of the children

actively participated in play-based literacy activities, and in some cases, took the initiative to "attempt emergent literacy tasks" such as initiating reading and writing in their activities.

Curiosity and Exploration: Children use play as a way to explore and satisfy their curiosity. Several teachers noted that children are naturally curious to explore new things and play, seeking to satisfy their curiosity in various ways. One teacher said, Children manipulate objects, ask questions, and experiment with different ways of playing (T1). This exploratory behavior is foundational for developing a lifelong love of learning.

4.5.2 Creative and Imaginative Engagement

Play provides a natural and safe ground for children's imagination, directly contributing to their narrative and language skills.

Storytelling and Role-Playing: Children use their imagination to create stories and scenarios, allowing them to explore their creativity and engage with others. During my observation, I have observed this phenomenon naturally in activities such as a "pretend home setup" (T5) or a "role-play shop" (T4). Another teacher said during the interview, 'when children invent or act out stories, they use complex language, create storylines, and practice sequencing, which are key components of reading comprehension and writing' (T1). Another interviewee mentioned that children "try to tell their own stories" and use "body language (making sounds of animals)" during storytelling.

Emergent Literacy Tasks: Children engage creatively with literacy materials. For example, I have found in the observation of a classroom that children "drew the letter 'V' in the sand" and made letters with play-dough to reinforce its shape and sound (T1). This engaging and creative approach makes learning abstract concepts, such as letters, more concrete and enjoyable.

4.5.3 Social and Collaborative Engagement

Play-based activities are inherently social, allowing children to practice communication and cooperation.

Peer Interaction: During play, children engage with their peers, practicing vital social skills. One teacher mentioned, *‘children engage with peers during play, practicing communication, cooperation, sharing, and problem-solving by negotiating roles, taking turns, or collaborating on a task’ (T1)*. This is crucial for developing the social communication skills necessary for future learning and group work.

Communicating with Teachers: Children also actively communicate with their teachers. I have observed that children seek help from teachers or assistants when they need support during activities, which demonstrates their comfort and trust in the classroom environment.

4.6 Support while employing play pedagogy in teaching

Based on the teacher interviews and the classroom observation protocols, the successful implementation of play pedagogy in Cambodian kindergarten classrooms relies heavily on several key supports. I have categorized these supports into professional development, material resources, and community engagement.

4.6.1 Professional Development and Teacher Support

All teachers frequently mentioned that the most needed support is better and more consistent teacher training. Teachers who have received professional development feel more confident in their ability to combine play with clear learning goals.

Interviewee teachers mentioned that training has changed their mindsets, enabling them to see play as a purposeful tool for learning, not just a distraction. One of them said that her training from an NGO and the Ministry of Education “changed her mindset” and helped her make lessons "more interactive and child-centered". (T2) Another teacher said, *‘We get training every year before starting the academic year to make teaching and learning more engaging for the kids. We teachers also share our knowledge and expertise and demonstrate different plays (T1)’*.

Besides, training provides practical skills, such as how to plan and assess literacy through play. It also helps teachers manage their time more effectively, balancing structured play with formal instruction.

Teachers also value professional support and peer sharing, as mentioned by a teacher (T4), who believes that this collaboration makes a significant difference in the effective implementation of play-based learning.

4.6.2 Material and Resource Support

I have found, through both interviews and classroom observations, that teachers who have access to resources are better able to create stimulating, literacy-rich environments with defined play areas, books, and alphabet toys. Moreover, two of the interviewee teachers (T1, T5) mentioned that they also require materials to address language challenges in their diverse classrooms, such as "visual aids and bilingual materials".

All classrooms had sufficient materials for several types of plays. In the materials corner, they have colored pencils, crayons, coloring books, storybooks, and other study materials. The play corner was organized with a variety of items, including plastic vegetables and fruits, plastic utensils, different animals, dolls, blocks with numbers and letters, pictures, and puzzles. They also

have a separate playground and a vegetable garden outside the classroom, where students can play freely with sand, swings, slides, number and alphabet mats, blocks, and learn to identify real vegetables. These materials were used to teach recognizing the alphabet, building vocabulary, counting numbers, and basic concepts such as big and small. Teachers also bring play materials for specific plays when needed. In classroom practice, one of the participating teachers used sand and play-dough to teach students the alphabet “V” (T1).

One of the teachers mentioned- *‘We have lots of toys for children. They do not need to share their toys with other students while counting numbers.’ (T2)*

Apart from these toys and materials, the classrooms were decorated with number and alphabet charts, as well as pictures of animals, vegetables, vehicles, occupations, and the names of the days and months. There were also smart TVs (in 2 schools), a projector, and speakers (in 1 school).

4.6.3 Systemic and Community Support

During interviews, teachers mentioned several systemic and community-level supports that are crucial for the long-term success of play-based learning. Teachers encountered no resistance from the community or parents; however, some parents still prioritize formal education over play. According to the interviewee teachers, parents previously thought play was a leisure-time activity, but their perspective has changed.

One of the teachers shared, *‘We have manager and peer observations during classes once each semester. They also give us suggestions for the betterment of lesson planning and classroom management (T1)’.*

Several teachers mentioned- *‘Parents positively take play pedagogy now. However, they did not initially consider play as a means of learning. Their viewpoint has changed.’* One of the teachers

mentioned, ‘she addresses this matter by using parent-teacher meetings to demonstrate how *play helps children to recognize and speak better (T1)*’.

4.7 Challenges of Employing Play Pedagogy in Teaching

Based on the teacher interviews and classroom observation protocols, several significant challenges hinder the effective implementation of play pedagogy in Cambodian kindergarten classrooms. These challenges are interconnected, and I have categorized them into systemic and administrative issues, material and resource limitations, and cultural and parental expectations.

4.7.1 Systemic and Administrative Challenges

Large Class Sizes: All teachers consistently pointed to large class sizes as a major challenge. Smaller classes would allow them to give more individual attention and better assess children's progress. This is the most frequently talked about challenge across both interviews and observations. Teachers consistently noted that a high number of students makes it difficult to provide individualized attention, which is crucial for play-based learning. As one teacher stated, ‘*smaller class sizes would give teachers enough time to engage meaningfully with all students, leaving no child behind (T5)*’. Another teacher said, ‘*One of the biggest challenges is definitely managing large class sizes- when you have many children, it is harder to give enough individual attention during play (T3)*’.

Curriculum Flexibility: Teachers face significant obstacles at both the school and curriculum levels that limit their ability to embrace play-based learning fully. The national curriculum and the pressure to prepare students for formal assessments leave limited time for play. One teacher mentioned, ‘*The Cambodian curriculum supports play-based learning quite well in theory, thanks to ECCD (Early Childhood Care and Development) policies and ELDS (Early Learning and*

Development Standards), but implementation is uneven due to resource and training constraints (T1)'.

As a result, teachers find it challenging to manage their time effectively between structured, goal-oriented play and formal literacy instruction. While teachers have developed a balanced daily schedule, it requires constant flexibility and adjustment based on student response. Two of the teachers (T3, T4) also suggested that curriculum adjustments could provide more time and flexibility for creative, child-led activities, ensuring a better balance between play and formal instruction.

4.7.2 Material and Resource Limitations

The lack of appropriate and sufficient resources directly impacts the quality and variety of play-based activities teachers can provide.

Limited Materials: A recurring challenge noted by multiple teachers is the lack of "appropriate toys, books, and materials". This includes simple items such as books, props for pretend play, and educational toys. Teachers often have to be creative or resourceful to compensate for the challenges they face.

One teacher said, *'My classroom lacks the developmentally appropriate toys, books, or literacy-rich blocks or story props. Budget constraints often limit access to high-quality play tools like puppets, letter blocks, or story props (T1)'.*

Technology Access: While some classrooms have technology such as projectors and Smart TVs, the availability of these resources is not universal, which can limit the use of educational videos and digital storytelling in specific settings.

Language-Specific Resources: Teachers noted a need for more resources to address language challenges. Two of the interviewee teachers mentioned, *‘They have some children who speak ethnic minority languages or local dialects at home. They require additional support to comprehend both Khmer and English instructions. So, they need bilingual materials and visual aids to support their learning, but have limited resources for that (T2, T4)’.*

4.7.3 Cultural and Parental Expectations

Teachers face pressure from parents and the community, who may not fully understand the value of play as a learning tool. Some parents and community members view education as a formal, structured process focused on rote learning and memorization. They view play as a waste of time or a distraction from "serious study."

Moreover, some parents expect children to learn to read and write at a very early age, which leads to a focus on formal literacy instruction over play. This forces teachers to balance their own beliefs in play pedagogy with these external demands.

Therefore, teachers recognize that they must actively educate parents on how play helps children develop essential skills such as confidence, communication, and creativity. Teachers use parent-teacher meetings to explain how play helps their child improve their communication skills.

4.8 Summary

This chapter has presented the teachers’ perceptions of play pedagogy in teaching, classroom practices, and its contributions to children’s learning, engagement in play, support, and challenges. Teachers consider play pedagogy a practical, participatory, and joyful approach to teaching early literacy and numeracy. They employed play pedagogy as outlined in the teachers’ guide.

Moreover, teachers receive training in play-based pedagogy. Although they had sufficient toys and other play materials for various types of play, they lacked developmentally appropriate toys and exceptionally high-quality play tools, such as puppets, letter blocks, story props, and pretend-play props. There was limited classroom space in most schools, limiting children's movement during play. Some schools use a traditional seating arrangement (rows and columns), which shrinks play space and wastes time rearranging classrooms for each play. Also, teachers faced challenges due to large class sizes, which limited their ability to provide individualized support, leading to restlessness and inattentiveness among students, and ultimately impeding learning through play. In addition to these, although some schools offer limited training and support for teachers in play pedagogy, most lack comprehensive training and post-training follow-up, which hinders teachers' understanding of their pedagogical strengths and weaknesses.

Chapter 5

Discussion and Conclusion

5.1 Introduction

The purpose of this chapter is to discuss the findings of the research questions. This chapter presents a discussion of teachers' perceptions, along with their classroom practices. Furthermore, the scope of teaching through play pedagogy is presented. Finally, I suggested some recommendations for further study.

5.2 Discussion

This section presents my findings and discusses them in relation to the three research questions. The study, based on interviews and classroom observations, found a gap between teachers' perceptions and classroom practices. Moreover, the scope and challenges are also discussed and

scrutinized in terms of their underlying reasons. The discussion evolved through an examination of the alignment or contrast between the findings and other research results, as well as the reasons behind the alignment or contrast.

5.2.1 How do play-based learning strategies contribute to the early literacy development of Cambodian kindergarten children?

According to the experiences of Cambodian kindergarten teachers and supported by academic research, play-based learning makes a significant contribution to the early literacy development of children by integrating key skills in an engaging and natural manner. According to Piaget's theory, play is a crucial means by which children learn about the world around them. As they play, they engage in experiences that help them grow cognitively (Piaget, 1962). Vygotsky's sociocultural perspective emphasizes how play helps children's cognitive development through social interactions and imaginative scenarios (Vygotsky, 1978). Both theories demonstrate that play is an active process through which children construct their mental images and refine their problem-solving abilities, which are crucial for their cognitive development.

Play provides a rich environment for developing the foundational verbal and narrative skills essential for literacy. Teachers use pretend play and role-playing to encourage children to use language in meaningful social contexts. For instance, in a "market" or "restaurant" play area, children practice new vocabulary, engage in back-and-forth conversations, and create storylines, which are crucial precursors to reading comprehension. This aligns with the findings of Christie and Roskos (2009), who found that pretend play is a powerful context for practicing language in different situations. Creating a positive mood state through playfulness invokes positive emotions, which are crucial for optimizing learning (Dehaene, 2020; Immordino-Yang, 2015). In teaching,

a positive mood state is created through classroom activities and teacher modelling that ‘encourage the interpretive spirit, humor, lightheartedness and openness of the curious inquirer’ (James & Brookfield, 2014, p. 64).

Play-based activities also provide children with opportunities to practice emergent writing, which includes drawing, scribbling, and attempting to form letters. Teachers use materials like play-dough, sand, and writing tools for activities such as creating letters, tracing words, and drawing pictures while reading stories. This hands-on approach helps children develop fine motor skills and letter recognition without the pressure of formal instruction. The use of songs, rhymes, and alphabet games also enhances phonological awareness—the ability to recognize and manipulate sounds in words—which is a critical predictor of reading success.

Although teachers strive to create a balanced daily schedule that combines play-based learning with more formal, structured literacy sessions to meet curriculum demands and parental expectations, most of the play is guided. All the interviewee teachers mentioned that they always try to set aside some time for child-led play in every class. However, they mainly focused on guided activities, such as guided reading and letter recognition, in shorter, structured sessions. Child-directed play is often scarce in teaching settings. Moreover, the lack of playfulness in the classroom makes the play activity monotonous for children. In turn, the attentiveness and active participation of students are severely impeded. After the play activity, teachers primarily engaged in the ‘asking and answering’ activity to help students memorize the contents. This finding contradicts the children's learning. According to Froebel and Reggio Emilia, children learn through active participation and interaction with their surroundings (Samuelsson, 2008). Furthermore, these guided plays often limit students' ability to construct knowledge independently, as they get distracted. Researchers argue that literacy skills are best developed through play and everyday

experiences. Teachers need to follow students' interests while they are playing and discern the activities in children's daily lives. In a teacher-directed approach, they plan the situation and observe students closely to decide when to deliver their play to teach (Meaney et al., 2014). In current practice, teachers often follow the content and prescribe the same play pedagogy for all children. They did not consider the students' individual interests when teaching literacy content. The reason behind this could be the pressure from standardized testing and a curriculum that prioritizes formal reading and writing skills, as well as parents' expectations. Eventually, this can lead to a conflict between the need for structured lessons and the desire to provide time for child-led, playful activities. Research confirms that this emphasis on academic achievement can cause resistance to play-based methods (Pyle & Danniels, 2017).

Despite the real situation, play-based learning contributes to a child's holistic development, which in turn supports their literacy acquisition. When children engage in play, they develop cognitive skills, including problem-solving and critical thinking. They also develop social-emotional competencies, such as cooperation and communication with peers. This is supported by Lugo-Gil and Dang (2020), who noted that play-based learning helps children retain concepts more effectively because the learning is both meaningful and joyful. This aligns with Pyle and Daniels (2017), who found that play-based learning encourages creativity and deeper engagement with learning, ultimately supporting stronger academic outcomes.

5.2.2. What is kindergarten teachers' perception of play pedagogy in teaching?

Teachers hold a generally positive view of play pedagogy, recognizing it as a critical and effective method for fostering early literacy and holistic child development. A blend of personal beliefs,

professional training, and the practical challenges of the classroom environment often shapes their perception.

All participating teachers believe that children learn best through play and that it is essential for their social, emotional, cognitive, and physical development. Teachers observe that children are more excited and actively involved during play activities, which in turn makes learning more meaningful and helps them retain concepts better. They view play as a natural and joyful way for children to engage with the world, leading to a love of learning. This is supported by other research, which shows that play-based learning helps children develop creativity, problem-solving skills, communication, and social-emotional competence (Lugo-Gil & Dang, 2020; Pyle & Daniels, 2017). Additionally, this finding aligns with the characteristics of play pedagogy as postulated by the LEGO Foundation. According to the Lego Foundation, learning through play includes a joyful and actively engaging experience for children (The Lego Foundation, 2017).

Teachers see a deep connection between play and literacy. They use play to support language development, vocabulary acquisition, and narrative understanding. For example, teachers use pretend play to encourage storytelling and role-playing, and they incorporate games and puzzles to teach letter and sound recognition. Research by Christie and Roskos (2009) provides evidence that play activities give children opportunities to practice language in different situations.

The Early Childhood Care and Development (ECCD) policy was adopted on 19 February 2010 (MoEYS, 2010) and is supported by the National Action Plan 2014-18 (MoEYS, 2014). The ECCD policy envisions a care and development environment that supports all children, from conception to six years of age, regardless of their background, aligning with the Constitution of the Kingdom of Cambodia (MoEYS, 2010). According to ECCD policy, play is considered an instructional strategy for teaching literacy concepts, developing documents and game materials for

early childhood care and development. Ministry of Education, Youth and Sport (2018) supports child-centered approaches in Cambodian early childhood classrooms. Later, a new National Action Plan on Early Childhood Care and Development (ECCD) was launched in 2022, which emphasized early childhood literacy and development. This result aligns with the views of prominent educators, such as Froebel and Margaret McMillan, who believe that play pedagogy is highly effective for learning because it involves children's work and play, creating a joyful learning environment (Chin & Zakaria, 2015). In addition to these, teachers also utilize toys and materials to enhance effective teaching and learning. Extensive research has demonstrated that toys serve as tools through which children engage in their play and learning activities (Dag et al., 2021). Teachers' perceptions of play pedagogy are the main activity in children's learning. Vygotsky (1966) addressed play as the leading activity of children. This is the predominant activity of young children. Hence, while formalizing early childhood education, play is considered the principal teaching and learning approach (Fleer, 2018).

Teachers' perceptions of play pedagogy are widely influenced by society and culture. For example, in Japan and Taiwan, play is viewed as a valuable tool for children's development and learning. Nevertheless, they believed that children should enjoy playing for its own sake (Izumi-Taylor et al., 2014). ECCD in Cambodia consists of 3 years of preschool education for children between 3 and 5 years; however, education at this level is not compulsory (Chea, Wang, Ogawa, & Ashida, 2025). Moreover, misalignments between teachers' qualifications and teaching assignments often force many teachers to teach outside their areas of expertise (UNESCO, 2024). Despite these issues, after having implemented the ECCD policy, the Education Congress Report of MoEYS (2013) expressed that enrolment rates have significantly increased from 2005-06 to 2012-13, in

total, children aged 3-5 has risen from 13.6 % to 32.7%, and among five year old dramatically soared from 27.3% to 56.5% (MoEYS, 2014, p.4).

In this study, teachers' perceptions of play pedagogy are generally positive, which in turn influences their classroom practices. This positive perception of play may be fostered because the policy and curriculum emphasize play pedagogy, as society and culture influence teachers' values and beliefs regarding play (Izumi & Taylor et al., 2014). According to the ECCE (2010), play is one of the key teaching and learning strategies for early childhood classroom teaching.

5.2.3 How is play pedagogy implemented in teaching literacy by kindergarten school teachers?

Based on the interviews and classroom observations of Cambodian kindergarten teachers, play pedagogy is implemented to teach literacy through a blend of structured and child-led activities designed to be engaging and meaningful. The implementation focuses on integrating literacy skills into various play-based contexts.

Teachers frequently use pretend play to foster language development and narrative skills. They create themed play areas, such as a "market" or "restaurant," where children can act out scenarios, practice new vocabulary, and engage in storytelling. This approach enables children to use language in practical and social contexts. The use of pretend play to support language development aligns with research by Christie and Roskos (2009), who highlight how play provides a context for children to practice language in various situations.

Teachers also set up the classrooms with a variety of literacy-rich materials to encourage exploration and emergent literacy. These materials include books, alphabet puzzles, letter toys, and writing tools like notepads. Teachers use these resources to facilitate activities such as "letter

hunts" and sound recognition games. Teachers also incorporate music, rhymes, and stories to make learning a joyful experience. They use puppet shows and read-aloud to model storytelling, encouraging children to retell narratives or create their own. This helps children develop narrative understanding and a love for reading. Teachers provide opportunities for emergent writing, including drawing, scribbling, and attempts to write letters or words. Activities such as tracing and rewriting story titles, or creating letters with playdough, are used to build fine motor skills and improve letter recognition. The teachers' belief that play supports not only academic but also social, emotional, and creative skills is supported by Pyle and Danniels (2017) and Lugo-Gil and Dang (2020), who found that play-based learning helps children develop a wide range of essential skills, including creativity and problem-solving.

Furthermore, these guided plays often limit students' ability to construct knowledge independently, as they get distracted. Researchers argue that literacy skills are best developed through play and daily life experiences. Teachers need to follow students' interests while they are playing and discern the activities in children's daily lives. In a teacher-directed approach, they plan the situation and observe students closely to decide when to deliver their play to teach (Meaney et al., 2014). In current practice, teachers often follow the content and prescribe the same play pedagogy for all children. They did not consider the students' individual interests when teaching literacy content. The reasons could be pressure from standardized testing, a curriculum that prioritizes formal reading and writing skills, and parents' expectations. Eventually, this can lead to a conflict between the need for structured lessons and the desire to provide time for child-led, playful activities. Research confirms that this emphasis on academic achievement can cause resistance to play-based methods (Pyle & Danniels, 2017). Pre-service teacher education programmes are often criticised for being overly theoretical, paying insufficient attention to teaching practice, and therefore being

far removed from classroom realities (Ribaeus, Enochsson & Löfdahl 2022). Pre-service teachers often have limited opportunities to practice core teaching practices ‘in the moment’ during the coursework component of the teacher education programme because school practicum is viewed as the site where ‘theory’ is applied or implemented (Gravett & Ramsaroop, 2017).

Despite these issues, several studies found that guided play within the school environment serves as the bridge between free (unstructured) play and direct instruction (Weisberg et al., 2013). Using guided play as a pedagogy couples learner agency and teacher guidance. This implies that learners’ initiative and self-direction are respected and fostered, while the teacher simultaneously guides learners towards a learning goal (Weisberg et al., 2016; Yu et al., 2018). Well-executed guided play involves active (cognitive) engagement (minds-on) of learners, invoking meaning, social interaction, iteration, and joy. These align with the science of learning literature on the features that comprise optimal learning environments (Zosh et al., 2017) and could therefore be applied to learners of all ages.

According to early childhood researchers, children's social skills and foundational arithmetic capabilities are developed through symbolic/fantasy play (Leong & Bodrova, 2012). Teaching mathematics through play, such as building blocks and rhymes, improves students' problem-solving skills, mathematical concepts, and understanding, as well as their ability to manipulate models (Rosli & Lin, 2018).

Moreover, imaginary situations in play improve students' literacy and numeracy skills through students’ active engagement and motivation for problem-solving. Early-grade children learn addition and subtraction through imaginative play (e.g., selling and buying shoes), which creates a context for meaningful mathematical learning (Ma et al., 2023).

5.2.4 What are the support and challenges of teaching mathematics through play pedagogy regarding materials and classroom management?

Through teachers' observations and interviews, this study found that Cambodian kindergarten teachers face a mix of supports and significant challenges in teaching literacy through play, particularly in terms of materials and classroom management. Researchers found that teachers reported that knowledge and skills in play-based learning play an important role in implementing play-based learning practices (Danniels & Pyle, 2018). Classroom environments play a crucial role in determining how pedagogical content knowledge influences teaching practices (Bennett et al., 1997; Edwards & Mackenzie, 2011). Keung and Fung found that pedagogical content knowledge played a significant role in teaching play-based learning practices, involving both pedagogical understanding and practical representation in classroom environments.

Supports

The study found that teachers have some access to resources and training. The ECCE (2010) of Cambodia also emphasizes the use of teaching aids and toys for the successful implementation of the curriculum. According to Bruner, teachers can scaffold learning with play materials, such as blocks and interactions, to help children learn geometry (Meaney et al., 2016). Play experiences with substantial objects help pre-primary students develop their mathematical understanding. Play materials like origami can enhance young students' thinking and spatial skills, which are crucial for geometry. Constructive play with blocks instills problem-solving, construction, and mathematical skills, as well as concepts of balance (Rosli & Lin, 2018).

In addition to expanding access to Early Childhood and Education (ECE), the MoEYS has taken steps to enhance its quality, including extending the ECE teacher training programme from 1 to 2

years and introducing preschool standards. UNICEF is a key development partner in helping train those teachers. As of 2023–24, multilingual preschool programmes are conducted in four public preschools and 154 community preschools across five provinces: Ratanakiri, Mondulakiri, Stung Treng, Preah Vihear, and Kratie (MoEYS, 2025a). A study noted that currently, 18 provincial teacher training centres (PTTCs) and two teacher training colleges (TECs) offer pre-service training for primary school teachers; however, the PSTTC is the only institution providing pre-service training for preschool teachers in Cambodia (Chea et al., 2025). Om (2024) provides an overview of ECE in Cambodia, including its curriculum and teacher-related issues. Karim et al. (2025) investigated the beliefs and professional development needs of preschool teachers. Teacher deployment systems determine where and how teachers are assigned, as well as the conditions for transferring between posts. Effective deployment strategies are essential for addressing disparities in teacher distribution, improving educational outcomes, and reducing inequalities, particularly in underserved and rural areas (UNESCO, 2024). The Teacher Policy aims to "develop teachers with quality, competencies, and accountability in line with their professional code of conduct as well as providing enabling conditions to fulfil their profession effectively and efficiently" (MoEYS, 2013, p. 3). In line with the policy, the MoEYS released the Teacher Policy Action Plan, outlining concrete activities and timelines for implementing the Teacher Policy (MoEYS, 2015).

This study found that a key support for teachers is the professional development they receive from NGOs and the Ministry of Education. Teachers mentioned that these trainings had helped them feel more confident and competent in planning purposeful play activities with clear learning goals and made their approaches more "interactive and child-centered," which helps them to manage time better between play and formal teaching. The study by Nath et al. (2014) also emphasized the importance of teachers' training in play to boost their confidence. Besides, while parental

expectations can be a challenge, some teachers find support through peer sharing and professional networks. However, the teachers also suggested that more awareness campaigns for parents are needed to help them understand the value of play-based learning.

Challenges

Although teachers have some support, they still face consistent challenges, such as the lack of adequate teaching materials, resources, and proper training. According to the study by Chea et al. (2025), teacher trainees are not adequately trained to manage a multilingual or multicultural environment, and no trainer at PSTTC can speak the ethnic languages. Some PSTTC trainees are from minority backgrounds and are expected to be deployed to their hometowns after completing the pre-service training in Phnom Penh. They often lack sufficient books, props for role-playing, and other play-based learning toys. This scarcity limits the variety and depth of literacy activities they can implement. One teacher noted that they sometimes lack enough books or props for all students, which hinders the effective implementation of play-based lessons. This challenge is also noted in broader academic literature, as Pyle and Danniels (2017) found that a lack of resources is a significant systemic barrier to implementing play-based learning.

Moreover, teachers face significant challenges in managing their classrooms, primarily due to large class sizes and the pressure to meet curriculum demands. The interviewee teachers mentioned class sizes ranging from 25 to 30 students, which makes it difficult to give individual attention and engage meaningfully with every child during play activities. This finding directly contradicts the pre-primary curriculum (2010), where the learning environment is mentioned explicitly for pre-primary children. According to the curriculum, the school environment must be both child-friendly and environmentally sustainable, promoting learner-centered approaches that incorporate various

methodologies, such as interest-based learning and play-based learning. These are the key challenges in both private and public ECE facilities: a shortage of ECE teachers and a high Student-Teacher Ratio (STR) (World Bank, 2024b). Moreover, teachers also feel pressure to balance a curriculum that prioritizes formal reading and writing with playful activities, a conflict that requires constant time management and negotiation. This is a common challenge that aligns with research by Ntshangase et al. (2022), who also identified large class sizes and balancing curriculum as key obstacles in early childhood education.

5.3 Conclusion and Recommendations

I investigated the kindergarten teachers' perceptions of play pedagogy in teaching literacy, classroom practices, and the contribution of play pedagogy to children's learning, engagement in play, and the support and challenges faced by teachers in their classrooms. In doing so, I interviewed kindergarten teachers and observed their classrooms. In this study, all the participating teachers perceived play pedagogy positively. All the kindergarten teachers received training in teaching, where they also learned about play pedagogy. The Teachers' Guide suggested that guided plays are the most commonly used play for teaching literacy and numeracy. However, there are some challenges regarding large class sizes, classroom management, inadequate resources, cultural and parental expectations, which impede children's free movement and effective learning of literacy and numeracy. Besides, Cambodia currently has only one dedicated PSTTC offering a 2-year pre-school training service, and the limited annual teacher quota approved by the Ministry of Civil Service further restricts the MoEYS's ability to recruit new preschool teachers. These structural constraints align with similar findings from other contexts, where systemic limitations impede efforts to staff disadvantaged schools (Asim et al., 2019; Bobba et al., 2021; Tao, 2014).

This study has implications for teachers' training, which may help to improve teaching literacy through play pedagogy in kindergarten classrooms by informing recent practices, support, and challenges.

Based on this study, the following recommendations are made for teachers, policymakers, and future research on play pedagogy in mathematics teaching.

- Though teachers get a 2-year-long training, the number of trainee teachers is insufficient and disproportionately concentrated in urban areas, leaving rural and community preschools with less qualified staff. So, this could be a potential exploration area for further research to mitigate the gap.
- Training and feedback after classroom observation should be given by the same entity so that teachers can work on their improvement areas. Peer-teacher class observations and peer-sharing sessions must be arranged in all schools.
- All the stakeholders need to be involved in resolving the issue regarding the scarcity of appropriate materials and resources for classrooms, and appoint more quality teachers to reduce the teacher-student ratio and improve classroom management.
- Educating parents and the community on the benefits of play-based learning to foster a supportive environment.

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Appendix A. Permission Letter to School Authority

Date:

To

The Principal / Director

School Name: _____

Subject: Request for providing support for Master's thesis.

Dear Sir/Madam,

I hope this letter finds you well. My name is Sumaia Islam Shumi, and I am a Master's student working on my thesis titled: "Exploring the Role of Play-Based Learning in Shaping Early Literacy Skills among Kindergarten Children in Cambodia" at the Brac Institute of Educational Development (Brac IED), Brac University. This study aims to explore how play-based learning practices influence literacy development in early childhood classrooms, focusing on the experiences and perceptions of kindergarten teachers.

With your approval, I kindly request permission to conduct semi-structured interviews with selected kindergarten teachers. I will also observe classroom literacy activities in a non-disruptive manner. Lastly, if permissible, will collect relevant teaching materials such as lesson plans and play materials.

Please be assured that participation is entirely voluntary and based on informed consent. The identity of the school and all participants will be kept strictly confidential. Ethical guidelines and research protocols will be strictly followed. Information will be used only for this research, and participating teachers can withdraw their consent at any time. As a researcher, I alone have access to the interview recordings and transcriptions.

I believe this study will contribute valuable insights into effective early literacy practices and may benefit your school's ongoing efforts to improve child-centered learning. Therefore, I would be most grateful for your consideration of this request. Please do not hesitate to contact me if you require any additional information.

Thank you very much for your time and support.

Sincerely,

Sumaia Islam Shumi

Master's Student

Student ID- 18357059

Email- sumaia.shumi@teachforbangladesh.org

Brac Institute of Educational Development, Brac University

Appendix B. Informed Consent Form for Teachers

Title of the Study:

Exploring the Role of Play-Based Learning in Shaping Early Literacy Skills among Kindergarten Children in Cambodia

Sumaia Islam Shumi, Master's Student

Brac Institute of Educational Development, Brac University

Purpose of the Study:

You are invited to participate in a research study that aims to explore how play-based learning influences the development of early literacy skills in Cambodian kindergarten classrooms. This study focuses on your experiences, perceptions, and classroom practices.

What You Will Be Asked to Do:

If you agree to participate, you will be asked to:

- Participate in a one-on-one interview (30–60 minutes).
- Allow classroom observation during literacy-related activities.
- Optionally provide relevant documents (e.g., lesson plans).

Voluntary Participation:

Participation in this study is completely voluntary. You can choose not to take part or withdraw at any time without penalty, and you can decline to answer any questions you don't want to answer.

Risks

- There are no risks to the teacher, students, or classroom practice related to this research.
- No information will be recorded that may be embarrassing or uncomfortable.
- Consent is optional and voluntary.

Benefits:

- You might learn more about your teaching methods and help enhance early childhood education in Cambodia.

Confidentiality:

Your identity and all data collected will remain confidential. Data will be stored securely on a password-protected laptop. Only the researcher will have access to your personal information. Audio recordings of the interview will be kept confidential and will conceal the participants' identities. No reference will be made in oral or written reports that reveals the name. The researcher will use all the data to explore teachers' perceptions of play-based strategies in teaching and how they employ them in their classrooms. Additionally, reports based on the recordings may be shared with the research community at conferences and in research papers.

Consent:

If you have any questions at any point about the study or its procedures, please do not hesitate to contact the researcher by email. If you later decide to withdraw your consent to participate, please don't hesitate to contact the researcher. You can stop participating at any time.

Sumaia Islam Shumi

Email: sumaia.shumi@teachforbangladesh.org

By signing below, you agree that:

- You understand the purpose and nature of the study.
- You voluntarily consent to participate.
- You may withdraw at any time.
- You have the opportunity to ask questions.

Participant's Name: _____

Signature: _____

Date: _____

Researcher's Name: Sumaia Islam Shumi

Signature: _____

Date: _____

Appendix C. Interview Guide for Kindergarten Teachers

Research Topic: Exploring the Role of Play-Based Learning in Shaping Early Literacy Skills among Kindergarten Children in Cambodia

Part 1- Demographic information

Please fill in the blanks or put a tick (✓) next to the word or phrase that best matches your response.

1. Name-
2. Email-
3. Phone number-
4. Age-
5. Year of teaching experience in a kindergarten class-
6. Education qualification-
7. Professional degree-
8. Did you get any training on ‘play-based learning’? (I) Yes (II) No
9. If your answer is ‘YES’, please write the name of the training

Part 2- Interview questions

(This asks for your views on “play-based learning”, the use of games in the classroom, and the reality of kindergarten classrooms. Please provide details of your personal experience and include relevant examples. Because I value your opinion.)

Warm-up Questions:

1. Could you please describe your teaching experience in kindergarten and your familiarity with play-based learning?
2. How early literacy is generally understood or emphasized in your school or community?

Core Interview Questions:

Section 1: Teachers’ Beliefs about Play-Based Learning and Early Literacy in Cambodia

1. How do you define **play-based learning** within the context of your classroom and Cambodian early childhood education?
2. What role do you believe play has in developing early literacy skills such as listening, speaking, vocabulary, and emergent reading and writing?
3. How do cultural values or community expectations in Cambodia influence your beliefs about the importance of play in literacy?
4. Do you think play helps children learn language and literacy effectively? Why or why not?

Section 2: Pedagogical Strategies and Practices for Play-Based Literacy

5. What types of play activities do you use to support children's literacy development? (Examples: pretend play, storytelling, letter games)
6. How do you integrate literacy goals (e.g., recognizing the alphabet, building vocabulary) into play activities?
7. How often do children engage in structured vs. free play in your classroom, and how does each support literacy?
8. Could you describe a successful example where play led to noticeable improvements in a child's literacy skills? (Any specific example from the classroom)
9. How do you observe or assess children's progress in literacy through their play? What signs or behaviors do you look for?

Section 3: Contextual and Systemic Factors

10. What challenges do you face when using play-based learning to promote early literacy? (e.g., lack of resources, large class sizes, curriculum demands)
11. How does the Cambodian national curriculum support or limit play-based learning for literacy?
12. How do parents and the local community perceive play as a learning tool, especially for literacy?
13. Have you received any training on play-based learning or literacy development? How has that shaped your teaching practice?
14. Are there language challenges when teaching literacy through play, especially if children speak multiple languages or dialects?

Closing Questions:

15. In your view, what changes or supports could improve play-based learning practices to foster early literacy in Cambodia?
16. Is there anything else about your experience or beliefs related to play and literacy that you think is important for this research to understand?

Additional Probes to Use:

- How do children respond during these play activities?
- How do you manage time between play and formal literacy instruction?
- Would you like to add any additional information?

Appendix D. Classroom Observation Protocol for Teachers

Research Topic: Exploring the Role of Play-Based Learning in Shaping Early Literacy Skills among Kindergarten Children in Cambodia

School/Kindergarten:

Date:

Subject:

Learning Objectives:

Teacher's Name:

Class Level:

Duration of Observation:

Number of Students:

Observation Checklist for Play-Based Literacy Implementation in the Classroom

Focus Area	Indicator Description	Frequency(Often / Sometimes / Rarely)	Examples / Notes
1. Environment and Materials	Literacy-rich play materials (books, alphabet toys, writing tools) present		
	Play areas are clearly defined (dramatic play, literacy corner, etc.)		
	The materials are culturally relevant.		
2. Types of Play-Based Literacy Activities	Pretend play involves storytelling or role-playing.		
	Letter or sound recognition games are included in play.		
	Opportunities for emergent writing (drawing, scribbling, writing letters)		
	Storytelling, songs, or rhymes are used as part of play		
3. Teacher's Role and Interaction	The teacher facilitates and supports literacy during play.		

	The teacher asks open-ended questions to promote language use.		
	Teacher models literacy behaviors (reading aloud, writing)		
	The teacher encourages peer interaction and collaborative play.		
4. Child Engagement and Behavior	Children actively participate in play-based literacy activities.		
	Children use literacy-related vocabulary during play.		
	Children show interest and enjoyment in play.		
	Children attempt emergent literacy tasks (storytelling, letter recognition)		
5. Assessment and Documentation	The teacher observes and records children's literacy progress during play.		
	The teacher uses informal assessment methods (checklists, notes)		

Additional Notes:

- Classroom (size, layout):
- Resources available:
- Challenges observed:
- Other relevant comments:

Appendix E. Student Observation Protocol

Purpose: To observe and document students' engagement, behaviors, and literacy development during play-based learning activities in the kindergarten classroom.

Observation Type: Non-participant / descriptive

Setting: Cambodian kindergarten classrooms

Observation Details

Observer: _____ Age Group/Class Level: _____
Date: _____ Duration: _____
School/Classroom: _____ Activity Observed: _____

Engagement Indicators Checklist (Frequency Scale)

Engagement Area	Behavior Indicators	Frequency Often / Sometimes / Rarely / Not Observed	Notes / Examples
Verbal Engagement	Talks about the activity, asks/answers questions, and uses vocabulary from the task.		
Literacy Behaviors	Identifies letters/sounds, handles books, and draws/writes symbols.		
	Children use literacy-related vocabulary during play.		
Task Focus	Stays on task, demonstrates absolute attention during the activity.		
Peer Interaction	Cooperates, communicates, and engages with peers during play.		
Initiative and Independence	Starts or directs activity independently and makes choices within the play.		
Creativity and Expression	Uses imagination to create stories, role-play, or solve problems creatively.		

Emotional Engagement	Appears happy, enthusiastic, and confident in participating in play.		
	Show interest and enjoyment in play.		

Observer Reflection Notes

General student reactions to the activity:

Notable literacy behaviors observed:

Group dynamics (peer roles, leadership, and cooperation):

Challenges or disengagement noticed:

Cultural/contextual insights (e.g., local stories, materials, language use):

Additional comments or observations:

Summary Rating

Engagement Level	Description
High	Actively engaged, demonstrating multiple literacy-related and social behaviors.
Moderate	Participates with some prompting; shows partial engagement.
Low	Rarely engages or is distracted throughout the activity.