

UNIVERSITY OF EDUCATION, WINNEBA



**KINDERGARTEN TEACHERS' USE OF PLAY-BASED ACTIVITIES IN
TEACHING AND LEARNING IN THE AYENSUANO DISTRICT**



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MASTER OF PHILOSOPHY

UNIVERSITY OF EDUCATION, WINNEBA



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**A thesis submitted to the School of Graduate Studies
in partial fulfilment of the requirements for the award of the Degree of
Master of Philosophy
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**DEPARTMENT OF EARLY CHILDHOOD EDUCATION
FACULTY OF EDUCATIONAL STUDIES
UNIVERSITY OF EDUCATION, WINNEBA**

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DECLARATION

Student's Declaration

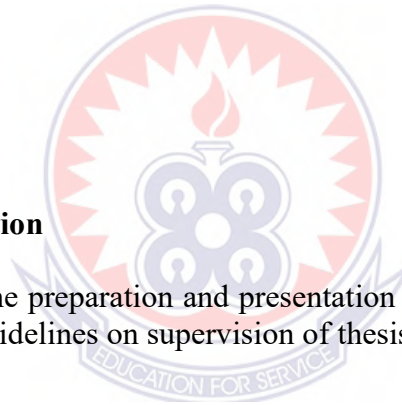
I, **Doris Yaa Frimpong**, declare that this thesis with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature:

Date:

Supervisor's Declaration

I hereby declare that the preparation and presentation of this thesis was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Education, Winneba.



Supervisor's Name: Mrs. Justina Adu

Signature:

Date:

DEDICATION

To my son, Miracle Joojo Mensah and daughter, Keziah Nana Ama Mensah.



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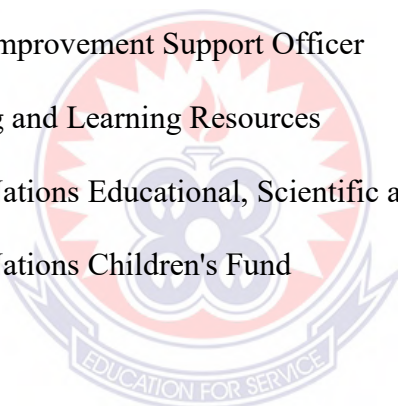
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LIST OF ABBREVIATIONS

ECE	Early Childhood Education
GES	Ghana Education Service
KG	Kindergarten
NaCCA	National Council for Curriculum and Assessment
NGO	Non-Governmental Organization
PBL	Play-Based Learning
PBA	Play-Based Approaches
PBP	Play-Based Pedagogy
PLC	Professional Learning Community
SISO	School Improvement Support Officer
TLRs	Teaching and Learning Resources
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund



ABSTRACT

The purpose of this study was to explore how kindergarten teachers use play-based activities in teaching and learning in the Ayensuano District of the Eastern Region of Ghana. A case study design was employed for the study. Purposive sampling technique was used to select the participants. Data was collected using interviews and observation checklists from twelve participants: four professional Early Childhood Education (ECE) teachers and eight non-professional ECE teachers. Data was analyzed through thematic analysis. The findings of the study revealed that most school authorities and other stakeholders within the education sector do not give sufficient attention or provide adequate support for play-based learning at the early childhood level. Additionally, it was found that many kindergarten teachers in the district face numerous challenges that hinder their ability to administer appropriate assessment tools to evaluate children's developmental progress. The study also identified a lack of teaching and learning resources to support effective instruction at ECE centers. The findings from the study also revealed that kindergarten teachers and headteachers do not receive regular trainings and programs from the training departments of the district directorate. Based on these findings, the study recommends that the Ghana Education Service (GES), in collaboration with the National Council for Curriculum and Assessment (NaCCA), engage other educational development agencies in Ghana, such as Sabre Education Trust and Right to Play (NGOs), as well as the training departments of district education directorates, to provide comprehensive training for kindergarten teachers and headteachers. This training should equip them with the necessary knowledge and skills in the use of play-based activities to enhance teaching and learning. Finally, the GES and NaCCA should organize workshops or in-service training programs to keep kindergarten teachers updated on evolving trends in play-based activities for effective teaching and learning.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter introduces the study, starting with the background and followed by the statement of the problem, the purpose of the study, the objectives, and the research questions. It continues with the significance, delimitations, operational definitions of key terms and the organization of the study.

1.1 Background to the Study

The use of play as a learning approach has become a key strategy for enhancing student engagement, fostering inclusion, and supporting well-rounded skill development beyond early childhood education. Early childhood education has seen the emergence of play-based pedagogy as a transformative strategy that has changed how young children learn (Adams & Nkansah, 2024). Play-based learning is defined as an instructional approach designed to enrich student learning through diverse educational experiences (Pyle & Danniels, 2017). It incorporates developmentally appropriate activities such as exploration, experimentation, engagement, collaboration, and problem-solving, allowing learners to interact meaningfully with both individuals and objects (Dinnerstein, 2016; Nestor & Moser, 2018; Pyle & Danniels, 2017; Yogman et al., 2018). According to the Oxford Dictionary, play is any activity undertaken for enjoyment and pleasure rather than for a serious or practical purpose. Play-based activities are those that promote learning through play, and play-based learning, at its core, involves acquiring knowledge and skills while engaging in playful experiences. Froebel (1894) believed that play allows children to gain insight into their world and serves as a means of creative self-expression. Similarly, White (2004) emphasized that play helps children explore their

surroundings, develop language and social skills, and gain self-awareness. As a result, play is recognized as a crucial factor in fostering both cognitive and social development (Lindon, 2002).

Research on the advantages of play-based learning has primarily focused on two types of play: free play, which is child-directed (Fleer, 2011), and guided play, which involves some level of teacher support or intervention (Fisher et al., 2013). Free play refers to play that is initiated by the child (Graue, 2009). It enables children to build social relationships, select their own level of challenge, and develop decision-making skills (Ashiabi, 2007). In contrast, teacher-initiated play involves active teacher participation, where educators provide feedback, extend conversations, and introduce relevant resources to enrich interactions (Graue, 2009). By emphasizing play-based learning, students continue to develop appropriately while also meeting expected learning outcomes (Miller & Almon, 2009).

Play-based learning encourages, engages, and enhances young children's oral literacy and communication skills (Pyle & Danniels, 2017). It offers students opportunities to develop positive attitudes and apply newly acquired skills (Cavanaugh et al., 2017; Pyle et al, 2018). Through play, learners can improve their oral language skills by using complex grammar and expanding their vocabulary, ultimately supporting comprehension and reading proficiency (Stagnitti et al., 2016).

Over a century ago, Dewey (1910) recognized a link between children's natural experimentation in play and the scientific inquiry process. Vygotsky (1978) emphasized the significant role of play in child development, particularly in fostering speech, cognitive processing, self-awareness, and self-regulation. Neuroscientific research has shown that play refines the prefrontal cortex and stimulates the

production of a protein that promotes the growth and differentiation of neurons and synapses (Gordon et al., 2003). In contrast, a lack of play can hinder brain development and problem-solving abilities (Pellis et al., 2014). As a result, play-based interventions are commonly used to support children in developing socio-emotional skills, including forming positive peer relationships (Fantuzzo & Hampton, 2000).

Furthermore, play-based learning offers numerous advantages for children by supporting the development of skills, attitudes, and knowledge (UNICEF, 2018). When implemented effectively, it helps children cultivate lifelong learning abilities that extend beyond early education and serve as a foundation for their future academic journey (Rauf & Baker, 2019). Through play-based learning, children actively engage in and enhance their cognitive abilities, including problem-solving, reasoning, and lateral thinking.

Play-based learning allows children to engage with others, build communication skills, and collaborate with both peers and adults. By making choices and initiating play, children gain confidence and develop self-motivation, fostering a sense of responsibility and self-regulation. Additionally, it offers valuable opportunities for children to navigate conflicts, address unfair play, and appreciate diversity (Mekonnen, 2016). Vygotsky (1978) emphasizes the significance of play in fostering social interaction and language development. Through play, children naturally learn to communicate and express themselves while exploring their surroundings. Moreover, play creates a zone of proximal development, allowing children to act beyond their typical age and daily behaviours. Vygotsky advocates for the role of adults and peers in scaffolding children's play, fostering creativity and imagination from early childhood into adulthood (Berk, 1994).

Conversely, Piaget (1951) argues that children construct knowledge by interacting with others and engaging with their environment. He underscores the connection between play and cognitive development, suggesting that play enables children to reach higher levels of cognitive growth by assimilating new experiences. Research points to learning through play as a promising pedagogy that is correspondingly expansive in its aims and outcomes for learning (Marbina et al., 2011). The National Council for Curriculum and Assessment (NaCCA) has adopted play-based learning as the heart of the new standard-based curriculum which is being implemented by the Ghana Education Service (GES).

According to NAEYC (2009), play plays a crucial role in supporting the holistic development of children. It significantly contributes to their cognitive, physical, social, and emotional growth (Rosli & Lin, 2018; Ali & Mahamod, 2015). Despite these considerations, there is increasing concern about how teachers incorporate play in the classroom (Genishi, Ryan, Ochsner & Yarnall, 2001). Notably, in Ghana, limited research exists on the use of play in early childhood education settings (Abdulai, 2014; Rauf & Baker, 2019). In general, perceptions of play in Ghana tend to fluctuate between views of it as both chaotic and harmonious (Abdulai, 2014; Whiteman, 2018).

Although learning through play is widely recognized as a hallmark of high-quality early childhood education (Wall et al., 2015; Nilsson et al., 2018) and international policy defines early childhood as spanning from birth to age eight (Irwin et al., 2007), research on play-based learning in schools for children over five remains limited (Howard, 2010; Jay & Knaus, 2018). The low adoption rate in schools may stem from varying perceptions of play and learning (Smith, 2015), as well as the competing

demands and constraints within preschool and school settings (Nicholson & Hendry, 2020). Moreover, in an attempt to enhance school readiness, some education systems are prioritizing early instruction in reading and mathematics in preschool, often at the cost of holistic child development fostered through play-based learning (Miller & Almon, 2009; Allee-Herndon & Roberts, 2020).

Additional challenges to the use of play-based learning include assessment requirements and accountability pressures. The use of authentic assessment methods was emphasized to be used at the kindergarten level to promote learning (NaCCA, 2019). Classroom assessment, particularly formative assessment, is recognized as a key element in enhancing educational quality and serves as the cornerstone of various educational improvement initiatives (Owusu-Oduro, 2015). Assessment impacts every aspect of a student's education (Brown, Rust & Gibbs, 1994; Gibbs, 2006).

Modifying assessment methods can lead to shifts in learning, making it essential to carefully evaluate assessment practices. However, the current focus on accountability regarding kindergarten children's knowledge and abilities, along with teacher performance, has led to the term "assessment" being used inconsistently (McAfee et al., 2004). This has resulted in a reliance on standardized procedures, such as tests, to measure children's development and learning (Miller & Almon, 2009). Consequently, children are subjected to undue pressure to meet expectations that may not be developmentally appropriate.

Many parents perceive play as separate from learning and see little value in its role within the school environment (Rauf & Baker, 2019; Samuelsson et al., 2011). Teachers who share this perspective often rely heavily on teacher-directed instruction, struggling to interpret children's learning through play (McInnes et al., 2011; Walsh et

al., 2010). Furthermore, high parental expectations for academic success have led to increased pressure on schools and teachers to equip children with the knowledge and skills needed for both present and future success (Whiteman, 2018). As a result, teachers are often expected to prioritize direct instruction over play-based learning.

In a child-centered kindergarten, teachers integrate play and play materials into daily learning activities (Graue, 2009). This approach allows students to explore their learning environment through free play, the use of play materials, and teacher-guided play experiences. In modern kindergarten classrooms, play materials have taken a lesser role, with teacher-directed instruction becoming more dominant. This shift is driven by the belief that direct instruction is more effective in preparing children for success on standards-based assessments. Miller & Almon (2009) note that the traditional kindergarten classroom—once characterized by ample space and time for unstructured play, exploration, art, music, social skill development, and a love for learning—has largely faded away.

Warner (2008) emphasized that play materials are not only beneficial but also crucial in supporting children's social, emotional, and cognitive development. They play a vital role in helping children reach key developmental milestones, manage stress, and build resilience. The most effective way to evaluate whether teaching in early childhood education (ECE) is child-friendly and relevant is by examining the teaching and learning strategies used. The approaches adopted by both teachers and pupils play a crucial role in fostering self-mastery of skills and concepts, particularly during this formative stage of development.

The process of teaching and learning using play-based learning is a structured approach that provides learners with the opportunity to learn in a meaningful and

positive way (Loy, 2017). Studies on early learning and development confirm that when children receive appropriate support during play, it enhances rather than detracts from their learning (Bergen, 2002). This underscores the importance of examining how kindergarten teachers use play-based pedagogy in the Ayensuano District.

1.2 Statement of the Problem

In recent years, play-based learning has become a topic of interest, discussion, and debate across various national contexts (Bubikova, 2019). Engaging in play-based activities plays a crucial role in children's overall growth and development. Research suggests that children who actively participate in play are more likely to experience well-rounded development (Rauf & Baker, 2019). Kindergarten education has undergone significant changes, with a growing emphasis on rigorous academic instruction and a move away from play-based learning practices in early childhood classrooms (Pyle & Danniels, 2018; Pyle, Poliszczuk, & Danniels, 2018).

Despite extensive evidence supporting the role of play in childhood learning and development - dating back to Piaget's Play, Dreams, and Imitation (Sutton-Smith, 1966) and more recent works like Play-Based Learning by Singer, Golinko, and Hirsh-Pasek (2006) - play-based learning has been increasingly side-lined in early childhood education programs. Instead, there is a growing emphasis on teacher-directed instruction aimed at meeting early learning standards. Nicolopoulou (2010) found that in several countries, concerns have been raised about the alarming decline of play in early childhood education (ECE) practices. Additionally, research suggests that mounting academic pressures are limiting children's opportunities for play, potentially depriving them of essential developmental experiences (Daubert et al., 2018; Irvin, 2017). Many schools and teachers overlook the importance of play-based

pedagogy, prioritizing early reading and formal education over engaging, play-centred learning (Ismail, 2015). Increasingly, stakeholders perceive play-based learning as an inefficient use of instructional time, doubting its impact on academic achievement. Consequently, numerous early childhood schools have scaled back or entirely removed play-based activities from their curricula. This shift has led to the decline of socio-dramatic play and the disappearance of domestic play areas in early childhood classrooms (Lester & Russell, 2008).

A study conducted in Ghana found that play is not consistently integrated into teaching and learning, and play materials are often scarce (Abdulai, 2014). Similarly, Putch and Ali (2012) emphasized that implementing play-based pedagogy can be challenging without the necessary knowledge and skills. Consequently, many schools and childcare centres rely on instructional methods such as drills and repetitive practice, while play-based activities are largely overlooked in the teaching and learning process (Miller & Almon, 2009).

Despite the Ghanaian government's strong policy commitment to the kindergarten sector, challenges related to access and quality persist. Inadequate teaching and learning resources exacerbate the challenges of using play activities in the classroom. The demand for resources at this level remains high, yet teaching and learning materials are limited, and nearly half of all kindergarten teachers have never received formal training (Mereku, 2019, as cited in Sabre Charitable Trust Country Report, November 21, 2017). Additionally, the NGO, Right to Play highlights that early childhood educators continue to struggle with curriculum and pedagogical challenges, leading to a gap between educational priorities and actual teaching methods in kindergarten classrooms (Right to Play Ghana, 2016).

Ghana's 2006 kindergarten curriculum clearly outlined assessment methods for children in early childhood centres. However, its implementation has been weak due to a lack of sufficient resources for teachers. Successive governments in Ghana have established high standards for both kindergarten children and their teachers. As part of teacher accountability measures, specific performance targets are set, commonly referred to as the "output of work." However, in response to these accountability demands, teachers are often seen as relying on inappropriate strategies to demonstrate their effectiveness in managing children's learning (Amoh & Subbey, 2022). As a result, kindergarten assessment practices in the country lack uniformity, which could impact the reliability and consistency of data collected on children.

Asare (2006) reported that kindergarten teachers in Ghana primarily rely on pencil-and-paper tests to assess children's learning. However, the study did not specify which aspects of children's learning and development these tests focus on. It is crucial for teachers to employ appropriate assessment methods that align with the intended purpose of evaluation.

Although existing literature highlights the importance of play-based learning and identifies challenges in its implementation in Ghana, there is limited empirical evidence on how kindergarten teachers in specific districts interpret and implement play-based pedagogy in practice. In particular, little is known about teachers' level of exposure to play-based approaches, their pedagogical competence, the types of play activities they use, and the assessment strategies they employ within the classroom context. Furthermore, while policy documents promote play-based learning, the extent to which classroom practices align with these policy expectations remains underexplored. There is also inadequate evidence on how resource constraints and

accountability pressures influence teachers' instructional decisions. Therefore, this study seeks to examine kindergarten teachers' exposure to and use of play-based activities in teaching and learning in the Ayensuano District of the Eastern Region of Ghana, in order to bridge the gap between policy intentions and classroom realities.

The Ayensuano District presents an important context for examining these issues, as it reflects the realities of many districts in Ghana where policy expectations coexist with resource limitations and varying levels of teacher preparation. Understanding how play-based pedagogy is enacted within this district provides context-specific evidence that can inform district-level planning, teacher professional development, and curriculum support. Insights from this study may also contribute to broader discussions on strengthening the implementation of play-based learning in similar districts across Ghana.

1.3 Purpose of the Study

The purpose of this study is to examine how kindergarten teachers' use play-based activities in teaching and learning within the Ayensuano District.

1.4 Objectives of the Study

The objective of this study was to examine kindergarten teachers' use of play-based activities in teaching and learning in the Ayensuano District. Specifically, the study sought to:

- i. examine how kindergarten teachers use play-based activities in the Ayensuano District;
- ii. examine the teaching and learning resources available to kindergarten teachers to facilitate play-based activities in the Ayensuano District;

- iii. find out the assessment tools used by kindergarten teachers during play-based activities in the Ayensuano District;
- iv. establish the challenges kindergarten teachers face when using play-based activities in the Ayensuano District.

1.5 Research Questions

- i. How do kindergarten teachers use play-based activities in the Ayensuano District?
- ii. What are the teaching and learning resources available to kindergarten teachers use to facilitate play-based activities in the Ayensuano District?
- iii. What assessment tools are used by the kindergarten teachers to evaluate play-based activities in the Ayensuano District?
- iv. What are the challenges kindergarten teachers face when using play-based activities in the Ayensuano District?

1.6 Significance of the Study

The findings of the study will be a significant endeavour in promoting the use of play-based activities in the early childhood learning environments. It will also be beneficial to curriculum developers and ECE teachers in strategic management when they employ effective play-based learning activities in their classroom settings particularly, indifferent concepts that will facilitate the growth and development of the learners.

Moreover, this study will provide recommendations on how ECE teachers will effectively and efficiently use the play-based activities in accordance to the holistic development of early childhood learners. Furthermore, this research will educate stakeholders (parents, guardians, and teachers) on the need to embrace and support the use of play-based learning activities in the ECE centres. For other researchers, the

study can be a source of valuable up-to-date information which can be very useful for their similar studies on the subject matter.

1.7 Delimitations of the Study

This study was conducted in the Ayensuano District, located in the Eastern Region of Ghana. The study focused on how kindergarten teachers use play-based activities in their teaching and learning. The variables studied included play-based activities, teaching and learning resources, and assessment tools. Interview was used to collect data from twelve (12) kindergarten teachers on the use of play-based learning in teaching and learning by kindergarten teachers in public schools. Observation guide was also used to collect data from the twelve (12) kindergarten teachers to support or substantiate the data from the interview. The reason for the choice of the district is the cultural diversity of the people. Again, the study focused on kindergarten teachers from public schools in two circuits out of the nine circuits in the district.

1.8 Operational Definition of Terms

Below is the operational definition of concepts used in this study.

Kindergarten (K.G) Teachers: Educators who specialize in working with young children, typically from age four to six years.

Teaching and learning resources (TLR's): Materials used by the teacher to supplement classroom instruction.

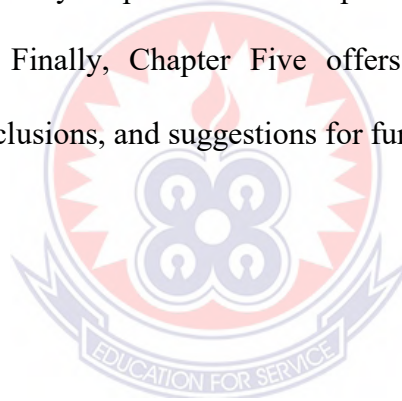
Assessment Tools: Methods teachers use to measure, evaluate and diagnose their learners progress during teaching and learning.

Pedagogical Strategies: Practices and teaching style of teachers.

Play-based Learning (PBL): Learning through play

1.9 Organization of the Study

The study is organised into five chapters. Chapter One provides the background, the problem statement, the purpose of the study, the research objectives, the research questions, the significance of the study, delimitations and organization of the study. Chapter Two reviews related literature under three main themes: the theoretical framework, the conceptual review, and the empirical review. Chapter Three outlines the research methodology, detailing the research paradigm, research approach, research design, population, sample and sampling techniques, data collection procedures, and data analysis procedures. Chapter Four presents the results and analysis of the data. Finally, Chapter Five offers a summary of the findings, recommendations, conclusions, and suggestions for further research.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter focuses on the review of literature that is related to the research problem. The review covered three areas, namely: Theoretical Perspective, Conceptual Review and Empirical Review of the Literature.

2.1 Theoretical Perspective

This part of the study spells out the theory on which the study is premised. The theory underpinning this study was the Social Constructivism Theory by Vygotsky in 1968.

2.1.1 Constructivism Theory

The definition of constructivism varies depending on different perspectives and contexts. It includes philosophical interpretations in education, personal constructivism as defined by Piaget (1967), social constructivism by Vygotsky (1978), and radical constructivism supported by Von Glasersfeld (1995). Educational constructivism, as described by Mathews (2003), encompasses constructivist epistemologies and theories of learning and pedagogy. Among these, social constructivism and educational constructivism have had the most significant impact on instruction and curriculum design in current educational practices. Scholars and researchers have extensively studied various constructivist theories (Mathieson, 2012), focusing particularly on how social and individual processes interact in the co-construction of knowledge. This perspective emphasizes understanding the influence of social and cultural factors on cognition and proposes methods for incorporating these insights into learning approaches. Key insights from Piagetian and Vygotskian perspectives have informed the development of these theories.

Bruner proposed constructivism in 1966, suggesting that individuals learn about the world by experiencing and reflecting on it. This philosophy is rooted in cognitive theory, termed cognitive constructivism (Olorode and Jimoh, 2016). According to Kussmaul & Pirmann (2021), when new knowledge is received, individuals either integrate it with existing beliefs or disregard it. In either case, knowledge creation occurs through questioning, investigation, and evaluation. This highlights how learners develop understanding as they make sense of their experiences. People actively generate new information through interaction with their environment (Kanno, 2018). Constructivist learning encourages students to employ practical methods to acquire knowledge, reflect on their work, and engage in classroom discussions. The philosophy discourages rote memorization of others' ideas and definitions, instead promoting learners to discover their own understanding. Children often develop their own explanations rather than memorizing lengthy definitions of terms, often through collaboration with peers. Now, considering the social aspect of constructivism (Fleury & Garrison, 2014), constructivism is a theory of learning based on empirical observation.

The argument posits that individuals construct their understanding through experience and reflection. When encountering new information, we must reconcile it with our existing knowledge and experiences, potentially revising our beliefs or disregarding the new information as irrelevant. In any case, we actively engage in creating knowledge by asking questions, conducting investigations, and evaluating findings. In educational settings, constructivism leads to various instructional approaches (Kutay, Howard-Wagner, Riley & Mooney, 2012). These typically involve encouraging students to use active methods such as experiments and real-world problem-solving to acquire knowledge and discuss their discoveries. The teacher's role is to guide these

activities, challenging and building upon students' existing conceptions (Amineh & Asl, 2015).

Social Constructivism

Social constructivism, as articulated by Vygotsky in 1978, posits that language and culture serve as lenses through which individuals perceive and engage with the world. These frameworks significantly shape intellectual development and how people understand their surroundings. Knowledge, under this theory, is not solely acquired individually but is socially constructed through interaction within a community sharing a common language and cultural context. According to Vygotsky (1978), children learn through collaborative efforts with peers, teachers, and others, where language facilitates the interpretation and assimilation of concepts based on cultural experiences. This perspective emphasizes that learning is a collaborative process, involving dialogue, shared experiences, and mutual support among learners and facilitators alike (Mohammed & Kinyo, 2020; Kennedy, 2014; Taylor, 2018).

Vygotsky (1978) posited that social interaction is crucial for lifelong development and contributes significantly to cognitive growth. According to him, learners can successfully tackle tasks, regardless of difficulty, with the assistance of adults or peers through collaboration. This approach fosters collaboration among students, teachers, and peers to construct knowledge and understanding on a solid foundation (Aljohani, 2017). Fleury & Garrison (2014) elaborate that knowledge is socially produced across diverse settings like educational institutions, social media forums, religious contexts, or market environments, where interactions with others and their surroundings provide valuable insights and experiences essential for adult life. Social constructivism, as an instructional approach, prioritizes student engagement,

discussion, and sharing, facilitating various groupings and interactive strategies such as whole-class conversations, small-group discussions, and paired activities. Through these methods, students exchange ideas, brainstorm solutions, and explore new knowledge to enhance their existing understanding (Al-Qaysi et al., 2021).

Characteristics of Social Constructivism Theory

Understanding how social constructivism interprets learning and learning communities involves grasping the principles through which this theory views the process of learning and the communities within which learning occurs. The following provides an overview of social constructivism.

1. Learners build their knowledge

Students, trainees, and others need to cultivate their understanding as their minds generate new knowledge and information. This process involves reasoning, critical thinking, and judgment. New concepts and ideas are best understood when connected to existing ones. As Dewey emphasized, education is an active and productive process, not merely a passive exchange of information through listening and receiving. Instead of simply absorbing information as it is presented, ideas, information, and knowledge acquired from others are transformed and evaluated.

2. Knowledge is gained through first-hand experience

Educators provide theoretical and conceptual knowledge to learners, while individuals acquire knowledge through their life experiences. In contrast, learners integrate their prior experiences to enhance their academic learning, understanding the significance of acquired knowledge, especially among adult learners. Therefore, learning is shaped by learners' real-life experiences.

3. Learning occurs within a social context

Learning is enriched through social interaction, interpersonal connections, and communication within communities. Cultures, languages, and societal norms all play roles in shaping people's learning experiences. Learning is inherently social, involving active engagement with society. Individuals acquire knowledge and familiarity with diverse subjects, objects, and concepts through social interaction. Isolation hinders the awareness and understanding of various fields and topics. Learners benefit from emotional and substantial support from their communities, empowering them to confront challenges and take charge of their learning journey.

Impact of social constructivism on instructional approaches

Teaching methods encompass the techniques and strategies employed by educators to effectively deliver subject matter in the classroom. Dorgu (2015) defines teaching methods as the manner in which teachers present their material to students to facilitate learning, tailored to the specific subject matter. Aljohani (2017) elaborates that teaching techniques encompass the concepts and strategies educators utilize to aid student learning. These definitions underscore the existence of instructional methods designed to optimize student learning, influenced by learning theories such as social constructivism. According to social constructivism, knowledge is socially constructed through interaction and is shared among groups rather than individually owned. Kelly (2012) advocates for the integration of social constructivist principles into classroom practices through various instructional strategies.

Some instructional strategies aligned with social constructivism include case studies, research projects, problem-based learning, brainstorming, group work, guided discovery learning, and simulations. Educators can structure activities where learners

are organized into groups or pairs, guiding them through the process of discovery and learning by posing questions, providing prompts, and directing them towards desired learning outcomes.

Broadly, social constructivist teaching approaches can be categorized into action-oriented methods, group work strategies, and discussion-based techniques. Omwirhiren (2015) defines discussion techniques as structured engagements that enhance student learning. Jegede (2010) asserts that these methods facilitate learning by allowing students to develop communication skills and cognitive abilities such as critical thinking, reflection, and the evaluation of differing perspectives. In this approach, the teacher serves more as a facilitator rather than a lecturer, guiding students through the process of self-discovery through informed dialogue.

Collaborative learning occurs when students and teachers collaborate on topics, often through small group or whole-class discussions Janssen (2008). The teacher facilitates these discussions while allowing all students the freedom to express their thoughts within agreed-upon guidelines to maintain order. This method enhances student engagement, retention, and participation in the lesson, fostering democratic thinking by promoting open debate and mutual understanding. It encourages reflective thinking, enabling students to analyse and understand challenges more effectively.

Group work encompasses methodologies such as Problem-Based Learning which focuses on addressing challenges through collaborative problem-solving. Project-Based Learning emphasizes inquiry skills and real-world application. Jigsaw, a well-known cooperative learning method outlined by Kussmaul & Pirmann (2021), involves students working together in groups, fostering collaboration throughout the learning process.

The role of teachers in social constructivist pedagogy emphasizes several key strategies. Firstly, instruction should be learner-centred, focusing on students rather than the teacher. This approach encourages active student participation in generating ideas, asking questions, defining concepts, and exploring hypothetical scenarios. Secondly, natural collaboration is promoted, where learning occurs through social interaction among students, fostering cooperative problem-solving, analysis, and the examination of topics to develop knowledge independently (Saleem et al., 2021).

Teachers are expected to create a social constructivist learning environment that fosters group engagement. They should discourage competitiveness among students while promoting collaboration and the sharing of experiences. This approach cultivates a supportive classroom atmosphere where students learn from one another and collectively construct knowledge through shared exploration and dialogue.

Social Constructivism in the classroom

- Teachers apply constructivist principles to foster and embrace students' independence and creativity, encouraging them to become more resourceful.
- Educators integrate raw data and primary sources into their lesson plans, utilizing interactive and substantive materials.
- Constructivist teachers use cognitive language when designing assignments and tasks.
- Teachers practicing constructivism empower learners to contribute to class planning, adapt instructional strategies, and modify content based on their learning needs and interests.

- Constructivist teachers typically allocate additional time for learners to explore problems, seek solutions and explanations, and formulate responses. Teachers exercise patience and wait as learners analyse questions.
- Learners under constructivist teaching are given opportunities to build relationships and create metaphors, emphasizing the importance of establishing connections with both teachers and peers in the classroom.
- Constructivist educators' foster learners' natural curiosity by frequently utilizing the learning cycle process, which involves three stages focusing on metacognition. In the initial stage, students generate questions and hypotheses, followed by experimentation where teachers broaden and focus on learners' perspectives. Lastly, there is a stage of generalization where learners apply their learning, enabling them to manage and enhance their own learning process.

However, social constructivist pedagogical principles challenge traditional practices, requiring teachers to reflect on their methods. As a result of social constructivism, the role of learners' shifts from passive listeners to active participants and co-constructors of knowledge alongside their peers, thereby transferring the responsibility of knowledge acquisition from teachers to learners. The researcher found this theory relevant to the current study.

2.2 Conceptual Review

2.2.1 Pedagogical Approaches

Pedagogical approaches encompass a set of instructions, techniques, and methods that facilitate learning and provide opportunities for acquiring knowledge, skills, attitudes, and behaviours within specific social and material contexts. Teachers implement

pedagogical approaches with a focus on student-centred learning, aiming to impart knowledge while students actively acquire it.

Pedagogical approaches in early childhood education

1. Play-based approach

According to UNESCO (2021), play-based learning as an approach where play is the primary context for learning. It involves children engaging actively and interactively in activities that allow for exploration, experimentation, and expression. Through play, children build a wide range of skills, including cognitive, social, emotional, and physical abilities. This approach emphasizes the importance of joyful, meaningful, and inclusive learning experiences that foster creativity, imagination, and problem-solving skills. It also respects the rights of children to learn through play, acknowledging its critical role in early childhood development (UNESCO, 2021).

In this approach, children are seen as active participants in their learning, where they lead activities with curiosity and imagination, while educators facilitate by providing a supportive environment and guiding their learning experiences (UNESCO, 2021).

The National Council for Curriculum and Assessment (NaCCA) and Ghana's new standards-based curriculum emphasize play-based learning as a crucial component of early childhood education. It describes play-based learning as an approach that integrates play with educational objectives, allowing children to develop essential cognitive, social, emotional, and physical skills through active engagement and exploration. It views play as a natural way for children to learn, offering opportunities for creative thinking, problem-solving, and the development of language and communication skills (NaCCA, 2019).

The curriculum highlights the importance of play-based learning in fostering holistic child development, helping children to build confidence, collaboration skills, and a positive attitude toward learning. Educators are encouraged to create environments that promote play and incorporate it into daily lessons, ensuring that learning is both enjoyable and effective. This method is seen as critical to achieving the objectives of the standards-based curriculum, which aims to produce well-rounded, competent learners (NaCCA, 2019).

The play-based approach in early childhood education involves both child-initiated and teacher-directed learning. Teachers encourage students' learning and inquiry through interactions aimed at enhancing their thinking and understanding. Play is seen as a multifaceted activity with several characteristics: spontaneous, allowing for failure, enjoyable, challenging, intrinsically motivated, engaging, imaginative, and social. Upon enrolment, learners are provided with toys and engage in purposeful, facilitated, guided, or free play. During these play activities, teachers observe how students learn (McGolerick, 2013).

A play-based approach in early childhood education typically includes various sections such as a science area, reading nook, block section, kitchen, dolls, cars, art, musical instruments, and more (Wohlwend, 2013). Research shows that learners in early childhood centres often develop strong attachments to their toys, sometimes becoming possessive and reluctant to share with others. Teachers play a crucial role in helping them understand the importance of sharing toys and other play items with their peers, ensuring that all learners have equal access to play materials.

Globally, research indicates that play-based pedagogy as an educational approach where play is utilized as the main medium for learning (Ahmed, 2024). This

pedagogy is rooted in the belief that children learn best when they are actively engaged, curious, and motivated, often through exploration and interaction with their environment. According to Wood (2014), play-based pedagogy promotes cognitive, social, emotional, and physical development by providing children with opportunities to engage in problem-solving, experimentation, and creative thinking.

Research also shows that play-based pedagogy fosters a learner-centred approach, where children take control of their learning experiences. Pedagogues like Pyle and Danniels (2017) emphasize that play-based pedagogy combines the spontaneous and joyful aspects of play with intentional teaching to guide children's learning outcomes. This balance between child-led and educator-supported activities allows for a deeper and more meaningful engagement with educational content.

Moreover, Samuelsson (2008) underscore the significance of this pedagogy in nurturing holistic development, as it fosters self-regulation, collaboration, and adaptability. They point out that play is not only a tool for learning but also a child's right, as recognized in international conventions such as the United Nations Convention on the Rights of the Child.

In schools, learners are encouraged to engage in play activities before formal learning begins on other concepts. This approach aims to familiarize students with the school environment and create a positive and inclusive atmosphere where all children can participate actively. Therefore, promoting a play-based approach is essential for acclimating learners to school settings.

2. Thematic instruction

A theme-based approach refers to an instructional method that organizes learning around central themes or topics (Chaojing, 2023). These themes integrate various subjects or disciplines, promoting connections between them to deepen students' understanding and engagement. Instead of focusing on isolated skills or subjects, a theme-based approach contextualizes learning by relating content to a central theme, encouraging holistic understanding. This method fosters critical thinking, creativity, and collaborative learning by allowing students to explore content through an interconnected framework (Drake & Reid, 2018). It is commonly used in interdisciplinary education to help learners make real-world connections between what they are learning.

The theme-based approach in education is the method of teaching and learning where various subjects in the curriculum are interconnected and integrated under a central theme. Thematic units serve as valuable tools for teachers to facilitate student learning. In early childhood education, learners often have unique learning styles, and theme-based approaches cater to these individual ways of understanding concepts. Thematic units are particularly popular in nursery education because young children learn best through interactive, hands-on activities.

Educators recognize that employing thematic units and implementing theme-based learning is systematic and methodical in fostering education. Students benefit by relating their learning to real-world experiences, thereby enhancing their comprehension of the subject matter. Thematic units also assist teachers in making learning enjoyable for students. It is crucial for educators to ensure that learning is

enjoyable for learners, igniting their interest and motivation to learn through effective teaching methods and approaches.

A thematic approach to teaching integrates all academic subjects under a central theme, providing students with a comprehensive understanding of the topic through various perspectives. For instance, if the theme is "plants," all classroom activities such as artwork, crafts, colours, pictures, and even music and singing would revolve around plants. Teachers plan the duration for focusing on each theme, typically ranging from a few weeks to a month, allowing learners ample time to develop a thorough understanding before transitioning to the next topic. This structured approach not only benefits students by deepening their comprehension but also supports teachers in organizing the curriculum effectively.

3. Activity-based approach

An activity-based approach is a teaching method that emphasizes learning through hands-on activities and experiences. This approach engages learners in practical tasks, allowing them to apply theoretical concepts in real-life situations. Researchers like Prince and Felder (2006) suggest that activity-based learning enhances students' understanding by encouraging active participation, critical thinking, and problem-solving. Kolb (2014) also emphasized that experiential learning, a core component of the activity-based approach, fosters deeper knowledge retention and application by involving learners in a continuous cycle of experience, reflection, and application. Similarly, Singh and Agrawal (2011) argue that the activity-based approach improves cognitive and social skills, making learning more student-centred. Bruner (1996) further notes that this method promotes discovery learning, where students build their knowledge by interacting with the world around them.

4. *Inquiry-based approach*

The inquiry-based approach is an educational method that emphasizes the learner's role in the learning process, encouraging them to ask questions, investigate, and explore topics independently or collaboratively (Acar & Tuncdogan, 2019). Instead of being passive recipients of information, learners actively engage in the discovery of knowledge, often through problem-solving and critical thinking. This approach fosters deeper understanding by having learners explore concepts through inquiry, experimentation, and analysis, thus promoting a more personalized and meaningful learning experience (Harlen, 2015). Inquiry-based learning typically follows a process where learners formulate questions, conduct investigations, gather and analyse data, and draw conclusions (Pedaste et al., 2015).

The inquiry-based approach enables learners to develop deep content knowledge, critical thinking, collaboration, creativity, and communication skills. Implementing this approach from early childhood is crucial to foster effective growth and development, particularly focusing on the development of these competencies.

2.2.2 The Concept of Play

Since the early 2000s, many countries, including Ghana, have increasingly embraced play-based activities in early childhood education (Pyle et al., 2018). Play-based activities are designed to promote learning through play, aligning with the concept of play-based learning, where children acquire knowledge and skills while engaging in playful experiences. Although researchers continue to debate the precise definition of play and which activities qualify as such (Wallerstedt & Pramling, 2012), Piaget regarded play as a vital process through which children integrate their experiences, knowledge, and understanding of the world.

While learning is not a requirement for an activity to be considered play, it is a core component of play-based learning (Pyle et al., 2017). Research exploring the advantages of play-based learning typically focuses on two main types of play: free play, which is initiated and directed by the children themselves (Fleer, 2011), and guided play, which involves some degree of teacher support or intervention (Fisher et al., 2013).

In child-centred early childhood settings, teachers integrate play as a key component of the daily curriculum. Children are encouraged to engage with their learning environment through both free play and teacher-initiated activities (Graue, 2009). Free play refers to play that is initiated and led by the child (Graue, 2009). It is characterized by being child-directed, voluntary, intrinsically motivated, and enjoyable (Ashiabi, 2007; Miller & Almon, 2009). This type of play supports the development of social relationships, allows children to select their own level of challenge, and fosters decision-making skills (Ashiabi, 2007).

Teacher-initiated play, also referred to as guided play, involves active teacher participation in children's play experiences. In this approach, the teacher plays a supportive role by offering feedback, enriching conversations, and introducing relevant resources to enhance learning (Graue, 2009). Within a play-based learning framework, this guided interaction ensures that children continue to develop appropriately while also meeting educational expectations (Miller & Almon, 2009). From this standpoint, early childhood education (ECE) should not rely solely on free play, as it may not sufficiently support academic growth. Instead, meaningful teacher engagement in play-based activities is essential for fostering deeper learning and development (Presser et al., 2015).

A growing body of research supports the use of play-based activities to foster various aspects of children's development and learning. However, there remains considerable debate among researchers and educators about the role and effectiveness of different types of play in the classroom (Lillard et al., 2013). Advocates for play-based learning emphasize that such strategies can effectively support academic growth by delivering curriculum content in a way that is both engaging and developmentally appropriate (Balfanz et al., 2006).

2.2.3 Assessment in Early Childhood Education

In the realm of teaching and learning, it's crucial to continually assess and evaluate the effectiveness of the educational process (Adom et al., 2020; Manichander, 2016). Assessment, which encompasses activities before, during, and after teaching, plays a pivotal role. Despite numerous scholarly attempts to clarify these concepts (Kivunja, 2015), confusion persists among student-teachers, educators, and academics who often incorrectly use "assessment" and "evaluation" interchangeably (Lane et al., 2016). This misuse is unacceptable in professional education, where precise understanding and application of these terms are essential. Educators employ various types of assessments for diverse educational objectives, depending on the timing and context of the learning process. Assessment holds significant importance for both policymakers and practitioners alike. It serves the dual purposes of accountability, which involves determining the extent of students' learning, and informing instructional design to enhance educational practices (UNESCO, 2019). These two objectives can either complement each other or present challenges that may contradict one another, underscoring the complexity inherent in the assessment process (Earl, 2003).

Gronlund (2003) defines assessment as "the various methods used to determine the extent to which students are achieving the intended learning outcomes of instruction" (p. 14). However, current educational practices often assess student learning in ways that lack meaningful alignment with what learners should demonstrably know and be able to do (Angelo, 1995). This mismatch frequently results in poorly designed assessments that yield unreliable or invalid results (Gronlund, 2003).

Such deficiencies in assessment can have profound effects on learners, leading to issues in classroom management like low motivation, behavioural problems, and frustration. To mitigate these potential problems, teachers must ensure that their assessment procedures provide valuable and accurate information about student learning. It's crucial that assessments used are closely aligned with the instructional content delivered throughout the term (Stiggins et al., 2004).

Forms of Assessment

Assessment can generally be categorized into formative or summative types. Formative assessment occurs continuously throughout the learning process. It is conducted by teachers with the goal of providing immediate and informative feedback to both students and teachers. This feedback helps to identify the gap between what students currently know and can do, and what they are expected to know and be able to do (Shavelson, 2006).

Formative assessment practices in the classroom can vary widely, ranging from informal to formal approaches (Bennett, 2011). The position of a particular formative assessment practice on this continuum depends on several factors: the level of planning involved, its formality, the type and quality of data collected, and the nature of the feedback provided to students by the teacher. These factors collectively

determine how effectively formative assessment informs instructional decisions and supports student learning.

Formative assessment hinges on providing immediate and specific feedback after each learning step to promptly correct students' errors and guide their progress without unnecessary delays. To maximize its benefits, formative assessment should not be a one-time event but rather a continuous process that shapes the teaching and learning journey through timely feedback.

Research emphasizes that feedback is most effective when it is immediate and clearly articulated, enabling students to understand how to improve and address any weaknesses in their learning. Consequently, assessment aimed at enhancing learning is increasingly seen as an integral part of teaching itself, rather than a separate activity (Wiliam, 2010). This integration underscores the critical role of formative assessment in fostering ongoing improvement in student learning outcomes.

Summative assessment refers to the evaluation of learning that occurs at the conclusion of a lesson, course, or program after a specific period of instruction (Bhat & Bhat, 2019). It involves teachers assessing a final product or outcome to determine the extent of student achievement. Typically, summative assessment is conducted at the end of a chapter, unit of study, benchmark period, quarter, course, semester, or academic year (Trumbull and Lash, 2013). Its primary aim is to measure how much students have learned over a defined period and to assign grades or determine proficiency levels based on this assessment.

Summative assessment is primarily focused on evaluating learning outcomes at the conclusion of an instructional unit, comparing them against predefined standards

(Bhat & Bhat, 2019). Its main purpose is to assess learners' achievements in relation to expected competencies that were established beforehand. Therefore, summative assessment serves an evaluative function rather than a diagnostic one, which is characteristic of formative assessment.

Unlike formative assessment, which is used to adjust teaching methods and monitor progress while learning is ongoing, summative assessment occurs after the learning process is completed. It is employed to gauge the overall effectiveness of a program, measure students' accomplishments, and determine their readiness for certification. After summative assessment, remedial teaching is typically not provided.

Summative assessment places significant emphasis on accountability, often resulting in the assignment of grades that reflect the level of achievement (Earl, 2012). This distinction is why summative assessment is sometimes referred to as "assessment of learning," contrasting with formative assessment, known as "assessment for learning."

Common tools used in summative assessment include achievement tests, rating scales, project assessments by experts, and interviews, among others. These tools are designed to provide a comprehensive evaluation of students' knowledge and skills against established criteria.

Assessment is regarded as a fundamental duty of classroom teachers (Adu-Mensah, 2018a). In public schools, teachers typically undertake summative assessments such as end-of-term exams, class exercises, and tests. These assessments are conducted with careful consideration of the cognitive abilities and developmental stages of their students. The purpose of such summative assessments is to evaluate students' overall

learning outcomes and to determine their progress against specific educational standards or objectives.

Early Childhood Assessment Tools

In educational settings, the choice of assessment tools depends on what needs to be assessed, how it should be assessed, and why the assessment is being conducted. Teachers' perceptions and practices of classroom assessment also play a crucial role in selecting appropriate strategies and tools.

When measuring psychological traits with validity and reliability, it's essential that the assessment tool minimizes personal errors, variable errors, constant errors, and interpretative errors. Key characteristics of a good assessment tool include validity (measuring what it intends to measure), reliability (consistency of results), objectivity (minimizing bias), usability and practicality, comprehensiveness and precision, ease of administration and scoring, cost-effectiveness, and availability (Angold and Costello, 1995).

A variety of tools and resources are employed to assess young children in both private and public-school settings. These tools may include:

- **Observation:** Systematic watching and recording of behaviour in natural settings.
- **Anecdotal records:** Brief, descriptive notes based on observations.
- **Checklists:** Lists of behaviours or skills to be observed and checked off as they occur.
- **Rating scales:** Tools for assessing performance or behaviour using a predefined scale.

- Rubrics: Criteria-based assessment tools that specify levels of performance.
- Portfolio: Collection of student work that demonstrates learning and progress over time.
- Interviews and conferences: Direct interactions with students to gather information about their understanding and progress (Angelo and Cross, 1993).

These various assessment tools cater to different aspects of learning and development, providing educators with a diverse toolkit to effectively evaluate learner performance and growth.

1. Observation

Certain characteristics such as honesty, punctuality, persistence, and truthfulness are difficult to assess objectively through standardized tests. Therefore, observation becomes a crucial assessment technique for these traits. Observations can take the form of participant or non-participant methods to ensure accurate and scientific data collection. Utilizing an observation schedule can help systematically measure these traits in a structured and consistent manner.

2. Checklist

A checklist is a tool that includes a list of items requiring responses from the respondent. Each item on the checklist is typically marked with a 'Yes' or 'No' to indicate its presence or absence. Checklists are widely used for evaluating various aspects such as research studies, school buildings, textbooks, outcomes of programs, and instructional procedures. They provide a structured way to assess compliance, completeness, or quality based on predefined criteria for each item listed.

3. *Rating scale*

Psychological traits are inherently subjective, making it challenging to categorize them definitively. Evaluating these traits often requires subjective judgment from the evaluator. Rating scales are commonly employed to assess personal and social behaviour of learners, gathering perspectives from teachers, parents, or peers along a continuum. These scales may consist of 5, 7, 9, or 11 points, where respondents provide their assessment of a specific trait or quality, such as very good, good, average, below average, or poor. Rating scales are versatile tools used to evaluate personality traits, test performance, school practices, and other educational programs, applicable across both public and private school settings.

4. *Anecdotal records*

Anecdotal records are methodically recorded notes detailing specific observations of student behaviours, skills, and attitudes in the classroom. They serve to accumulate information on progress, skills acquisition, and guidance for future instruction (Hattie, 2013). These notes are typically written based on continuous observations during a lesson, although they can also be written in response to a student's completed product or performance.

Systematically collecting anecdotal records for a student offers valuable insights into their learning patterns and the continuity of their progress. Well-maintained anecdotal records serve as a valuable, practical, and detailed reference about individual students, aiding in comprehensive evaluation and personalized support.

5. *Rubrics*

A rubric functions akin to a roadmap, providing clear guidance to both students and teachers on where to start, the desired destination, and the path to achieve educational

goals. Rubrics are structured scoring guides or sets of criteria used to evaluate learners' level of understanding. They serve to clarify expectations and outline what students must accomplish to achieve higher levels of learning.

Advocates of rubrics argue that they help educators and learners concentrate on the key aspects valued within a subject, activity, or topic (Airasian, 2001). By delineating specific expectations, rubrics enable consistency in assessment and provide transparency regarding the standards by which learners work is evaluated. This structured approach not only supports learners in understanding what is required for success but also assists teachers in delivering targeted feedback and fostering continuous improvement in learning outcomes.

6. *Portfolios*

Paulson (1991) defines a portfolio as "a purposeful collection of learner work that showcases the learners' efforts, progress, and achievements in one or more areas. This collection should involve learner participation in selecting the contents, establishing criteria for judging merit, and demonstrating evidence of learner self-reflection."

The physical structure of a portfolio refers to how the work samples are organized, which can be by chronology, subject, types of student products, or goal areas. The conceptual structure, on the other hand, pertains to the teacher's objectives for student learning. For instance, a teacher might encourage learners to self-assess a work sample, reflect on their performance, and set goals for future learning. These self-assessment reflections and goal-setting sheets can be included in the portfolio alongside the work samples.

In portfolios, learners typically choose which work samples to include, reflecting their own perceptions of their best achievements and growth. However, teachers may also select specific work samples to ensure a comprehensive representation of learning outcomes.

Overall, portfolios serve as dynamic tools for documenting and assessing learner progress and development across various learning objectives, emphasizing both learner agency and teacher guidance in their construction and use.

Importance of Assessment in Early Childhood Education

Assessment in early childhood education involves a multifaceted approach to understanding and supporting young children's learning and development. Assessment in this context aims to:

1. **Monitor Developmental Milestones:** Assessments track children's progress in key areas such as cognitive, language, social-emotional, and physical development, aligning with age-appropriate benchmarks.
2. **Inform Instructional Planning:** Teachers use assessment data to plan and adapt curriculum and activities that meet individual learning needs and promote growth.
3. **Support Individualized Learning:** Assessments help identify strengths, areas needing improvement, and individual interests, allowing educators to provide targeted support and enrichment.
4. **Engage Families:** Assessment practices involve families as partners, sharing observations and discussing children's progress to promote continuity between home and school environments.

5. **Promote Holistic Development:** Beyond academic skills, assessments in early childhood education focus on nurturing social skills, emotional regulation, creativity, and critical thinking.
6. **Use Diverse Assessment Tools:** Utilizing a range of tools ensures a comprehensive view of each child's abilities and progress, recognizing the uniqueness of each learner.
7. **Ensure Developmentally Appropriate Practices:** Assessment practices in early childhood education emphasize play-based and hands-on learning experiences that align with young children's natural curiosity and developmental needs.

Overall, effective assessment in early childhood education supports holistic development, informs teaching practices, involves families, and ensures that learning experiences are tailored to meet the diverse needs of young children as they grow and learn.

2.2.4 Teaching and Learning Resources

Teaching-learning resources serve as the essential tools employed by educators to deliver instructional content effectively. These resources encompass a wide array of educational materials utilized within classrooms to align with specific learning objectives outlined in lesson plans. Teaching-learning resources are instruments employed by teachers to facilitate comprehensive and efficient learning experiences for their students. These resources range from simple aids like chalkboards to sophisticated platforms such as computer programs, all of which serve the purpose of conveying information within the classroom setting. Tamakloe, Amedahe, and Atta (2005) further emphasize that teaching-learning resources are materials employed by teachers to enhance students' learning, understanding, and acquisition of knowledge,

concepts, principles, and skills. In essence, these resources are instrumental in motivating, informing, instructing, and presenting subject matter to learners, thereby facilitating the learning process and making it more accessible than it would be without their utilization. Instructional materials play a crucial role in fostering effective teaching and learning experiences. Their significance lies in their ability to enhance classroom instruction when utilized effectively. These materials encompass a variety of tools that teachers employ to enrich learning, making it more engaging and memorable for learners.

Farombi (1998) defines instructional materials as including books, audio-visual aids, software, and hardware related to educational technology. He asserts that the availability, adequacy, and relevance of these materials directly impact the quality of teaching, subsequently influencing students' learning outcomes and academic performance positively. Thus, by ensuring access to high-quality and suitable instructional materials, educators can enhance the overall educational experience and contribute to students' academic success.

Many individuals commonly perceive teaching-learning resources as exclusively referring to materials prepared and utilized by teachers within the classroom to facilitate learning. Mialaret (1966) supports this notion by stating that these resources serve to assist the teacher but do not replace their role in the teaching and learning processes.

Furthermore, teaching-learning resources are seen as complementary tools that enhance the teacher's efforts in fostering understanding among students. In essence, these resources serve as aids that provide vivid experiences through various sensory modalities such as seeing, hearing, touching, manipulating, and demonstrating. By

leveraging such resources, teachers can create dynamic and immersive learning environments that cater to diverse learning styles, ultimately enriching the educational experience for students.

Types of Teaching and Learning Resources

The teaching-learning process is significantly influenced by the availability and utilization of various types of equipment in the classroom, particularly in today's age of science and technology. Teachers have access to a wide range of teaching aids beyond traditional textbooks, which they can leverage to engage students, stimulate discussion, and demonstrate concepts effectively. This study categorizes teaching resources into four main types: visual, audio, audio-visual, and human resources (personnel).

Visual resources rely on the sense of vision and encompass objects or images relevant to the subject being taught. These aids provide tangible support for the discussion or presentation, enhancing students' comprehension and retention of the material. Nacino-Brown et al. (1982) highlight that visual resources may include objects and specimens, offering students direct, hands-on experiences essential for conceptual understanding. By engaging multiple senses, such as sight, touch, smell, and even taste, these resources provide students with a richer and more meaningful learning experience.

Based on this definition, visual aids are tools that enhance discussions by adding visual interest. Examples of visual aids include whiteboards or chalkboards, charts, maps, flashcards, calendars, actual objects, models, pictures, bulletin boards, overhead projectors, slides, among others.

On the other hand, audio resources are tools that engage the sense of hearing. They assist students in listening and speaking. These aids target the learner's auditory sense, which involves listening and hearing. Examples of audio aids include record players or gramophones, radio programs, tape recorders, among others. Tape recorders are particularly beneficial for slow learners as they allow them to listen at their own pace without holding back the rest of the class. Additionally, audio aids aid in the development of listening skills.

Audio-visual aids are tools that engage both the sense of vision and hearing. These aids utilize sight and sound to present information or subject matter in the classroom setting. Tamakloe et al. (2005) define audio-visual aids as resources that cater to both audio and visual perceptions. When a teacher combines exclusively audio aids with visual aids or resources, they effectively appeal to both auditory and visual senses.

Examples of audio-visual aids include slide projectors, television, film-strips, or transparencies accompanied by commentaries or explanations provided by the teacher simultaneously. These aids facilitate multisensory learning experiences, enhancing students' engagement and comprehension of the material.

Resource Persons, another category of teaching resources, involve inviting individuals who possess specialized knowledge or expertise in a particular subject area to address students. These individuals, known as resource personnel, offer insights and perspectives beyond those of the classroom teacher. Inviting resource personnel can break the monotony of hearing from the same teacher continuously and stimulate curiosity and excitement among students, ultimately fostering effective learning through heightened attention and engagement. Teaching-learning materials play a vital role in stimulating and motivating students to engage actively during lessons.

They provide cues to help students comprehend detailed information and contribute to sustaining their interest throughout the learning process. As Cuning (1970) notes, teachers utilize these resources to captivate students' attention, foster interest, and clarify concepts, leading to improved retention of content.

Furthermore, teaching-learning resources transform classroom teaching into an enjoyable learning experience, promoting meaningful communication and effective learning outcomes. By leveraging these resources, teachers can save time and create dynamic learning environments that engage and inspire learners. Additionally, teaching-learning materials serve to stimulate and motivate learners, encouraging them to delve deeper into their studies.

2.3 Empirical Review

2.3.1 Kindergarten Teachers Use of Play-based Learning

This session of the study reported methods and findings of other studies that are similar to the topic under study. The review included the following;

A study conducted by Kekesi et al., 2019 on the topic –Early Childhood Education Teachers' Perceptions on the Use of Play as a Teaching Technique in Afadjato South District of the Volta Region, Ghana”. The study used the mixed method approach. A sample of 120 participants was used comprising 100 kindergarten teachers, 10 basic school headteachers and 10 school supervisors. Purposive, simple random and convenience sampling techniques were employed to select the participants. Questionnaire and interview guide were used to collect data. Descriptive and inferential statistics were used to analyse the quantitative data while thematic analysis was used for the qualitative data. The study concluded that early childhood teachers in Afadjato South District had good intentions on the use of play as a teaching

technique. Also, kindergarten teachers could use play as a teaching technique depending on their perception towards play. Moreover, factors that contributed to kindergarten teachers' use of play as a teaching technique was; availability of play materials, the kind of motivation teachers receive and their teaching experiences.

Another study which was conducted by Weisberg et al. (2013) on the topic –Guided Play and Cognitive Development in Early Childhood in the United States. The study employed the quantitative experimental design. A sample of 110 children aged 4-5 years from various preschools was used. Cognitive tasks and standardized tests were used to assess problem-solving, memory, and reasoning. Data was analysed using ANOVA to compare the performance of children in play-based versus non-play-based environments. The study concluded that children in guided play settings demonstrated improved problem-solving, memory, and reasoning skills. Also integrating guided play alongside structured learning in early childhood curricula will support holistic cognitive development.

In a mixed-method study conducted in Turkey, Cimer and Cakır (2010) explored teachers' knowledge and application of assessment methods introduced in a new educational curriculum. The study involved 22 teachers and utilized questionnaires, interviews, and document analysis as data collection tools. The results indicated that teachers lacked sufficient knowledge about the newly introduced assessment techniques, a situation attributed to the recent implementation of the curriculum changes. The questionnaire revealed that the teachers' perceived understanding of the various performance assessment methods ranged between low and moderate, with mean scores falling between 2 and 3. During the interviews, it was evident that although teachers were aware of the curricular changes and the system's new

requirements, they were not applying the new assessment methods. Instead, they continued to rely on traditional written tests such as multiple choice, fill-in-the-blank, and true/false questions, which they had used prior to the curricular revisions. Even though some teachers incorporated portfolios and performance tasks into their assessments, they were often not used effectively. For instance, only two teachers reported using portfolios, yet they merely served as folders for collecting students' work, lacking the critical self-reflection component that distinguishes portfolios as valuable learning and assessment tools (Paulson, Paulson, & Meyer, 1991). Overall, the study concluded that the new assessment approaches had not been successfully implemented in classrooms. Traditional testing methods persisted, largely due to teachers' limited understanding of performance-based assessments. This lack of knowledge prevented the effective integration of new assessment strategies into everyday classroom practices (Cimer & Cakir, 2010).

Eshun et al. (2014) conducted a study aimed at exploring the impact of authentic assessment on the classroom practices of early childhood teachers, as well as the challenges faced in Social Studies classrooms in Ghana. Using a descriptive case study design, the research was carried out across 10 senior high schools, with 20 early childhood teachers randomly selected from a total of 57 senior high schools in the Central Region of Ghana. The primary data collection tool was a semi-structured interview guide. The findings revealed that the use of authentic assessment in early childhood classrooms was constrained by various factors, including examination policies, time limitations, inadequate resources, and the assessment methods adopted by their schools. Additionally, the study found that many early childhood teachers were not incorporating assessment techniques that actively engaged students in the learning process. Some teachers expressed concerns that utilizing authentic

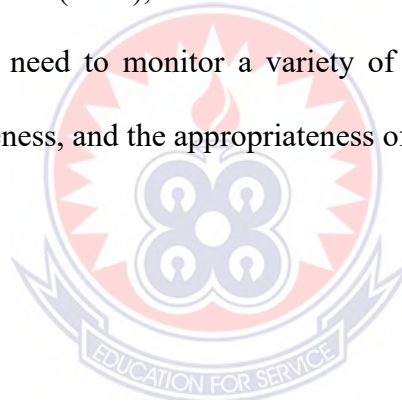
assessments would hinder their ability to complete the required topics within the given syllabus timeframe.

Opong Frimpong (2021) conducted a case study to examine the role of teaching and learning resources (TLRs) and their interaction in enhancing the quality of early childhood education (QECE) in the Agona East District of Ghana's Central Region. The study utilized interviews and observations to gather data. The results indicated that participants viewed TLRs as crucial for providing quality early childhood education. However, TLRs were often unavailable, which limited children's ability to interact with these resources. This lack of access to TLRs impeded both their use and the active engagement of children with the resources. Consequently, interaction—a key component in effective early childhood education—was not adequately emphasized due to the unavailability and inaccessibility of TLRs. Based on these findings, the study recommended that early childhood educators and providers ensure the availability and accessibility of TLRs for children. Additionally, teachers should explore innovative methods for creating and developing TLRs using local materials. Promoting and encouraging active interaction with TLRs is essential for achieving meaningful learning outcomes.

Ameyaw (2019) conducted a descriptive study to investigate the use of teaching and learning resources (TLRs) in teaching mathematics and their impact on pupils' performance in the Cape Coast metropolis. The study's findings echoed those of Ampiah (2008), who had previously reported that the traditional "chalk and talk" method of teaching does not effectively enhance pupils' understanding. In contrast, employing structured methods along with available TLRs significantly improves pupils' comprehension. Based on these insights, Ameyaw's study recommended that

teachers and head teachers actively seek out TLRs from non-governmental organizations (NGOs), educational stakeholders, the Ghana Education Service (GES), and other relevant educational bodies to support the effective delivery of resources to schools. This approach is essential for improving educational outcomes by making optimal use of available teaching materials.

Researchers such as Greenberg, Putman, and Walsh (2014) emphasized in their study that students' learning depends to a large extent on the teacher's ability to properly manage the classroom. It may be inferred that a teacher's capacity to effectively manage the classroom towards learning is a significant indicator of their quality. In an earlier study by Kyriacou (1995), the researcher noted that teaching is particularly demanding due to the need to monitor a variety of concerns to maintain students' attentiveness, receptiveness, and the appropriateness of learning experiences.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discusses the research paradigm, research approach, research design, population of the study, sampling procedures, instruments for data collection, pre-testing of instruments, the validity of the research instrument, data collection procedures, data analysis, and ethical issues about the research.

3.1 Research Paradigm

The interpretivism paradigm was adopted for this study. This paradigm is grounded in the assumption that individuals' perceptions, ideas, thoughts, and the meanings they attach to their experiences can be understood through the study of their cultures (Pervin & Mokhtar, 2022). Unlike methods used in the physical sciences, the interpretivist approach recognizes that human behaviour is influenced by individuals' interpretations of their surroundings (Hammersley, 2013). Interpretivism also employs a relativist ontology, positing that a single event may have multiple interpretations rather than a singular, objective truth. This approach enables researchers to gain a deeper understanding of complex issues and phenomena within the specific contexts in which they are embedded (Creswell, 2007). Through this lens, researchers can uncover not only what has happened but also how and why it has happened.

In this study, the researcher explored the phenomenon by interpreting participants' responses. The focus was on systematically uncovering the meanings behind the results and demonstrating how these meanings combine to produce observable outcomes. To address the research problem, the researcher employed qualitative methods and designed two research instruments to collect data. Kindergarten teachers

were interviewed to gather insights about the phenomenon, and classroom activities were observed simultaneously. The combination of data collected through these instruments provided a comprehensive understanding of the problem. The findings were then analysed and interpreted through a process of inductive reasoning, allowing the researcher to draw meaningful conclusions and offer effective solutions to the issue under investigation.

3.2 Research Approach

The qualitative approach was employed in this study. Qualitative research is a naturalistic process that seeks to achieve an in-depth understanding of social phenomena in their natural contexts (Creswell, 2012). According to Creswell (2012) and Patton (2002), qualitative research is particularly suited for studies where the research questions are designed to facilitate learning directly from participants.

In qualitative research, it is assumed that there are multiple realities, which may be complementary or contradictory but are equally valid (Mertens, 2010). This perspective recognizes that diverse viewpoints are valuable because reality is subjective and context-dependent (Cohen et al., 2017). Knowledge is considered dynamic, complex, contextual, and intertwined (Creswell, 2014). Another assumption in qualitative research is that data collection methods are subjective and open to interpretation, with data being highly contextualized and individualized (Cohen et al., 2017; Creswell, 2014). While this subjectivity makes it difficult to generalize qualitative findings to larger populations, it enables researchers to gain rich, detailed insights into the phenomenon under study.

Despite the challenges of generalization, qualitative research provides a depth of understanding that cannot be obtained through quantitative methods (Creswell, 2014).

This approach offers the most appropriate tools and methods to address the research questions of this study, which focused on kindergarten teachers' use of play-based activities in teaching and learning.

3.3 Research Design

The study utilized the case study design to interpret how kindergarten teachers use play-based activities in teaching and learning. The use of case studies for the creation of new theory in social sciences was developed by the sociologists Barney Glaser and Anselm Strauss who presented their research method, Grounded theory, in 1967. Researchers may interview a group to learn more about the group. The research moves between data collection and data analysis in order to gain a theoretical sampling which will in turn assist the researcher in gathering data to answer their research question. Case study methodology assumes the existence of multiple realities that are interpreted differently by each individual who is living the experience. These different realities exist because each individual brings their own voice which is derived from the different social and contextual experiences that they have been exposed to in the past.

As Williams (2017) stated, language is at the nexus of meaning, context and action in interpretive research. In this case study one on-one interviews was used with study participants in order to better understand a phenomenon through experiences they have had. Through discussion, data was collected and analyzed for the purpose of better understanding our human situation. The phenomenon in question may be an individual, a group, an event or a program in which the researcher is interested in gaining insight (Creswell, 2012; Merriam, 2009). Case study is a useful design when

the researcher is interested in understanding contemporary events in which they cannot manipulate relevant behaviors (Yin, 2009).

The researcher used illustrative case study to provide descriptive details about how kindergarten teachers use play-based activities in teaching and learning in the Ayensuano District of the Eastern Region of Ghana. The researcher through observation explained how participants involved use play activities during teaching and learning, the teaching and learning resources available to facilitate the play activities, the assessment tools used by the kindergarten teachers to evaluate play activities and also expressed in common language about the challenges confronting these teachers when using play-based activities in teaching and learning in the Ayensuano District. In the illustrative case study used, the researcher used clear language and avoided oversimplifying the choice of words because the rich description could be lost (Epler, 2019). For this reason, only a small number of cases, one or two at a time was used (Davey, 1991).

3.4 Description of the Study Area

The study was conducted in the Ayensuano District. The Ayensuano District is one of the twenty-six administrative districts in the Eastern Region of Ghana, with its capital located at Coaltar. The district shares boundaries with Suhum Municipality to the north, Nsawam-Adoagyiri Municipality to the south, Upper West Akim District and West Akim Municipality to the west, and Akuapim South District to the east. Within the district, there are 62 Kindergartens, 66 Primary Schools, 62 Junior High Schools, and 2 Senior High Schools. Both trained and untrained teachers serve in the public schools (Ayensuano District Education Directorate, 2024).

The district is known for its excellence in sports, however, its academic performance has been poor over the past five consecutive years (Ayensuano District Education Directorate, 2024). Most communities within the district are rural, with farming, commercial motorbike business ("Okada"), and trading as the primary economic activities. A significant proportion of parents in the district have only basic education or no formal education. Additionally, many communities face challenges with accessing reliable telecommunication network signals.

The Ayensuano District was chosen for the study because many kindergarten teachers complain of lack of interest from parents at the kindergarten level. Learner absenteeism is also high at the kindergarten level. These challenges are compounded by inadequate facilities and insufficient play materials for both indoor and outdoor activities. Such conditions have negatively impacted the academic performance of learners in the district, which is a source of concern. These factors motivated the researcher to undertake this study to investigate the issues faced by kindergarten teachers who use play-based activities in teaching and learning in the district.

3.5 Study Population

The target population comprised all kindergarten teachers within the Ayensuano District. According to the Ayensuano District Directorate of Education (2024), there are currently 104 kindergarten teachers serving across 62 kindergarten centres in the district. These centres are distributed across nine educational circuits.

3.6 Sample and Sampling Procedures

Purposive sampling was used to select two (2) out of the nine (9) circuits, namely, Marfo and Coaltar, and the kindergarten teachers to ensure participants who could provide rich, relevant insights on the use of play-based activities in teaching and

learning. The study was purely qualitative and sought to generate detailed, contextualised insights rather than achieve statistical representativeness across all circuits. Selecting two circuits allowed for intensive engagement with participants and facilitated deeper probing into teachers' experiences and practices. Focusing on two circuits also ensured manageability within the time and logistical constraints of the study while maintaining sufficient diversity of perspectives to address the research objectives.

The inclusion criteria required teachers to be currently teaching in kindergartens within the Ayensuano District and have at least one (1) year of teaching experience. Maximum variation sampling was employed to include teachers with diverse backgrounds, such as varying levels of experience, training, and geographical location within the circuits. The sample size was determined based on the principle of data saturation, where interviews continued until no new themes or information emerged. At data saturation twelve (12) respondents had been interviewed.

3.7 Data Collection Instruments

The instruments used for data collection in the study included an observation checklist and an interview guide. Classroom observations, conducted using structured checklists, provided valuable qualitative data on the implementation of classroom management practices. Additionally, the researcher conducted interviews with kindergarten teachers to gain in-depth insights into their experiences, challenges, and perspectives on kindergarten teachers' use of play-based activities. Combining these two data collection methods allowed for triangulation, enhancing the validity and reliability of the findings (Wergin, 2018; Yin, 2009).

3.7.1 Interview Guide

A self-designed interview guide was utilized in this study, with questions categorized into five (5) sections aligned with the research objectives. Section A collected personal information about the respondents, including their class, educational qualifications, and duration of teaching experience. Section B focused on kindergarten teachers' use of play-based pedagogy as a classroom management practice. Section C explored the assessment strategies employed by kindergarten teachers to evaluate play-based activities. Section D examined the teaching and learning resources (TLRs) utilized by teachers to facilitate play-based activities. Lastly, Section E addressed the challenges faced by kindergarten teachers in their use of play-based activities.

The semi-structured interview format provided respondents the opportunity to articulate their thoughts in their own words while maintaining enough structure to keep the discussion focused (Kusi, 2012). Kusi (2012) further noted that semi-structured interviews are highly flexible, enabling interviewees to freely express their views, feelings, and experiences. This approach allowed the interviewers to deviate from the set questions and use probing techniques to seek further clarification during the interview process. It also enabled the researcher to probe deeper into respondents' experiences and perspectives, ensuring a richer understanding of the phenomenon under study.

3.7.2 Observation Checklist

An observation checklist was utilized in this study to allow the researcher to observe how kindergarten teachers used play-based pedagogy, assessment tools and teaching and learning resources during instructional time in the classroom. Kawulich (2012),

suggested that observation involves a systematic and detailed description of events, behaviours, and artefacts within a social setting. This process therefore requires careful attention to both what is seen and heard. The checklist included codes with tick boxes, enabling the researcher to record observed data by marking the presence or absence of each code with a "YES" or "NO." This self-designed tool was selected to mitigate some of the inherent limitations of interviews, where respondents might provide biased information (Tarimo, 2013). Additionally, respondents might struggle to accurately recall events or details relevant to the researcher's focus. The data gathered through observation was used to complement the information obtained from the interviews. The researcher also observed the available play materials and facilities in both indoor and outdoor school environments.

3.8 Trustworthiness of the Data

In any systematic exploration of human environments, it is essential to evaluate the actual value of the research. This evaluation ensures that the findings and interpretations accurately reflect participants' experiences or realities and are dependable (De Vos, 2002). Lincoln and Guba (2000) argued that trustworthiness in qualitative research is assessed using four indicators which correspond closely to the concepts of validity and reliability in qualitative research. Qualitative research is deemed trustworthy when it authentically represents the experiences of the study participants (Speziale & Carpenter, 2011). To assess the trustworthiness of qualitative, Lincoln and Guba (2000) proposed four key criteria: credibility, dependability, transferability, and confirmability. These criteria were upheld in the study through the implementation of specific procedures designed to ensure the quality and rigor of the research process.

3.8.1 Credibility

Credibility refers to the extent to which the research accurately represents the true meanings expressed by the participants, often referred to as the "truth value" (Mills & Wiebe, 2010). To ensure credibility in this study, the researcher engaged in an extended period of interactions with participants, spending six (6) weeks in the field gathering data. During this period, the researcher conducted interviews while simultaneously observing participants' verbal and non-verbal cues, which provided valuable insights and opportunities for further probing. In addition to interviews, the researcher utilized an observational checklist to collect data on indoor and outdoor teaching and learning resources used by kindergarten teachers to support play-based learning. The checklist also captured information about the assessment tools employed by teachers to evaluate learners. This method served to complement and corroborate the data gathered through semi-structured interviews. After data collection, the recordings were transcribed, and the files were securely transferred to a password-protected laptop, ensuring that only the researcher had access. The data analysis process incorporated verbatim quotes from the participants, further enhancing the authenticity and credibility of the findings.

3.8.2 Dependability

Dependability refers to the consistency and reliability of research findings and the extent to which the research process is thoroughly documented, enabling others to follow, audit, and critique it (Polit & Beck, 2006; Streubert, 2007). In this study, dependability was ensured through sound inquiry decisions. Steps were taken to address researcher bias, avoiding premature conclusions and mitigating unreliable responses due to participant fatigue from lengthy discussions. A review of relevant literature guided the researcher in designing questions aligned with the study's

research objectives. The interview guide and observation checklist were instrumental in categorizing data into themes, ensuring that both positive and negative responses were integrated into the findings. Data collection, analysis, and interpretation were systematically conducted, relying on the generated data. Comprehensive documentation, including detailed transcriptions of participant narratives, records of methods employed, and decision-making processes captured in memos, ensured transparency and dependability throughout the research.

3.8.3 Transferability

Transferability, a form of external validity, refers to the extent to which the findings of a study can be applied to theory, practice, or future research (Lincoln & Guba, 1985). To ensure transferability, the researcher provided a detailed description of the research processes, study setting, participants, and their demographic information, enabling others to assess the applicability of the findings to similar contexts. An audit trail was maintained, including audiotapes of interviews, permission letters, and relevant documents. Additionally, raw data, such as interview transcripts, and detailed records of data analysis were preserved as evidence, further supporting the study's transferability.

3.8.4 Confirmability

Confirmability refers to the extent to which a study's findings are grounded in the participants' narratives and words, rather than being influenced by the researcher's biases (Korstjens & Moser, 2018). In this study, confirmability was ensured through a systematic process. After each interview, the researcher played the recorded sessions back to participants to confirm the accuracy of the data. Once the interviews were coded and transcribed, the transcripts were returned to participants for verification and

any necessary adjustments. The final, approved transcripts were used as an accurate record of participants' responses. Additional measures included audiotape recordings and careful observation of non-verbal cues, such as pauses, sighs, and facial expressions, noted during the interviews. Immediate transcription and reflection after each session further captured participants' overall mood and attitudes, enriching the data interpretation and ensuring the findings authentically reflected their experiences.

3.9 Data Collection Procedures

An introductory letter was obtained from the Head of Department of Early Childhood Education, University of Education, Winneba, to seek permission from the Ayensuano Director of Education. This letter officially introduced the researcher to the heads of schools where the study participants taught. Teachers were briefed on the purpose of the research, confidentiality, and the intended use of the data. Agreements were made with participants regarding the date, time, and location for data collection, and the researcher met each participant on the school premises at the agreed-upon time, following approval from school authorities.

Before each interview, the researcher reminded participants of the study's purpose and their role. Permission was sought and granted for audio recording of the sessions. Each interview, lasting approximately 25 to 35 minutes, included probing and follow-up questions about teachers use of play-based activities, assessment strategies, teaching and learning resources. The recorded sessions were transcribed by the researcher shortly after the interviews. The researcher carefully reviewed the transcriptions alongside the recordings to ensure accuracy.

Using a participant-observer strategy, the researcher also observed teaching and learning materials in the school environment and how teachers used them to support

play-based learning in classroom. Arrangements were made to observe teaching and learning sessions led by the teachers, including how learners were assessed. The researcher actively participated in these sessions, interacting with teachers and pupils to minimize anxiety and maintain a natural classroom environment. This approach ensured that the behaviour of both teachers and pupils was not influenced by the researcher's presence.

An observation checklist guided the researcher in recording information before, during, and after the classroom sessions. These observations corroborated the data from interviews, providing a comprehensive understanding of the study's focus.

3.10 Data Analysis Procedures

Data was analysed using thematic analysis. Thematic analysis is a qualitative method for identifying, analysing, and reporting patterns or themes within data (Braun & Clarke, 2006). The researcher began by thoroughly reading and listening to the data multiple times to gain a deep understanding of its content (Creswell, 2009). Emerging patterns were identified, and codes were assigned to text segments that provided key insights related to the research questions. This process, referred to as meaning coding, involved assigning descriptive labels to meaningful units of text. The numerous codes were then grouped into manageable categories. As Creswell (2007) noted, re-categorizing codes is necessary, as researchers initially generate a large number of codes.

The next step involved condensing the codes into broader thematic areas through content analysis. This iterative process of reading, coding, and refining categories continued until clear themes emerged. These themes served as the primary framework for organizing and integrating the data. By systematically categorizing and

thematizing the information, the researcher ensured that the analysis effectively addressed the research objectives while maintaining clarity and rigor. The code "P" for "Participant" was used to represent interviewees in the findings.

3.11 Ethical Issues

A researcher has an ethical responsibility to safeguard the rights, dignity, and welfare of participants who contribute valuable knowledge to a study (Speziale & Carpenter, 2011). Prior to data collection, the researcher obtained a formal introductory letter from the Department of Early Childhood Education, University of Education, Winneba (Appendix 3), and written permission from the Ayensuano District Education Directorate (Appendix 4). Permission was also sought from headteachers before engaging kindergarten teachers in the study.

Participation in the study was entirely voluntary. The purpose of the research, procedures involved, and expected duration were clearly explained to participants before data collection. Participants were informed of their right to decline participation or withdraw at any stage without penalty or negative consequences. This ensured respect for participants' autonomy and minimized any form of coercion.

3.11.1 Confidentiality and data protection

Confidentiality and anonymity were strictly maintained by assigning codes to participants instead of using their real names. No identifying information was included in the final report. Audio recordings and transcripts were securely stored on a password-protected device accessible only to the researcher. Data will be retained for academic purposes only and securely destroyed after the required retention period.

Consent was obtained before recording interviews, and participants were assured that their responses would be used solely for academic purposes. This aligns with Polit and Hungler's (2004) assertion that confidentiality guarantees protection against unauthorized disclosure.

3.11.2 Minimization of Harm

The study posed minimal risk to participants. However, care was taken to ensure that interview questions did not cause discomfort or professional embarrassment. Participants were not pressured to answer questions they found uncomfortable, and interviews were conducted in environments convenient and comfortable for them.

3.11.3 Positionality and power relations

As an experienced early childhood educator in the district, the researcher acknowledged the potential influence of insider status on the research process. While familiarity facilitated access and openness, it also posed a risk of bias and perceived power imbalance. To mitigate this, the researcher emphasized that participation was voluntary and unrelated to professional evaluation. A reflexive diary was maintained throughout the study to critically reflect on assumptions, interactions, and potential biases. Semi-structured interviews and direct quotations were used to ensure that findings authentically represented participants' perspectives.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter presents the results and discussions, starting with a description of the socioeconomic characteristics. It then follows with a presentation and discussion of the data organized according to the research questions.

4.1 Demographic Characteristics of Respondents

The participants included four (4) professional Early Childhood Education Teachers and eight (8) non-professional Early Childhood Education Teachers, making a total of twelve (12) participants. All the kindergarten teachers in the district are female, so the participants were all female and trained teachers. According to data from the Ayensuano District Education Directorate, these teachers have teaching experience ranging from 5 to 10 years in the district. Additionally, each participant has at least 2 years and up to 5 years of experience teaching at the kindergarten level.

4.2 Analysis of Research Questions

Research Question One

The first research question examined how kindergarten teachers use play-based activities for teaching and learning. The themes which emerged from the interviews include: KG teachers' use of play-based activities; frequency of use of play-based activities; importance of play-based pedagogy; influence of class size on play-based activities; prioritization of play-based activities; and in-service training of KG teachers on play-based activities. These themes are further elaborated below after which they are discussed.

KG Teachers' use of Play-Based Activities

The excerpt on the use of play-based activities shows that, almost all participants use play in teaching and learning. These are what some participants had to say:

—To me, play-based learning involves using play as a primary tool for learning and teaching. Before I think of using play in my class for teaching, I look at my lesson objectives and the interest of my learners (P1).”

—I only use play in some subjects where I think it will help me achieve my objectives. When it comes to counting of numbers in mathematics and letter identification literacy, I engage my learners through the use of songs in the lesson and they really enjoy and participate actively (P2).”

—Even though my classroom environment is not play-friendly, but I manage to do something with them in groups. Sometimes I look at the needs of my learners and their abilities as well. Let's say we are learning about fruits; I display different kinds of fruits on a table then we will sing a song about fruits where I mention a fruit for the children to identify from the fruits on the table (P3).”

Only four out of the twelve teachers were observed actively incorporating play-based activities into their lessons (Appendix B). This indicates that play-based instruction was not widely practiced, with the majority of teachers relying primarily on non-play-based or teacher-directed approaches. The limited number suggests that although play-based pedagogy is encouraged at the policy level, its practical application remains inconsistent.

Frequency of use of Play-Based Activities for Teaching and Learning

Most participants emphasized how play activities enable learners to become active participants in lessons, which enhances their understanding of the material. They expressed the view that the more play is integrated into lessons, the better it is for the overall development of the children. Below are some extracts from the interviews to support this point.

—Well, I can say that I use play throughout all my lessons every day. Though some children don't like learning but immediately you start using play activities as a form of teaching they find it easy to learn since they don't find much difficulty in what they are learning (P)."

—I incorporate various types of play in all lessons to support learning and development of my learners. It helps children who don't involve themselves in class to become active learners. Again, some of the ECE teachers often present their lessons in abstract manner, like, they have resorted to the use of memorization and recitation which makes learners unhappy about learning, but through play-based learning, learners are always ready to learn with joy and happiness (P4)."

—Oh yes! The standard-based curriculum has emphasized on the use of play and games in lesson delivery. Additionally, learning through play makes classroom welcoming and boost attendance (P6)."

—Now kindergarten is no more about eating and sleeping at all. Learning is always fun since learning is always done through play (P7)."

Importance of Play-Based Pedagogy

Play-based pedagogy is essential in teaching and learning at the kindergarten level. Participants noted that play-based learning encourages active participation, reduces misbehaviour, and increases focus among learners. During the interviews, several participants shared their perspectives on the importance of play-based pedagogy in early childhood education. Below are what some of the participants had to say:

—When it comes to the importance of PBP; it helps the children to develop self-control, it helps the children to have real life activities of what they learn, they have hands on activities too, because they use their hands to manipulate all the objects in the classroom (P10)."

—It encourages collaboration, empathy, and social skills creating a positive classroom culture. It also motivates learners to do more of whatever we are doing in class (P12)."

—I appreciate it because it makes teaching and learning easier for the teachers and the learners as well. Teachers can also create a well-managed, inclusive, and effective learning environment that supports the diverse needs of all the children (P11)."

—In my opinion, I think it fosters a strong positive relationship between teachers and their learners, built on trust and mutual respect (P6)."

Influence of Class Size on Play-Based Activities

Large class sizes can significantly impact the use of play-based activities in various ways. However, being aware of these challenges and adopting appropriate strategies can help teachers effectively use play activities in larger classrooms. Participants shared how their class sizes influence their use of play activities in lesson delivery. Below are quotations from some participants expressing their views on the influence of class size on PBA during teaching and learning. Below are extracts from what some of the participant said:

—With the number of learners in my class, sometimes I struggle to provide individual attention and support during play. There is no space for more learning centres in my class that is why you can see only the grocery shop there (P3).”

—Just look at me and all these children in one class, sometimes it becomes chaotic but I manage to use small group play for them during lessons. The first group will perform their activities after which the other groups will follow in batches (P5).”

—Because my children are many compared to my classroom size and the limited teaching and learning resources available, I always take my children outside the class for play activities so that I can monitor them well (P11).”

—If you take a look at my class, it is very spacious for my kids. We have enough space to move around and engage in any activity that we want. I also have an assistant who helps me in the class (P8).”

Prioritization of Play-Based Activities for Teaching and Learning

Play-based learning is a vital component of early childhood education, offering children a meaningful and enjoyable way to learn. As a result, play-based pedagogy has become a priority in today’s early childhood education. Most participants suggested that play-based activities should be used across all early childhood levels for effective teaching and learning. Additionally, some participants expressed that it is more effective for using play than direct instruction. Some participants had this to say on the prioritization of play-based activities for teaching and learning:

–This teaching and learning pedagogy should be used across all early childhood levels. I will encourage all ECE teachers to use this method, because that is what will promote multiple areas of children’s development and learning (P12).”

–Yes, it should be prioritized because if I take my class size for instance, how can I manage my class using direct instruction for my learners. They will not pay attention to me because the distraction will be more, but with the play-based activities they will do majority of the work by themselves and in doing that too, they are learning and it helps them to become ownership of whatever they do (P1).”

–During creative arts lesson in my class, you will find each child busily demonstrating his or her creative skills. And when you ask about what they are doing, they will respond appropriately. In fact, this teaching and learning pedagogy has make the teaching work more easily for me (P9)”,

–No play-based learning, no early childhood education. She explained that, the traditional way of teaching and learning did not help children to explore and make sense of the world around them. We the teachers were exploring and thinking for them (P).”

In-Service Training of KG Teachers on Play-Based Activities

Providing comprehensive training and support enables teachers to develop the knowledge, skills, and confidence needed to effectively use play-based activities in teaching and learning. The interview results revealed that teacher participants rarely receive in-service training from the education directorates within the district. However, some participants noted that their challenges are occasionally addressed during Professional Learning Community (PLC) sessions. Some participants indicated the following:

–No. For my two years of teaching in this district, I have not received any training from the education directorate (P7).”

–During PLC on Tuesday’s, that is when we meet as colleagues to learn from each other on ways of improving our teaching skills (P4).”

–We normally meet during PLC time for in-service training within my school on challenging topics and how to teaching approaches to use. (P12).”

Discussion of the Themes which Emerged from Research Question One

The study revealed that nearly all participants integrated play-based activities into their lessons, using it as an instructional approach to encourage active learning, exploration, and discovery. Participants reported that the choice of play activities was primarily guided by lesson objectives and learners' interests. Play-based pedagogy was highlighted as an effective teaching approach, fostering a positive teacher-learner relationship that made teaching and learning more engaging and efficient. Moreover, frequent use of play-based activities was found to enhance children's understanding of lessons, boost their enthusiasm for participation, and improve class attendance.

The study also indicated that class size significantly influenced teachers' ability to use play-based activities effectively. While many participants actively engaged in learners' play activities, classroom observations revealed that some teachers were unsure about the appropriate play-based activities to employ for optimal learning outcomes. These findings align with earlier research by Kekesi et al. (2019) and Abdulai (2014), which highlighted challenges such as teachers' limited understanding of play-based pedagogy and the lack of adequate training and resources to support its implementation. Additionally, participants noted that they rarely received in-service training from the district education directorates, except during Professional Learning Community (PLC) sessions where they addressed personal challenges.

The study further revealed that incorporating play into lessons not only made teaching more effective but also helped children grasp concepts better by engaging them visually and physically. These findings support earlier research by Izumi Taylor, Samuelsson, and Rogers (2010), which emphasized that teachers' understanding of play-based activities significantly shapes children's learning experiences. However,

the lack of adequate attention and support from school authorities and stakeholders in the district for play-based pedagogy was a significant challenge. Many participants indicated that the materials and resources used in play-based learning were often provided by teachers themselves, reflecting insufficient external support. This finding aligns with Oppong Frimpong (2021) and Yavuz and Güzel (2020), who argued that stakeholders' perceptions of the importance of teaching and learning resources (TLRs) play a critical role in promoting play-based pedagogy.

The study also identified policy-related challenges affecting the use of play-based activities. Educational programs such as the Jolly Phonics approach, Gallop program, and UNICEF Learning program often overlapped with or conflicted with play-based methods, leaving teachers confused about how to balance these approaches. This finding is consistent with Kane (2016), Theobald et al. (2015), and Wang and Lam (2017), which documented increasing pressure on early childhood education systems worldwide to prioritize formal learning goals through didactic, teacher-directed methods.

In conclusion, the findings underscore the importance of providing comprehensive training and adequate resources to enable teachers to effectively use play-based activities. While participants acknowledged the benefits of play-based learning, challenges such as limited understanding, insufficient support, and policy conflicts hinder its full potential in early childhood education.

Research Question Two

The second research question aimed to identify the assessment tools used by kindergarten teachers in the Ayensuano District. Firstly, nearly all the participants interviewed reported using a variety of assessment tools to evaluate their learners.

Secondly, it was revealed that participants assess learners at different stages—before, during, and after lesson delivery. Thirdly, it emerged that some parents and stakeholders prioritize pencil-and-paper assessments as the sole method of evaluating learners, which places undue stress on children. The most significant themes that emerged from the findings are discussed below.

How and when Assessment Tools are used in lessons

Kindergarten teachers use assessment tools at different stages of the lesson to obtain a comprehensive understanding of children's learning and progress. Based on the participants' responses, assessment tools are employed in various ways and at different times during lessons. Below are the views shared by some of the participants:

“I am faced with limited time to develop assessment tools like portfolios, checklist and rubrics. So I use paper and pencil test tool in assessing pupils which is used in almost all schools. So let's say I'm going to teach numbers, before the lesson I will ask my learners to count the boys and girls in the class while I observe them to determine their prior knowledge and understanding on numbers. At the end of the lesson too I give them exercise (P10).”

“In the course of the lesson, I use group activities to monitor learners' progress and understanding of what we are doing (P3).”

“After the lesson I usually give them class exercise to evaluate my learners understanding on what they have learnt. I am restricted to try other assessment tools like checklist, portfolios and rubrics due to examination policies (P8).”

All twelve teachers were observed using traditional assessment tools such as class exercises and homework. However, only two teachers employed more developmentally appropriate assessment methods such as checklists and portfolios (Appendix B). This indicates a strong reliance on conventional assessment strategies, which may not fully align with play-based pedagogical principles.

Effectiveness of Assessment Tool on Learning Outcomes

Kindergarten teachers can evaluate the effectiveness of their assessment tools by clearly defining their learning objectives. Many participants noted that they rely solely on class exercises and end-of-term examinations to assess learners. Below are some of the participants' views on the effectiveness of the tools they use to assess their students:

—As for me, class exercise alone may not cover all the learning objectives for me. There are some children who will not do well in the class exercises but can do better in other areas. As an ECE teacher, I use observation, portfolios and my checklist to evaluate my learners apart from the normal exercises and exams (P2).”

—We are dealing with children with individual differences so in order not to be bias, teachers must use different assessment tools that will cater for the diverse needs of the children. Written exercises and exams alone is not appropriate to determine their academic achievement so I always tell my colleagues about the use of other forms of assessment tools (P12).”

—I observe my learners learning processes whenever they are performing a task. Sometimes I use class exercise and exams too but that one only measures their cognitive skills (P3).”

Parents and Stakeholders value for Assessment

An effective early childhood program requires the involvement and support of parents and stakeholders. The value that parents and stakeholders place on assessment in early childhood education (ECE) is crucial for the success of ECE provision. Some participants noted that parents and stakeholders tend to prioritize pencil-and-paper assessments, such as standardized tests, as measures of academic success. When asked about the value placed on assessment by parents and stakeholders, some participants shared their views as follows:

—Most of them don't value it at all. I remember when we first started using the observational checklist in my district as assessment tool for kindergarten 1&2, there were a lot of challenges. During a P.T.A meeting, parents said they don't understand why their children didn't write end of term exams like their counterparts in the private schools and were just given this book (P1).”

—Well, some do some don't. On the side of parents, they mostly say their wards just go to school to play. But when you come to people who have the knowledge that they are learning through play they value it and needs to be assessed. But when it comes to especially the parents, and then the community, sometimes we have challenges with the assessment tools that we use unless we explain things to them (P6).”

—A parent asks, why is another school kindergarten class doing more tests and exams than ours? This shows their perception on other tools for assessment other than the pencil and paper test (P4).”

Discussion of the Themes which Emerged from Research Question Two

The findings of this study align with the views of Tamakloe, Amedahe, and Atta (2005), who emphasized that assessment techniques extend beyond paper-and-pencil tests and performance tasks, including methods like class participation, homework, observations, interviews, student presentations, and portfolios. The study reveals that the least utilized assessment tools among teachers in the Ayensuano District are portfolios, rubrics, and checklists. This may be due to a lack of sufficient knowledge on how to effectively use these tools, time constraints, and the rigid curriculum, which may discourage teachers from using alternative methods to avoid deviating from prescribed guidelines. This finding mirrors Eshun et al. (2014), who noted similar challenges faced by early childhood teachers in Ghana due to policies, time, resources, and assessment methods employed by their schools.

The study also supports Segers et al. (2003), who highlighted the challenges of assessment, particularly the need for specific knowledge to implement assessment methods effectively. As assessment practices evolve to focus on competencies and emerging skills, the findings underscore the importance of formative and summative assessments, which were used by nearly all participants. Formative assessments were employed to evaluate learners' understanding during the learning process, while summative assessments were conducted at the end of the term, in line with district-

wide exams. Teachers noted that assessment helped identify learners' strengths and weaknesses, allowing for instructional adjustments to meet individual needs.

However, some participants were observed to use only written exercises, with a few employing additional tools like observations, checklists, and portfolios. This reflects the findings of Reeves (2007), who pointed out the need for greater teacher capacity to evaluate learners' work using shared rubrics or criteria, a practice that can inform formative instruction. Despite these challenges, the study revealed that the main barrier to effective assessment was the rigid curriculum, which restricts flexibility and hampers teachers' ability to engage in holistic assessment practices. Additionally, participants noted that parents and education directorates often prioritize pencil-and-paper assessments, leaving teachers with little choice but to abandon alternative assessment tools. Therefore, curriculum developers must recognize the need for adjustments to better support comprehensive and flexible assessment strategies.

Research Question Three

The third research question sought to assess Teaching and Learning Resources (TLRs) that kindergarten teachers use to facilitate play-based activities. TLRs are those materials used in the classrooms for instruction. The use of TLRs is indispensable in the delivery of play-based pedagogy in Early Childhood Education (ECE) centres. Teachers' use of TLRs in play activities and the opportunities children get to have contact with the TLRs play an important role in ensuring quality teaching and learning in ECE settings. The themes which emerged from this research question included: teaching and learning resources availability to kindergarten teachers; effects of teaching and learning resources on play-based learning; learners' accessibility to

appropriate TLRs and learning centres enhancement in the classroom. These themes are further elaborated below.

Teaching and Learning Resources availability to Kindergarten Teachers

To effectively use play-based activities in ECE, teachers should provide a diverse range of materials and resources that foster curiosity, creativity, and exploration, allowing children to learn through play and hands-on experiences. Participants shared their views on the teaching and learning resources that are readily available and accessible for specific lessons or activities. Some participants had these to say:

—We have a lot of TLRs in my class. The children are able use them during teaching and learning and it makes them enjoy every lesson (P7).”

—My school has most of the materials because the PTA supports us with the buying of these materials. We have a TV set, textbooks for learners, materials for tracing, reading books, conversational posters, flip chart, pictures of scenes on the walls, etc. When you come to the playground there is a swing, Mary-go-round and a see-saw. It’s great to see the learners manipulating the materials (P5).”

—As for me the materials are not there so I make use of local material like sticks, stones, maize and bottle tops to teach numeracy concepts. All I can say is that, we always improvise materials for teaching and learning and it’s amazing how much children learn from what is available (P9).”

Effects of Teaching and Learning Resources on Play-Based Learning

The purpose and importance of teaching and learning resources is to make lessons interesting, learning easy and enable teachers to express concepts. Participants of the study equally understand that for play-based learning to be effective, there should be an interaction between learners and TLRs. Below are some of the information shared by the participants:

–My school lacks a lot of materials to help learners acquire basic skills like writing, reading and for that matter quality education (P4).”

–We don’t have most of the materials that the learners can play with in the school. When it comes to textbooks, the school has only few copies that cannot reach all the learners in the class. This affects teaching and learning since learners will be fighting for the few copies available (P1).”

–As you can see, we don’t have even a single play item outside for these children to play with. How can the children interact? It’s a very big problem for the teachers in the school (P10).”

–We have a lot of TLRs in my class. The children are able use them during teaching and learning and it makes them enjoy every lesson (P7).”

Learners Accessibility to Appropriate Teaching and Learning Resources

Children having access to TLRs and play items gets the opportunity to have hands-on experiences. In this regard, participants were of the view that, learners’ ability to engage and interact with the TLRs is pivotal in using play-based pedagogy. Here are what some participants shared:

–The children are able to get access to the materials and handle them and it helps in their learning and improves understanding (P8).”

–The materials are all age appropriate as you observed, and they are always at the reach of my learners. So, they get access to them anytime they wish (P4).”

–Yes, they have access to all the large posters in the class like; Vegetables and fruits chart and then parts of the body as well as parts of the plants. The alphabets and number charts and pictures of the environment (P2).”

Learning Centres Enhancement in the Classroom

Teachers creatively utilize local resources to develop innovative teaching materials, fostering a supportive environment that encourages children to take ownership of their learning through independent exploration and discovery in learning centres. Some study participants indicated that they have created shopping centres, book centres, market centres in their classrooms to help the learners to play with the materials there. Also, most of the participants interviewed indicated that, children have free access to

the learning centres, because when they go there, it helps them work together as teams. These are what some of the participants had to say:

—In numeracy when we are learning about money, children are allowed to visit the shopping centres, where they engage in selling and buying activities. Here, learners are guided on how to buy with real money. So, it helps them to grasp the concept easily for effective understanding (P5).”

—In my class I have two centres because of the size of the classroom, I don't want the place to be so congested. I give my learners free access to the learning centres, because when they go there, I think it helps them to just come together and work as a team. Also, whatever they do there, I think it will help them have a fair knowledge of what they are supposed to achieve out of the lesson (P6).”

—It depends on the lesson that am teaching, so, if it is about —market” I just direct them, they should go and play there, they should mention the names of everything they see. I even ask them to count the things that they see as long as they are playing with it, so it depends. I put them into groups, one group will go to the book centres, the other too will go to the home, and if our focus for day is on the market centres, that's where I will concentrate, so after am done with the first group, they will just rotate within 10 to 15 minutes (P9).”

Only four classrooms demonstrated clear learner-centred characteristics, where children were actively engaged, interacting with materials, and participating collaboratively (Appendix B).

Discussion of the Themes which emerged from Research Question Three

The study revealed that most schools lacked the necessary Teaching and Learning Resources (TLRs). This shortage, as observed by the respondents and the researcher, may hinder interaction and consequently, the use of play-based activities and the assessment strategies as well. TLRs are intended to be accessible to both teachers for instructional purposes and learners for hands-on interaction such as touching, moving, and tasting—which helps deepen their understanding of the material (French, 2007). Without these resources, teachers cannot effectively use them to support teaching, and learners' opportunities for interaction with the resources are limited. As a result,

teaching in these schools is likely to be more abstract than concrete and practical, which contradicts the assertion by Cho et al. (2000) that children under eight learn best when they can manipulate physical objects. Furthermore, such teaching methods may fail to engage learners and keep them active, as advocated by Montessori (1949).

In addition to the scarcity of TLRs, the few available were often fixed to classroom walls, limiting their use to teacher reference only, without allowing learners to touch or manipulate them. This deprived children of the sensory experience of feeling, touching, or tasting, as real objects were rarely used. When pictures or charts were employed, their limited availability meant that teachers either drew the objects on the chalkboard for learners to copy into their workbooks, held up the pictures for reference, or moved them closer to learners, instructing them not to touch them to avoid damage. However, effective learning with TLRs requires that individual learners physically interact with and manipulate the materials. The researcher argues that merely seeing the materials is insufficient; children must also have the opportunity to handle them. Moreover, the ability of TLRs to provide feedback to learners is crucial. Therefore, learners should have access to TLRs for practice, rather than writing on the floor, where their work could easily be erased by other learners. While it could be acknowledged that, given the circumstances, this was the best option available, it still limited the children's ability to practice meaningfully.

Additionally, the study found that most participants used play materials as specified by the lesson. Some schools visited had spacious classrooms where materials were well organized. Observations also revealed that nearly all participants ensured materials and resources were accessible to all learners during lessons. Consistent with this study, Oppong Frimpong (2017) argues that teachers' ability to effectively use

teaching and learning resources (TLRs) in their lessons, and to create an environment where children can access and interact with these resources, is essential for the successful use of play-based activities.

The study also highlighted that the lack of textbooks led teachers to draw illustrations on the chalkboard for learners to copy into their exercise books. This approach often wasted instructional time and made the lessons more theoretical rather than the hands-on, practical learning that should characterize Early Childhood Education. Ajayi (2007) emphasized the importance of textbooks and instructional materials in the teaching and learning process. Overall, the absence of TLRs meant that children could not interact with them, which hindered their learning. These findings are concerning, given the significant role that TLRs play in enhancing play-based learning. Without access to TLRs, teachers may struggle to make lessons engaging and to capture learners' attention, as Montessori (1949) advocated.

The study's findings highlight the essential role of Teaching and Learning Resources (TLRs) in delivering play-based pedagogy in Early Childhood Education centres. The research revealed that participants relied on mobile phones, particularly for phonics lessons. Observations confirmed that only a few participants utilized Bluetooth speakers for oral and listening activities. Tamakloe et al. (2005) emphasized the importance of selecting diverse TLRs that appeal to multiple senses, not just hearing, when using play-based activities. The study also found that the materials available for play were insufficient, with many schools lacking access to electricity, and televisions for classroom use. Observations noted that only two classrooms had television to support audio-visual and literacy activities, reinforcing the idea that TLRs should

fulfil relevant functions and enhance lesson delivery effectively, as confirmed by Tamakloe et al. (2005).

Moreover, Oppong Frimpong (2021) pointed out that teachers' ability to effectively use TLRs and create environments that allow children to interact with these resources is crucial for successful lesson delivery and quality learning outcomes. The study also noted a scarcity of real objects like fruits and vegetables, leading participants to substitute them with artificial items or charts. This aligns with the modern trend, as highlighted by Nkuuhe (1995), which emphasizes learning through all the senses— hearing, seeing, smelling, tasting, and touching.

The study further confirmed that most participants supported the idea that engaging and interacting with TLRs is pivotal for the use of play-based learning in ECE centres. It was found that learners had access to large posters in the classroom, such as charts of vegetables, fruits, and body parts. Additionally, concrete materials and manipulatives like empty cans, boxes, bottle tops, sticks, and straws were used by participants in numeracy lessons. These findings resonate with Oppong Frimpong's (2021) study, which noted that while some materials were available in ECE centres, they were often limited in quantity and fixed in place, preventing learners from touching or manipulating them.

The study also revealed that some ECE centres had created shopping, book, and market centres within classrooms to allow learners to manipulate materials, promoting teamwork and enhancing play-based activities. This finding contradicts Lester & Russell's (2008) observation that socio-dramatic and domestic play centres have been disappearing from early childhood classrooms.

The study's findings indicate that nearly all participants resorted to improvisation for play-based activities in the absence of original learning materials. Observations confirmed that most participants used improvised materials instead of realia to provide learners with first-hand experiences. This aligns with a study by Nantwi et al., (2019) which found that when teaching and learning materials are unavailable, teachers can use alternatives to support effective teaching and learning through play-based approaches (PBA). The study also noted the use of empty cans, boxes, and items like bottle tops, sticks, and straws for numeracy lessons. This supports Aina (2012) assertion that teachers should use discarded resources and materials from their surroundings to create effective teaching aids. Similarly, Opoku-Asare (2004) highlighted that the local environment offers various raw materials and discarded resources that teachers can use to improvise TLRs for effective teaching and learning.

Research Question Four

The fourth research question established the challenges that kindergarten teachers face in using play-based activities in teaching and learning in the Ayensuano District. Learning through play has changed how young children learn. Participants' role is to use play activities in teaching and learning. Participants revealed lack of professional development or training in play-based learning and pressure from parents and the education directorate to achieve prescribed academic outcomes as some practical challenges they face. Some participants also identified discrepancies between their personal beliefs and the use of some play activities as a challenge. Furthermore, some participants indicated the pressures they face in meeting accountability requirements as a reason for bias towards play activities in teaching and learning in the classroom. Whiles some participants shared their ordeal on the output of work pressure, some indicated a lack of confidence and knowledge due to limited exposure and

experiences in early childhood pedagogic principles. The challenges raised by the participants have been summarised in the following themes.

Kindergarten Teachers' Personal Beliefs and Attitudes in the use of Play-based Activities

Kindergarten teachers' ability to use play is influenced by their own beliefs. Some participants attributed their beliefs to their religion, health life, and own philosophy.

The views of some of the participants are quoted below:

—As for me. I believe in the play-based pedagogy compared to the traditional style of teaching, just that, the policy demands put pressure on me right now, because am alone in the class and looking at this approach and how intensive it is, and how you suppose to facilitate, and guide the children, I always feel exhausted each day after school. Meanwhile, the SISOs will also follow up with the demands for output of work and so if you don't take care, you will stop the play approach and just be giving exercise all the time (P1)."

—Sometimes it can be your health life which may be affected, because as far as my health is concerned then I must be careful with the use of some materials and equipment, I can put my personal beliefs aside but my health first (P11)."

Some participants also opposed the idea that self-beliefs influence the choice of play activities as summarised with the quotations below:

—I don't have any belief, health issues or anything against the use of play-based learning, assessment strategies or the use of the various teaching and learning resources, I do appreciate everything that I do with the children a lot when it comes to the full implementation of these practices (P5)."

If I have beliefs, then it will be a positive one because I believe that children should be made to play, and as they play with the right materials, they learn, so I will not do anything that will affect it, I will rather encourage all ECE teachers to use these management practices more for effective teaching and learning (P6)."

Kindergarten Teachers lack of Confidence and Inadequate Knowledge in the use of play-based activities for teaching and learning.

A significant challenge in early childhood education is the ability of teachers to use play activities effectively. Some participants noted that teachers' difficulties in the use

of play-based activities stem from a lack of confidence and limited knowledge about it. Additionally, several participants expressed the view that limited exposure to and experience with early childhood pedagogical principles negatively impact their use of this pedagogy. Here are some of their comments:

–I have not received any form of in-service training to enrich my knowledge on these activities, so it means, the old knowledge that I have acquired is what I have been using, so that one it could be a problem to me (P12).”

–I think that if we have been receiving regular training from workshops, like every term we attend about two workshops, then we can say that we will be equipped so much with how to manage our class that our confidence level will be boosted (P8).”

–Yes, because when you are looking for something, and you don't get it, you will feel bad and disturbed and you don't know what to do but if the materials are there, support from parents and stakeholders is guaranteed, coupled with constant training, then you can do it and do it well (P1).”

Three teachers displayed observable signs of limited confidence and inadequate knowledge in implementing play-based activities (Appendix B). This was reflected in hesitation, minimal facilitation of play, or difficulty structuring activities effectively.

Inadequate Teaching and Learning Resources and Related Facilities

The provision of teaching and learning resources, as well as play equipment, is essential for the effective implementation of play-based pedagogy and assessment strategies in early childhood education. Many participants expressed the view that funds should be allocated specifically for procuring teaching and learning resources to address the diverse needs of learners. Additionally, some participants highlighted that early childhood education (ECE) centres face a significant shortage of teaching and learning resources due to insufficient funding. Below are quotations from some participants regarding the inadequacy of resources and facilities at ECE centres.

—I think that TLRs should be the centre of our teaching. I see that if you don't have it you can't even teach. You will have to talk and talk and the children will just be looking at you but if you have enough TLRs you will not talk too much because the children will see and understand the lesson better (P10)."

—The only problem that I have in my daily activities is the unavailability of textbooks. How do I assess their reading skills (P3)?"

—We lack a lot of facilities to help the children acquire basic skills like writing and for that matter quality education. Parents don't also buy exercise books for their children so when it comes to assessment sometimes its difficulties (P2)."

Three teachers were observed to operate in environments with inadequate teaching and learning materials, which may hinder effective implementation of play-based strategies (Appendix B).

Perception of Parents, other Teachers and SISOs on use Play in Teaching and Learning

Participants shared their views on the perceptions of some parents, other teachers, and circuit supervisors regarding the use of play activities in teaching and learning. Some participants revealed that their colleagues looked down on them for incorporating play-based methods in their teaching. Additionally, some participants expressed that their circuit supervisors discouraged the use of observation and checklists for assessment. Furthermore, participants noted that parents' attitudes towards purchasing teaching and learning resources (TLRs) for their children were often discouraging. The general attitude towards early childhood education (ECE) teachers reflects a lack of respect for the field, which poses challenges their use of play as a teaching pedagogy. Below are some of the participants' remarks:

—As for me, I had an experience with two parents who came to complain to my head teacher that anytime their wards return from school if they are not singing then its buying and selling of any item, they set their eyes on in the house. They said I don't teach them anything, all I do is sing with them. But when it happens like that, then it means they are forcing us to go contrary to the demands of the approach which in the end will affect its goals (P12)."

–Yes, that one too is there. I mean, when they don't know what you are doing, they will definitely think you are doing nothing, especially when you take KG 2 learners out and they are learning through play activity, a colleague teacher who doesn't understand the approach, will think that you are not doing anything (P5)."

–Once my SISO was like, how can you have these few class exercises at the end of the term. So, I explained to him that most of the activities are done through play and we have different ways of assessing them apart from the normal class exercises, and he was like, but the output of work will determine if you are really working (P6)."

Discussion of Themes which Emerged from Research Question Four

The study revealed several challenges faced by kindergarten teachers in using play-based activities in teaching and learning. Teachers often rely on traditional teaching methods, making it difficult to embrace modern approaches. A lack of confidence and knowledge about play-based pedagogy emerged as a significant barrier, which is compounded by insufficient in-service training. This aligns with findings by Miller and Almon (2009), who noted that young teachers often hesitate to implement play-based curricula due to limited experience and confidence. Similarly, research by Putch and Ali (2013), Sofo, Thompson, and Kanton (2015), and Tamanja (2016) supports the notion that inadequate knowledge and skills hinder teachers from integrating play effectively.

The study also highlighted that insufficient teaching and learning resources, infrastructure, and assessment tools impede teachers' ability to evaluate learners and manage classrooms effectively. Teachers face time constraints in developing and implementing assessment strategies due to an already packed curriculum. This finding corroborates Akyeampong's (2017) research, which emphasized that the lack of standardized assessment tools hinders classroom management practices. Moreover, Eshun et al. (2014) observed that many early childhood teachers do not use

assessment techniques that actively involve learners, due to constraints such as examination policies, limited time, and scarce resources.

Inadequate teaching and learning resources were identified as a critical challenge, as noted by Oppong Frimpong (2021), who emphasized the importance of TLRs in creating effective learning environments. Limited classroom space, especially in schools with high enrolment levels, further exacerbates the challenges. Additionally, teachers face pressure from school administrators, supervisors, and parents to prioritize academic outcomes over play. Many stakeholders undervalue play-based approaches, which results in teachers abandoning play-based pedagogy to focus on academic achievements. This finding aligns with study by Mariani (2003), which highlight how pressure for academic results and a lack of support from administrators and stakeholders contribute to the decline of play-based approaches.

Furthermore, the study found that teachers' personal beliefs, including those shaped by religion, health, and individual philosophies, influence use of play activities. Participants also shared that some colleagues and circuit supervisors mocked or discouraged them from using play-based pedagogy and certain assessment tools, which negatively affected their morale. These challenges, coupled with a lack of support from parents and school authorities, hinder the successful integration of play-based activities in teaching and learning.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter deals with the summary, conclusions, limitations and recommendations.

5.1 Summary of the findings of the study

The study identified that kindergarten teachers are not familiar with play-based activities to use during their lesson delivery. It was established that, most school authorities and other stakeholders within the education do not give enough attention and necessary supports to play-based learning at the early childhood level. The study again found that some educational policies overlap while others seem to conflict with the demands of play-based pedagogy.

Also, the study revealed that kindergarten teachers use formative and summative form of assessment to evaluate learners learning and understanding during the learning process. Similarly, it was revealed that at the end of the term, learners write end of term examination which is used to assess their academic performance. It was found that most kindergarten teachers in the district are faced with many problems that hinder them in their quest to administer the right assessment tools on learners to evaluate their developmental changes. Some of which were the limited resources to conduct the assessment in schools, the lack of confidence to try out assessment tools like portfolios, learning logs, journals, checklist and rubrics due to inadequate professional guidance and the limited time to develop the assessment tools.

Lastly, the study established that, receiving regular training on play would help prepare teachers with the right skills and confidence to use play-based activities in teaching. Based on this, the study confirmed that, kindergarten teachers are

overstretched by school administrators and supervisors to achieve the prescribed academic outcomes rather than play.

5.2 Conclusions

Based on the findings of the study, the following conclusions were drawn:

To successfully utilize play-based activities, it is essential for teachers to possess the requisite content knowledge and pedagogical skills and confident of their ability to guide and facilitate meaningful learning through play-based learning.

The study concluded that teachers' ability to meaningfully use TLRs in their lessons and to create the necessary environment and opportunities for their learners to have access to the TLRs and to manipulate them is central to an effective teaching and learning.

It was evident from the findings of the study that kindergarten teachers in the district were well equipped with assessment practices.

The study finally concluded that; teachers must be given regular trainings in order to boost their confidence in the use of play-based activities. Also, sensitization and advocacy programs should be given to all stakeholders in education including teachers, supervisors and parents to avoid the mindset they have with the use of play-based activities.

5.3 Limitations of the Study

This study encountered several limitations that may influence the interpretation and applicability of its findings. Firstly, the study relied solely on the opinions, attitudes, and views of participants from the Ayensuano District. As a result, the findings may not be generalizable to other districts with different socio-economic, cultural, or

educational contexts. Finally, there is a possibility of response bias, as participants may have provided socially desirable answers rather than being entirely truthful about their use of play-based activities, though measures such as ensuring confidentiality and creating a non-judgmental interview atmosphere were employed to mitigate this.

Despite these limitations, the study provides valuable insights into the play-based activities used by kindergarten teachers in the Ayensuano District. It offers a foundation for further research that can address these limitations and build on the findings to inform policy and practice in early childhood education.

5.4 Recommendations

Based on the findings, the following recommendations were drawn:

1. Ayensuano District Directorate of Education should organize workshops on regular basis for teachers to upgrade their skills and knowledge in the use of play-based activities. This will help them to continually show the same level of professionalism in the use of play-based activities in their lessons irrespective of their location.
2. The GES in collaboration with NaCCA should charge other agencies in educational development in Ghana such as Sabre Education Trust and Right to Play (NGOs) and the training department of the various district education directorates to adequately prepare ECE teachers and head teachers of ECE centres through training with the requisite knowledge and skills on the various kinds of play-based activities to engage children through during instructions for effective teaching and learning.
3. Stakeholders of education such as Parent Association (PA), School Management Committee (SMC), Head teachers, Teachers and the Mission

Education Units should provide early childhood centres with enough, varieties, and developmentally appropriate teaching and learning resources and equipment to facilitate play-based pedagogies at the early childhood centres.

4. Finally, the ECE Coordinators in collaboration with the Educational Directorates, and other Agencies in Education should strategically and periodically organize sensitization and advocacy programs for all stakeholders in education including education supervisors, head teachers, teachers, and parents to help them acquire basic knowledge which will help curb their misconceptions about play-based pedagogy.
5. Further studies should focus on the following:
 - a. Since the study did not focus on influence of play-based pedagogy on academic performance of learners in the Ayensuano District, it is recommended that future research should consider this area.
 - b. Also, the study employed the qualitative type of research which is limited to generalizability because of small sample size. Further studies should consider a mixed method approach where the results can be generalized.

REFERENCES

- Abdulai, A. (2014). The place of play in Ghana's early childhood education. *Developing Country Studies*, 4(20), 180–188.
- Acar, O. A., & Tuncdogan, A. (2019). Using the inquiry-based learning approach to enhance student innovativeness: A conceptual model. *Teaching in Higher Education*, 24(7), 895–909.
- Adams, A. K., Asemnor, F., & Nkansah, V. (2024). Play-based pedagogy in Ghanaian basic schools: A review of related literature. *Asian Journal of Advanced Research and Reports*, 18(3), 17–28.
- Adom, D., Mensah, J. A., & Dake, D. A. (2020). Test, measurement, and evaluation: Understanding and use of the concepts in education. *International Journal of Evaluation and Research in Education*, 9(1), 109–119.
- Adu-Mensah, J. (2018). Attitude of basic school teachers toward grading practices: Developing a standardised instrument. *International Journal of Social Sciences & Educational Studies*, 5(1), 52–62.
- Ahmed, U. (2024). *Perception of teachers on play-based learning as an effective pedagogical tool in early-primary grades* (Doctoral dissertation, BRAC University).
- Aina, J. K. (2012). Teaching aids improvisation in the teaching and learning of physics in secondary schools. *African journal of Education studies*, 4(2).
- Airasian, P. W. (2001). *Classroom assessment: Concepts and applications*. McGraw-Hill, Blacklick, OH 43003.
- Ajayi, I. A. (2007). Achieving universal basic education in Nigeria: Strategies for improved funding and cost effectiveness. *The Social Sciences*, 2(3), 342–345.
- Akyeampong, K. (2017). Teacher educators' practice and vision of good teaching in teacher education reform context in Ghana. *Educational Researcher*, 46(4), 194–203.
- Ali, A., & Mahamod, Z. (2015). Development of a play-based instruction module for teaching preschoolers' language skills. *Australian Journal of Basic and Applied Sciences*, 9, 110–118.
- Ali, A., Aziz, Z., & Majzub, R. (2011). Teaching and learning through play. *World Applied Sciences Journal*, 14, 15–20.

- Aljohani, M. (2017). Principles of constructivism in foreign language teaching. *Journal of Literature and Art Studies*, 7(1), 97–107.
- Allee-Herndon, K. A., & Roberts, S. K. (2021). The power of purposeful play in primary grades: Adjusting pedagogy for children's needs and academic gains. *Journal of Education*, 201(1), 54–63.
- Al-Qaysi, N., Mohamad-Nordin, N., & Al-Emran, M. (2021). Factors affecting the adoption of social media in higher education: A systematic review of the technology acceptance model. In M. Al-Emran, K. Shaalan, & A. Hassanien (Eds.), *Recent Advances in Intelligent Systems and Smart Applications* (Studies in Systems, Decision and Control, Vol. 295). Springer.
- Amineh, R. J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal of Social Sciences, Literature and Languages*, 1(1), 9–16.
- Amo, R., & Subbey, M. (2022). Teachers' exposure level to the use of assessment methods in kindergarten centres within the Effutu municipality. *International Journal of Research and Innovation in Social Science (IJRISS)*, 4 (4), 700-705
- Ampiah, J. G. (2008). *An investigation of provision of quality basic education in Ghana: A case study of selected schools in the Central Region*. *Journal of international cooperation in education*, 11 (3), 19 – 37.
- Angelo, T. A. (1993). Classroom assessment. *Metropolitan Universities*, 4(1), 5–15.
- Angelo, T. A. (1995). Improving classroom assessment to improve learning: Guidelines from research and practice. *Assessment Update*, 7(6), 1–2.
- Angold, A., & Costello, E. J. (1995). A test–retest reliability study of child-reported psychiatric symptoms and diagnoses using the Child and Adolescent Psychiatric Assessment (CAPA-C). *Psychological Medicine*, 25(4), 755–762.
- Asare, K. (2015). Exploring the kindergarten teachers' assessment practices in Ghana. *Assessment*, 5(8), 110–128.
- Ashiabi, G. (2007). Play in the preschool classroom: Its socio-emotional significance and the teacher's role in play. *Early Childhood Education Journal*, 35(2), 199–207.
- Balfanz, R., Ginsburg, H. P., & Greenes, C. (2003). The “Big Math for Little Kids” early childhood mathematics program. *Teaching Children Mathematics*, 9(5), 264–268.

- Bennett, R. E. (2011). Formative assessment: A critical review. *Assessment in Education: Principles, Policy & Practice*, 18(1), 5–25.
- Bergen, D. (2002). The role of pretend play in children's cognitive development. *Early Childhood Research & Practice*, 4(1).
- Berk, L. E. (1994). Vygotsky's theory: The importance of make-believe play. *Young Children*, 50(1), 30–39.
- Bhat, B. A., & Bhat, G. J. (2019). Formative and summative evaluation techniques for improvement of learning process. *European Journal of Business & Social Sciences*, 7(5), 776–785.
- Biggs, J. (1996). Assessing learning quality: Reconciling institutional accountability and educational demands. *Assessment & Evaluation in Higher Education*, 21.
- Billingsley, G. M., McKenzie, J. M., & Scheuermann, B. K. (2020). The effects of a structured classroom management system in secondary resource classrooms. *Exceptionality*, 28(5), 317–332.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Brown, S., Rust, C., & Gibbs, G. (1994). *Strategies for diversifying assessment in higher education*. Oxford Centre for Staff Development.
- Bruner, J. (1996). Frames for thinking: Ways of making meaning. In D. R. Olson & N. Torrance (Eds.), *Modes of thought: Explorations in culture and cognition* (pp. 93–105). Cambridge University Press.
- Bubikova-Moan, J., Hjetland, H. N., & Wollscheid, S. (2019). ECE teachers' views on play-based learning: A systematic review. *European Early Childhood Education Research Journal*, 27(6), 776–800.
- Cavanaugh, D. M., Clemence, K. J., Teale, M. M., Rule, A. C., & Montgomery, S. E. (2017). Kindergarten scores, storytelling, executive function, and motivation improved through literacy-rich guided play. *Early Childhood Education Journal*, 45, 831–843.
- Chaojing, M. (2023). Approaches to designing interdisciplinary theme-based learning cases for primary and secondary schools. *Advances in Educational Technology and Psychology*, 7(10), 8–14.
- Chmielewski, M., & Watson, D. (2009). What is being assessed and why it matters: The impact of transient error on trait research. *Journal of Personality and Social Psychology*, 97(1), 186.

- Cho, B. I., Michael, J. A., Rovick, A. A., & Evens, M. W. (2000). An analysis of multiple tutoring protocols. In G. Gauthier, C. Frasson, & K. VanLehn (Eds.), *Intelligent tutoring systems* (pp. 212–221). Springer.
- Cimer, S. O., Cakir, I., & Cimer, A. (2010). Teachers' views on the effectiveness of in-service courses on the new curriculum in Turkey. *European Journal of Teacher Education*, 33(1), 31–34.
- Cohen, L., Manion, L., & Morrison, K. (2017). Approaches to qualitative data analysis. In L. Cohen, L. Manion, & K. Morrison (Eds.), *Research methods in education* (pp. 643–656). Routledge, London
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Sage, Thousand Oaks, California
- Creswell, J. W. (2009). *Educational research* (2nd ed.). Merrill Prentice Hall, New Jersey.
- Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five traditions* (3rd ed.). Sage, Thousand Oaks, California
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). Sage, Thousand Oaks, California
- Cunning, C. J. (1970). *Changing student attitude toward programmed instruction and measurement of its effect* (Doctoral dissertation, The University of Iowa).
- Daubert, E. N., Ramani, G. B., & Rubin, K. H. (2018). Play-based learning and social development. In *Play-based learning* (pp. 1–5).
- Davey, L. (1991). The application of case study evaluations. *Practical Assessment, Research & Evaluation*, 2 (9).
- De Vos, A. S. (2002). Qualitative data analysis and interpretation. In A. S. De Vos, H. Strydom, C. B. Fouché, & C. S. L. Delport (Eds.), *Research at grassroots: For the social sciences and human service professions* (2nd ed., pp. 363–372). Van Schaik.
- Dewey, J. (1910). Science as subject-matter and as method. *Science*, 31(787), 121–127.
- Dinnerstein, R. (2016). *Choice time: How to Deepen Learning Through Inquiry and Play, PreK–2*. Heinemann, Portsmouth, NH.

- Dorgu, T. E. (2015). Different teaching methods: A panacea for effective curriculum implementation in the classroom. *International Journal of Secondary Education*, 3(6), 77–87.
- Drake, S. M., & Reid, J. L. (2018). Integrated curriculum as an effective way to teach 21st century capabilities. *Asia Pacific Journal of Educational Research*, 1(1), 31–50.
- Earl, L. M. (2003). Classroom assessment for deep understanding: Shifting from assessment of learning to assessment for learning and assessment as learning. *Aporia Consulting*, 1–10.
- Earl, L. M. (2012). *Assessment as learning: Using classroom assessment to maximize student learning*. Thousand Oaks, CA: Corwin Press.
- Epler, P. (2019). Types of case studies. In A. Baron & K. McNeal (Eds.), *Case study methodology in higher education* (pp. 20–46). IGI Global.
- Eshun, I., Bassaw, T. K., Kankam, B., Bordoh, A., & Korang, F. Y. (2014). Teachers' perceptions of authentic assessment techniques in social studies lessons in senior high schools in Ghana. *International Journal of Educational Research and Information Science*, 1(4), 62–68.
- Evans, J. L., Myers, R. G., & Ilfeld, E. M. (2000). *Early childhood counts: A programming guide on early childhood care for development*. World Bank.
- Fantuzzo, J. W., & Hampton, V. R. (2000). Penn Interactive Peer Play Scale: A parent and teacher rating system for young children. In K. Gitlin-Weiner, A. Sandgrund, & C. Schaefer (Eds.), *Play diagnosis and assessment* (2nd ed., pp. 599–620). John Wiley & Sons, Inc.
- Farombi, J. G. (1998). *Resources and resource utilization in nomadic education*.
- Fisher, K. R., Hirsh-Pasek, K., Newcombe, N., & Golinkoff, R. M. (2013). Taking shape: Supporting preschoolers' acquisition of geometric knowledge through guided play. *Child Development*, 84(6), 1872–1878.
- Fleer, M. (2011). Conceptual play: Foregrounding imagination and cognition during concept formation in early years' education. *Contemporary Issues in Early Childhood*, 12(3), 224–240.
- Fleury, S., & Garrison, J. (2014). Toward a new philosophical anthropology of education: Fuller considerations of social constructivism. *Interchange*, 45, 19–41.

- Foxworthy, J. E. (2006). Teachers' beliefs about classroom management (Master's thesis, Lakehead University).
- French, G. (2007). *Children's early learning and development: A research paper*. National Council for Curriculum and Assessment (NCCA), 24 Merrion Square, Dublin 2.
- Froebel, F. (1894). *The education of man*. Appleton & Co.
- Garrett, T. (2005). *Student- and teacher-centred classroom management: A case study of three teachers' beliefs and practices* (Doctoral dissertation, The State University of New Jersey, New Brunswick).
- Genishi, C., Ryan, S., Ochsner, M., & Yarnall, M. M. (2001). Teaching in early childhood education: Understanding practices through research and theory. In V. Richardson (Ed.), *Handbook of research on teaching*, 4, 1175–1210. American Educational Research Association.
- Gibbs, G. (2006). Why assessment is changing. In *Innovative assessment in higher education* (pp. 31–42). Routledge.
- Glaserfeld, E. von. (1995). *Radical constructivism: A way of knowing and learning*. Falmer Press.
- Gordon, E. (2003). Integrative neuroscience. *Neuropsychopharmacology*, 28(1), S2–S8.
- Gordon, R. A., Russ, S. W., & Dimitropoulos, A. (2024). Examining effective intervention strategies in a play-based program for children with Prader-Willi syndrome. *Journal of Developmental and Physical Disabilities*, 36(3), 511–533.
- Graue, M. E. (2009). Reimagining kindergarten: Restoring a developmental approach when accountability demands are pushing formal instruction on the youngest learners. *Educational Leadership*, 66(10), 10–15.
- Greenberg, J., Putman, H., & Walsh, K. (2014). *Training our future teachers: Classroom management*. National Council on Teacher Quality, 1420 New York Avenue NW Suite 800, Washington
- Gronlund, N. E. (2003). *Assessment of student achievement* (7th ed.). Allyn & Bacon, Boston, Massachusetts
- Hammersley, M. (2013). *The myth of research-based policy and practice*. Sage, Thousand Oaks, California

- Harlen, W. (Ed.). (2015). *Working with big ideas of science education*. Science Education Programme of IAP.
- Hattie, J. (2013). Calibration and confidence: Where to next? *Learning and Instruction, 24*, 62–66.
- Howard, J. (2010). Making the most of play in the early years: The importance of children's perceptions. In *Play and learning in the early years* (pp. 145–160).
- Howard-Wagner, D., Kutay, C., Riley, L., & Mooney, J. (2012). Decolonising Sociology Curriculum: using an online immersive learning environment to deliver cross-cultural training. In *Refereed Conference Proceedings of the Australian Sociological Association 2012* (Peer Reviewed ed., pp. 9). TASA (the Australian Sociological Association).
- Irvin, M. (2017). *The importance of play in early childhood education* (Master's theses and capstone projects, Northwestern College, Orange City, IA).
- Irwin, L. G., Siddiqi, A., & Hertzman, G. (2007). *Early child development: A powerful equalizer*. Commission on the Social Determinants of Health, World Health Organization.
- Ismail, Z. (2015). *The effect of fun learning on learning readiness in preschoolers* (Master's thesis, Universiti Pendidikan Sultan Idris).
- Izumi-Taylor, S. I., Samuelsson, I. P., & Rogers, C. S. (2010). Perspectives on play in three nations: A comparative study of Japan, the United States, and Sweden. *Early Childhood Research & Practice, 12* (1).
- Janssen, J. J. H. M. (2008). *Using visualizations to support collaboration and coordination during computer-supported collaborative learning* [Doctoral dissertation, Utrecht University].
- Jay, J. A., & Knaus, M. (2018). Embedding play-based learning into junior primary (Year 1 and 2) curriculum in WA. *Australian Journal of Teacher Education, 43*(1), 112–126.
- Jegede, S. A. (2010). Nigerian students' perception of technical words in senior secondary school chemistry curriculum. *Pakistan Journal of Social Sciences, 7*(2), 109–111.
- Kane, N. (2016). The play-learning binary: U.S. parents' perceptions of preschool play in a neoliberal age. *Children & Society, 30*(4), 290–301.
- Kanno, Y. (2018). High-performing English learners' limited access to four-year college. *Teachers College Record, 120*(4), 1–46.

- Kawulich, B. (2012). Collecting data through observation. In C. Wagner, B. Kawulich, & M. Garner (Eds.), *Doing social research: A global context* (pp.150-160). New York: McGraw Hill.
- Kekesi, D. K., Donkor, K., & Torkonyo, M. (2019). Early childhood education teachers' perceptions of the use of play as a teaching technique in Afadjato South District of the Volta Region, Ghana. *Education Quarterly Reviews*, 2(3), 504–516.
- Kelly, G. J. (2012). Epistemology and educational research. In *Handbook of complementary methods in education research* (pp. 33–55). Taylor and Francis
- Kennedy, A. (2014). Understanding continuing professional development: The need for theory to impact on policy and practice. *Professional Development in Education*, 40(5), 688–697.
- Kivunja, C. (2015). Teaching students to learn and to work well with 21st-century skills: Unpacking the career and life skills domain of the new learning paradigm. *International Journal of Higher Education*, 4(1), 1–11.
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. (2nd ed.) Peason FT Press.
- Korstjens, I., & Moser, A. (2018). Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, 24(1), 120–124.
- Kusi, H. (2012). *Doing qualitative research: A guide for researchers*. Emmapong Press.
- Kussmaul, C., & Pirmann, T. (2021). Guided inquiry learning with technology: Community feedback and software for social constructivism. In *Proceedings of the International Conference on Computer Supported Education* (pp. 407–428).
- Kutay, C., Mooney, J., Riley, L., & Howard-Wagner, D. (2013). Teaching through story mapping. In *Proceedings of the Technology, Knowledge and Society Conference*. Los Angeles, USA.
- Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing* (2nd ed.). Sage, Thousand Oaks, California.
- Kyriacou, C. (1995). A humanistic view of discipline. In B. Rogers (Ed.), *Teacher leadership and behaviour management*. Paul Chapman Publishing.

- Lane, L. K., Oakes, W. P., Cantwell, E. D., Schatschneider, C., Menzies, H., Crittenden, M., & Messenger, M. (2016). Student Risk Screening Scale for internalizing and externalizing behaviours: Preliminary cut scores to support data-informed decision making in middle and high schools. *Behavioural Disorders, 42*(1), 271–284.
- Le, H., Janssen, J., & Wubbels, T. (2018). Collaborative learning practices: Teacher and student perceived obstacles to effective student collaboration. *Cambridge Journal of Education, 48*(1), 103–122.
- Lester, S., & Russell, S. (2008). *Play for a Change: Play Policy and Practice: A Review of Contemporary Perspectives*. Play England.
- Levin, J., Nolan, J. F., Kerr, J. W., & Elliot, A. E. (2005). *Principles of classroom management: A professional decision-making model* (Canadian ed.). Pearson/Allyn & Bacon.
- Lillard, A. S., Lerner, M. D., Hopkins, E. J., Dore, R. A., Smith, E. D., & Palmquist, C. M. (2013). The impact of pretend play on children's development: A review of the evidence. *Psychological Bulletin, 139*(1), 1–34.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage, Thousand Oaks, California.
- Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.). Sage, Thousand Oaks, California.
- Lindon, J. (2002). *What is play?* Fact Sheet, Children's Play Information Service, National Children's Bureau, London
- Lindon, J. (2013). *Play and learning in the early years: Practical activities and games for the under 3s*. Andrews UK.
- Loy, C. L. (2017). Boneka sebagai alat pedagogi dalam perkembangan sosial dan emosi kanak-kanak prasekolah. *Jurnal Pendidikan Awal Kanak-Kanak, 6*, 45–56.
- Mangal, S. K. (2012). *Advanced educational psychology* (2nd ed., pp. 159–163). PHI Learning.
- Manichander, T. (2016). *Assessment in education*. Lulu Press.
- Marbina, L., Church, A., & Tayler, C. (2011). *Victorian early years learning and development framework: Evidence paper—Practice principle 6*. University of Melbourne.

- Mariani, M. D. N. (2003). *Kepentingan bermain dalam pendidikan prasekolah*. <http://www.scribd.com/doc/4007899>
- Mathieson, S. (2012). Disciplinary cultures of teaching and learning as socially situated practice. *Higher Education*, 63 (5), 549–564.
- Matthews, W. J. (2003). Constructivism in the classroom: Epistemology, history, and empirical evidence. *Teacher Education Quarterly*, 30 (3), 51–64.
- McAfee, O., Leong, D., & Bodrova, E. (2004). *Basics of Assessment: A Primer for Early Childhood Professionals*. National Association for the Education of Young Children, 1509 16th Street, NW, Washington, DC 20036.
- McInnes, K., Howard, J., Miles, G., & Crowley, K. (2011). Differences in practitioners' understanding of play and how this influences pedagogy and children's perceptions of play. *Early Years*, 31(2), 121–133.
- McMillan, J. H., & Schumacher, S. (2014). *Research in education: Evidence-based inquiry* (7th ed.). Pearson Education.
- Mekonnen, D. (2016). An assessment of the current practices of play-based learning in North Gondar. *International Journal of Current Research*, 8 (5), 32097 – 32119.
- Mereku, D. K. (2019). Sixty years of teacher education in Ghana: Successes, challenges and the way forward. *African Journal of Educational Studies in Mathematics and Sciences*, 15(2), 69–74.
- Merriam, S. B., & Tisdell, E. J. (2009). Dealing with validity, reliability, and ethics. In *Qualitative research: A guide to design and implementation* (pp. 209–235). Jossey-Bass.
- Mertens, D. M. (2010). Divergence and mixed methods. *Journal of Mixed Methods Research*, 4(1), 3–5.
- Mialaret, G. (1966). *The psychology of the use of audio-visual aids in primary education*. George G. Harrap & Co. Ltd.; Paris, United Nations Educational, Scientific, and Cultural Organization.
- Miller, E., & Almon, J. (2009). *Crisis in the Kindergarten: Why Children Need to Play in School*. College Park, MD: Alliance for Childhood.
- Mills, A. J., Durepos, G., & Wiebe, E. (2010). *Case study research*. Sage, Thousand Oaks, California.

- Mohammed, S. H., & Kinyo, L. (2020). The role of constructivism in the enhancement of social studies education. *Journal of Critical Reviews*, 7(7), 249–256.
- Montessori, M. (1949). *The absorbent mind*. Clio Press Ltd.
- Nacino-Brown, R., Oke, F. E., & Brown, D. P. (1982). *Curriculum and instruction: An introduction to methods of teaching*. Macmillan, London.
- Nantwi, W. K. (2016). *Skills development for preparing teaching and learning materials at Offinso College of Education* (Master's thesis, Kwame Nkrumah University of Science and Technology).
- National Council for Curriculum and Assessment (NaCCA). (2019). *National pre-tertiary education curriculum framework*. <https://nacca.gov.gh>
- Nestor, O., & Moser, C. S. (2018). The importance of play. *Journal of Occupational Therapy, Schools, & Early Intervention*, 11(3), 247–262.
- Nicolopoulou, A. (2010). The alarming disappearance of play from early childhood education. *Human Development*, 53(1), 1–15.
- Nilsson, M., Chisholm, E., Griggs, D., Howden-Chapman, P., McCollum, D., Messerli, P., Neumann, B., Stevance A-S, Visbeck M. & Stafford-Smith, M. (2018). Mapping interactions between the sustainable development goals: Lessons learned and ways forward. *Sustainability Science*, 13(6), 1489–1503.
- Nkuuhe, J. (1995). Instructional media. In A. Matiru & R. Kamau (Eds.), *Teach your best: A handbook for university lecturers* (pp. 223–260). German Foundation for International Development.
- Nor Puteh, S., & Ali, A. (2013). Preschool teachers' perceptions towards the use of play-based approach in language and literacy development for preschool. *Malaysian Journal of Learning and Instruction*, 10, 79–98.
- Oduro, E. O. (2015). *Assessment in mathematics classrooms in Ghana: A study of teachers' practices* (Doctoral dissertation, University of Sussex).
- Olorode, J. J., & Jimoh, A. G. (2016). Effectiveness of guided discovery learning strategy and gender sensitivity on students' academic achievement in financial accounting in colleges of education. *International Journal of Academic Research in Education and Review*, 4(6), 182–189.
- Omwirhiren, E. M. (2015). Enhancing academic achievement and retention in senior secondary school chemistry through discussion and lecture methods: A case

- study of selected secondary schools in Gboko, Benue State, Nigeria. *Journal of Education and Practice*, 6(21), 155–161.
- Opoku-Asare, N. A. A. (2004). Non-book instructional media usage in Ghanaian primary schools. *Journal of Science and Technology*, 24(2).
- Oppong Frimpong, S. (2017). *An investigation into the quality of interaction in early childhood education in Ghana: A constructivist perspective* (Doctoral thesis, University of Aberdeen).
- Oppong Frimpong, S. (2021). The role of teaching and learning materials and interaction as a tool to quality early childhood education in Agona East District of the Central Region of Ghana. *African Educational Research Journal*, 9(1), 168–178.
- Patton, M. Q. (2002). *Qualitative evaluation and research methods* (2nd ed.). Sage, Thousand Oaks, California.
- Paulson, F. L., Paulson, P. R., & Meyer, C. A. (1991). What makes a portfolio a portfolio. *Educational Leadership*, 48(5).
- Pedaste, M., Mäeots, M., Siiman, L. A., de Jong, T., van Riesen, S. A., Kamp, E. T., & Tsourlidaki, E. (2015). Phases of inquiry-based learning: Definitions and the inquiry cycle. *Educational Research Review*, 14, 47–61.
- Pellis, S. M., Pellis, V. C., & Himmler, B. T. (2014). How play makes for a more adaptable brain: A comparative and neural perspective. *American Journal of Play*, 7(1), 73–98.
- Pervin, N., & Mokhtar, M. (2022). The Interpretivist Research Paradigm: A Subjective Notion of a Social Context. *International Journal of Academic Research in Progressive Education and Development*, 11(2), 419–428.
- Piaget, J. (1951). Principal factors determining intellectual evolution from childhood to adult life. In D. Rapaport (Ed.), *Organization and pathology of thought: Selected sources* (pp. 154–175). Columbia University Press.
- Piaget, J. (1967). *The development of thought: Equilibration of cognitive structures*. Viking Press.
- Polit, D. F., & Beck, C. T. (2009). International gender bias in nursing research, 2005–2006: A quantitative content analysis. *International Journal of Nursing Studies*, 46(8), 1102–1110.

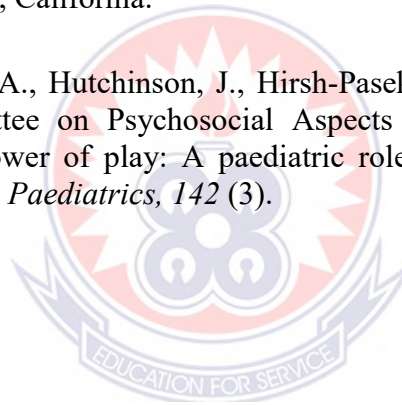
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies*, 47(11), 1451–1458.
- Presser, A. L., Clements, M., Ginsburg, H. P., & Ertle, B. (2015). Big math for little kids: The effectiveness of a preschool and kindergarten mathematics curriculum. *Early Education and Development*, 26(3), 399–426.
- Prince, M. J., & Felder, R. M. (2006). Inductive teaching and learning methods: Definitions, comparisons, and research bases. *Journal of Engineering Education*, 95(2), 123–138.
- Putch, N., & Ali, A. (2013). Preschool teachers' perceptions toward the use of a play-based approach in language and literacy development. *Malaysian Journal of Learning and Instruction*, 10, 79–98.
- Pyle, A., & Danniels, E. (2017). A continuum of play-based learning: The role of the teacher in play-based pedagogy and the fear of hijacking play. *Early Education and Development*, 28 (3), 274–289.
- Pyle, A., & DeLuca, C. (2017). Assessment in play-based kindergarten classrooms: An empirical study of teacher perspectives and practices. *Journal of Educational Research*, 110, 457–466.
- Pyle, A., Danniels, E., Larsen, N. E., & Martinussen, R. (2022). Supporting children's self-regulation development in play-based kindergarten classrooms. *International Journal of Educational Research*, 116, Article 102059.
- Pyle, A., DeLuca, C., & Danniels, E. (2017). A scoping review of research on play-based pedagogies in kindergarten education. *Review of Education*, 5 (3), 311 – 351.
- Pyle, A., Poliszczuk, D., & Danniels, E. (2018). The challenges of promoting literacy integration within a play-based learning kindergarten program. *Journal of Research in Childhood Education*, 32(2), 219–233.
- Rauf, A., & Bakar, K. (2019). Effects of play on the social development of preschool children. *Creative Education*, 10, 2640–2648.
- Reeves, D. (2007). Challenges and choices: The role of educational leaders in effective assessment. In *Ahead of the curve: The power of assessment to transform teaching and learning* (pp. 227–251).
- Rigby, J. G., Woulfin, S. L., & März, V. (2016). Understanding how structure and agency influence education policy implementation and organizational change. *American Journal of Education*, 122(3), 295–302.

- Right to Play Ghana. (2016). *Annual report*. <https://righttoplay.com/en/national-offices/national-office>
- Rosli, R., & Lin, T. W. (2018). Children early mathematics development based on a free play activity. *Creative Education*, 9(7), 1174–1184.
- Sabre Charitable Trust. (2017). *Annual reports and accounts for Sabre Education*. <http://sabre.education/about-us>
- Saleem, A., Kausar, H., & Deebea, F. (2021). Social constructivism: A new paradigm in teaching and learning environment. *Perennial Journal of History*, 2(2), 403–421.
- Samuelson, L. K., Smith, L. B., Perry, L. K., & Spencer, J. P. (2011). Grounding word learning in space. *PLOS ONE*, 6(12), e28095.
- Sarama, J., & Clements, D. H. (2006). Mathematics in kindergarten. *Young Children*, 61(5), 38–41.
- Segers, M., Dochy, F., & Cascallar, E. (2003). The era of assessment engineering. In Segers, M., Dochy, F., & Cascallar (Eds.), *Optimising new modes of assessment: In search of qualities and standards* (pp. 1–12). Springer.
- Shavelson, R. J. (2006). On The Integration of Formative Assessment in Teaching and Learning: Implications for New Pathways in Teacher Education. In F. Oser, F. Achtenhagen, & U. Renold (Eds.), *Competence-Oriented Teacher Training: Old Research Demands and New Pathways*. Utrecht, The Netherlands: Sense Publishers.
- Singer, D. G., Golinkoff, R. M., & Hirsh-Pasek, K. (2006). *Play = learning: How play motivates and enhances children's cognitive and social-emotional growth*. Oxford University Press.
- Singh, Y. P., & Agrawal, A. (2011). Introduction to cooperative learning. *Indian Streams Research Journal*, 1(2), 1–9.
- Smith, K. (2015). The role of research in teacher education. *Research in Teacher Education*, 5(2), 43–46.
- Sofu, S., Thompson, E., & Kanton, T. L. (2015). Untrained teachers diploma in basic education programme in Ghana. *American International Journal of Contemporary Research*, 5(6), 7–13.
- Speziale, H. J., & Carpenter, D. R. (2011). *Qualitative research in nursing: Advancing the humanistic imperative*. Lippincott Williams & Wilkins.

- Stagnitti, K., Bailey, A., Hudspeth Stevenson, E., Reynolds, E., & Kidd, E. (2016). An investigation into the effect of play-based instruction on the development of play skills and oral language. *Journal of Early Childhood Research, 14*(4), 389–406.
- Stevenson, N. A., VanLone, J., & Barber, B. R. (2020). Misalignment of teacher education and the need for classroom behaviour management skills. *Education and Treatment of Children, 43*(4), 393–404.
- Stiggins, R. J., Arter, J. A., & Chappuis, J. (2004). *Classroom assessment for student learning*. Assessment Training Institute.
- Streubert, H. J. (2007). *Designing data generation and management strategies*. Lippincott Williams & Wilkins.
- Sutton-Smith, B. (1966). Piaget on play: A critique. *Psychological Review, 73*(1), 104–110.
- Tamakloe, E. K., Amedahe, F. K., & Atta, E. T. (2005). *Principles and methods of teaching*. Black Mask Limited.
- Tamanja, E. M. J. (2016). Teacher professional development through sandwich programmes and absenteeism in basic schools in Ghana. *Journal of Education and Practice, 7*(18), 92–108.
- Tarimo, J. J. (2013). *Teachers' use of play as a teaching strategy in pre-primary schools in Mwanga District, Kilimanjaro, Tanzania* (Master's thesis, Kenyatta University).
- Taylor, S. P. (2018). Critical realism vs. social constructionism and social constructivism: Application to a social housing research study. *International Journal of Sciences: Basic and Applied Research, 37* (2), 216–222.
- Theobald, M., Danby, S., Einarsdóttir, J., Bourne, J., Jones, D., Ross, S., & Carter-Jones, C. (2015). Children's perspectives of play and learning for educational practice. *Education Sciences, 5* (4), 345–362.
- Trumbull, E., & Lash, A. (2013). Understanding formative assessment: Insights from learning theory and measurement theory. *Creative Education, 8* (8).
- UNESCO. (2019). *The promise of large-scale learning assessments*. UNESCO.
- UNESCO. (2021). *Global partnership strategy for early childhood (2021–2030)*. <https://unesdoc.unesco.org/ark:/48223/pf0000380077>

- UNICEF. (2018). *Early childhood development: The key to a full and productive life*. <https://www.unicef.org/media/60561/file/ECD-Key-Facts-UNICEF.pdf>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wall, B. T., Gorissen, S. H., Pennings, B., Koopman, R., Groen, B. B., Verdijk, L. B., & van Loon, L. J. (2015). Aging is accompanied by a blunted muscle protein synthetic response to protein ingestion. *PLOS ONE*, *10*(11), e0140903.
- Wallerstedt, C., & Pramling, N. (2012). Learning to play in a goal-directed practice. *Early Years*, *32*(1), 5–15.
- Walsh, G., McGuinness, C., Sproule, L., & Trew, K. (2010). Implementing a play-based and developmentally appropriate curriculum in Northern Ireland primary schools: What lessons have we learned? *Early Years*, *30*(1), 53–66.
- Wang, M., & Lam, Y. (2017). Evidence-Based Practice in Special Education and Cultural Adaptations: Challenges and Implications for Research: *Research and Practice for Persons with Severe Disabilities*, *42*(1), 53-61.
- Warner, L. (2008). You're it! Thoughts on play and learning in schools. *Horace Summer*, *24* (2).
- Weisberg, D. S., Hirsh-Pasek, K., & Golinkoff, R. M. (2013). Guided play: Where curricular goals meet a playful pedagogy. *Mind, Brain, and Education*, *7*(2), 104–112.
- Wergin, J. F. (2018). Finding the right design for EDI research. In A. M. Konrad, P. Prasad, & J. K. Pringle (Eds.), *Handbook of research methods in diversity management, equality and inclusion at work* (pp. 36–59). Edward Elgar Publishing.
- White, R. (2004). Young children's relationship with nature: Its importance to children's development and the Earth's future. *White Hutchinson Leisure & Learning Group*, *1*(9), 215–219.
- Whiteman, E. (2018). *The impact of social play on young children*. (Master's thesis, Murray State University).
- Wiliam, D. (2010). An Integrative Summary of the Research Literature and Implications for a New Theory of Formative Assessment. In H. L. Andrade, & G. J. Cizek (Eds.), *Handbook of Formative Assessment* (pp. 18-40). New York: Taylor & Francis.

- Williams, G. E. (2017). *Teacher experiences on the play-based methods and instructional practices used in half vs. full day kindergarten* (Doctoral dissertation, Northeastern University Boston, Massachusetts).
- Wohlwend, K. E. (2013). *Literacy playshop: new literacies, popular media, and play in the early childhood classroom*. Teachers College Press, Teachers College, Columbia University.
- Wood, E. (2014). The play–pedagogy interface in contemporary debates. In Brooker L, Blaise, M., Edwards S. (Eds.) *Part II: Play and learning in pedagogy, curriculum and assessment. The SAGE Handbook of Play and Learning in Early Childhood* (pp. 145–156). Sage, Thousand Oaks, California.
- Yavuz, S., & Güzel, Ü. (2020). Evaluation of teachers' perceptions of effective communication skills according to gender. *African Educational Research Journal*, 8(1), 134–138.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Sage, Thousand Oaks, California.
- Yogman, M., Garner, A., Hutchinson, J., Hirsh-Pasek, K., Golinkoff, R. M., Baum, R., & Committee on Psychosocial Aspects of Child and Family Health. (2018). The power of play: A paediatric role in enhancing development in young children. *Paediatrics*, 142 (3).



APPENDIX A:

SEMI-STRUCTURED INTERVIEW GUIDE

**UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES,
DEPARTMENT OF EARLY CHILDHOOD EDUCATION AND CARE
DEVELOPMENT**

Dear Respondent,

I am a student of the above mentioned university conducting a study on kindergarten teachers' use of play-based activities in teaching and learning. I would therefore appreciate it if you could respond to the questions below as it pertains to you. You are assured that information gathered will be used for academic purposes only.

SECTION A

BACKGROUND INFORMATION

1. Sex: Female [] Male []
2. Teaching experience (years):
3. Your highest academic qualification:
Diploma []
Bachelor's Degree []
Master's Degree []
PhD []
Others specify:
4. Current school:
5. Class: KG 1 [] KG 2 []
6. Class Size.....

SECTION B

Objective 1: Kindergarten teachers' use of play-based activities

7. Are you an early childhood trained teacher? Yes [] No []
8. What teaching approach do you employ in your class?
.....
.....
9. How and when do you integrate play-based activities into your lessons?
.....
.....
.....

10. What informs your choice of play to use in a lesson?

.....
.....

11. What are some of the challenges that you face when using play activities in your lesson?

.....
.....

SECTION C

Objective 2: Assessment Tools used by Kindergarten Teachers

12. What assessment tools do you currently use to assess learner's learning progress?

.....
.....

13. How do you use assessment as, of and for as required by the standard-based curriculum?

.....
.....
.....

14. How effective do you find these assessment methods in understanding learner's learning outcome?

.....
.....

15. How do you communicate feedback from assessment to parents?

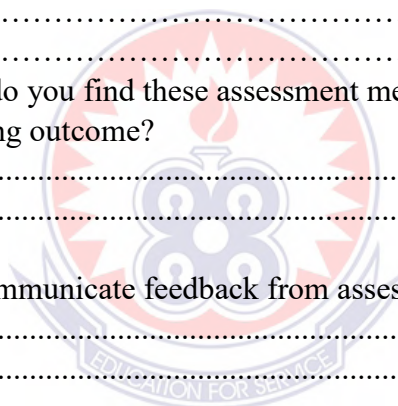
.....
.....
.....

16. How does parent's feedback improve your teaching practices?

.....
.....

17. Can you describe any challenges you face with the current assessment methods?

.....
.....



SECTION D

Objective 3: Availability of Teaching and Learning Resources used by Teacher's

18. What teaching and learning resources are currently available to you in terms of instructional and technological tools?

.....
.....

19. How does the resources in your class allow for play-based learning?

.....
.....
.....

20. Are the resources sufficient for use? Yes [] No []

21. Have you encountered any challenges in accessing resources during teaching and learning? Yes [] No []

Explain

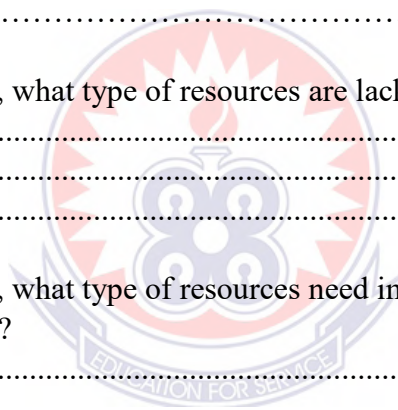
.....
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22. In your opinion, what type of resources are lacking?

.....
.....
.....

23. In your opinion, what type of resources need improvement for better implementation?

.....
.....
.....



SECTION E

Objective 4: Challenges Kindergarten Teachers face in the use of play-based activities?

24. Do you find it difficult to use play-based activities in your lessons? Yes [] No []

25. How does your class size influence your use of play activities in your lessons?

.....
.....
.....

26. Do you think that the location of your school influences your choice of play activities to use in your lessons? Yes [] No []

Explain.....

.....
.....

27. How often do you get training on professional development programs in play-based learning?

.....
.....
.....

28. Do you get support from school administrators and other stakeholders towards the use of play-based activities?

.....
.....
.....

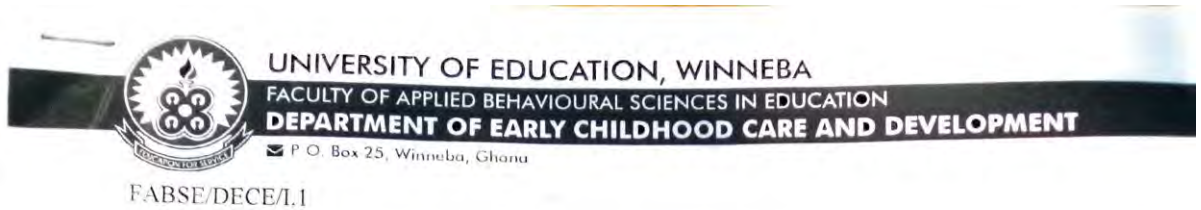
Thank you.



APPENDIX B: OBSERVATION CHECKLIST

Teacher's use of Play-based activities in lesson													Remarks
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12		
			√	√	√	√							four out of twelve
Teaching and Learning Resources available to Kindergarten Teachers													three out of twelve
				√		√		√					
Learning Centres Enhancement in the classroom													three out of twelve
				√	√			√					
Kindergarten Teachers use of Assessment Tools (class exercise and homework)													twelve out of twelve
√	√	√	√	√	√	√	√	√	√	√	√		
Kindergarten Teachers use of Assessment Tools (checklist and portfolio)													two out of twelve
	√			√									
Teachers lack of Confidence and Inadequate knowledge in Play-based Activities													three out of twelve
√							√				√		
Inadequate Teaching and Learning Resources													three out of twelve
	√	√							√				
Learner Centered Classroom													four out of twelve
			√	√	√	√							

APPENDIX C: INTRODUCTORY LETTER, UNIVERSITY OF EDUCATION, WINNEBA



FABSE/DECE/L1

3RD SEPTEMBER, 2024

The Director
Ayensuano District Education Office
P.O. Box C32
Coaltar

Dear Sir/ Madam,

INTRODUCTORY LETTER

I kindly write to introduce to you **Ms. Doris Yaa Frimpong** with index number: **8231900038** who is an M.PHIL. student at the Department of Early Childhood Care and Development, University of Education, Winneba. She is in her final year and has to embark on her thesis on the topic: "*Kindergarten Teachers' Classroom Practices in the Ayensuano District*".

Ms. Doris Yaa Frimpong is to collect data for her thesis, and I would be most grateful if she could be given the needed assistance.

Thank you.


Yours faithfully,

PROF. MICHAEL SUBBEY, (PhD.)
HEAD OF DEPARTMENT

APPENDIX D: INTRODUCTORY LETTER, GHANA EDUCATION SERVICE

GHANA EDUCATION SERVICE

In case of reply the number and date of this letter should be quoted.


REPUBLIC OF GHANA

AYENSUANO DISTRICT EDUCATION OFFICE
P.O. BOX C 32
COALTAR.
Email – ayensuano.ded@ges.gov.gh
3RD OCTOBER 2024

My Ref: GES/ER/ADEO/MC: 178/
Your Ref No.....


PERMISSION TO CONDUCT A RESEARCH
RE: DORIS YAA FRIMPONG STAFF ID.: 950545

We reference to your letter dated 25th September 2024 on the above subject, permission is granted to you to conduct the research at the kindergarten department of the selected schools.

Your permission starts from Thursday 10th October 2024 and ends on Thursday 21st November 2024. Please ensure not to disrupt the contact hours of the pupils.

Please be notified that data on the kindergarten department of the schools in the district could be accessed at the Planning and Statistical department of our office. Contact the head of the department.

Thank you.

.....

ALEXANDER N. AMANYA (REV)
DISTRICT DIRECTOR OF EDUCATION
AYENSUANO

✓ **DORIS YAA FRIMPONG**
MARFOKROM BASIC SCH.

CC: THE H.O.D. – SUPERVISION AND MONITORING – D.E.O. – AYENSUANO
THE H.O.D. – PLANNING AND STATISTICS – D.E.O. - AYENSUANO
ALL SCHOOL IMPROVEMENT SUPPORT OFFICER (SISOs) CONCERN – AYENSUANO
THE HEADTEACHER, KRABOA METH. PRIM SCH.
THE HEADTEACHER, COALTAR PRESBY BASIC SCH.
THE HEADTEACHER, MARFOKROM ANG/D/A BASIC SCH.
THE HEADTEACHER, OTOASE PRESBY PRIM SCH.
THE HEADTEACHER, AKOTUAKROM PRESBY BASIC SCH.
THE HEADTEACHER, MAMAKROM D/A BASIC SCH.
PERSONAL FILE.

*lp-2410003 **