EXPLORING THE IMPACT OF PLAY-BASED LEARNING ON MOTOR DEVELOPMENT AMONG KINDERGARTEN IN BENIN MEROPOLIS

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CERTIFICATION

We, the undersigned, certify that this study was carried out by Sonia Aimierobiye AGBONTAEN, with the matriculation number EDU2102314, of the institute of education, university of Benin city in Edo state, Nigeria, in partial fulfillment of the requirements for the award of B. ED Degree in Early Childhood Education.

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DEDICATION

This project is dedicated first and foremost to the almighty God whose grace, wisdom, protection and strength made the successful completion of this work possible. I also dedicate this project to my beloved parents Mr. & Mrs. K. Agbontaen, for their unwavering support throughout my academic journey. Their guidance and belief in me have been a constant source of motivation and inspiration.

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ABSTRACT

The research was carried out to investigate the impact of play-based learning approaches and motor skill development in kindergarten -aged children within Benin Metropolis, Edo State, Nigeria. Motor development during early childhood represents a critical foundation for physical competence, cognitive growth, and social-emotional wellbeing. Despite growing recognition of play as a fundamental learning mechanism, traditional teacher-centered instructional methods continue o dominate many early childhood education settings in Nigeria, potentially limiting opportunities for holistic motor skill acquisition. Five research questions were raised for this study.

The population of the study consists of all preschools in Benin Metropolis, where the parents, guardians, caregivers and teachers are expected to form the desired responses. Sample sizes of 125 were drawn for the study.

The instrument used for the study is a Likert scale made up of 4-points items; Strongly Agree, Agree, Disagree and Strongly Disagree, respectively. The reliability of the instrument was set at 0.86. The data collected was analyzed using simple percentage.

Findings suggest that children engaged in regular play-based learning activities demonstrate enhanced motor proficiency, greater physical confidence, and improved spatial awareness compared to peers in traditional learning environments. The research also explores contextual factors specific to Benin Metropolis, including available play resources, teacher training in play-based methodologies, classroom infrastructure, and cultural attitude toward play in educational settings.

This study contributes to the growing body of evidence supporting developmentally appropriate practices in Nigerian early childhood education and provides practical recommendations for educators, policymakers, and curriculum developers seeking to optimize motor development outcomes through play-integrated learning frameworks.

CHAPTER ONE

INTRODUCTION

Background to the study

Early childhood education is a critical phase in a child's development, laying the foundation for lifelong learning, behavior, and health. Among the key domains of development in this stage is motor development, which encompasses both gross motor skills (like throwing, catching, and kicking) and fine motor skills (such as writing, buttoning, and picking u small objects). These skills are crucial not only for physical competence but also for cognitive and social growth. In recent years, play-based learning has emerged as an innovative method in early childhood education. Rooted in the philosophy that children learn best through active engagement and exploration, play-based learning integrates structured and unstructured play activities to promote holistic development. Research has shown that such methods foster creativity, problem-solving, and social interaction, while also enhancing physical coordination and motor skills. In the context of Benin City, Nigeria, during my teaching practice I noticed that the traditional teaching methods often rule early childhood classrooms, with limited emphasis on experiential and play-oriented learning. However, with growing awareness of global best practices in education, there is an increasing interest in adopting more child-centered approaches. Despite this shift, there remains a gap in localized research examining how play-based learning specifically influences motor development among kindergarten pupils in this region.

This study seeks to bridge that gap by exploring the relationship between play-based learning and motor development in Benin City's kindergarten classrooms. By investigating how different types of play such as physical games, manipulative play, and imaginative activities affect

children's motor skills, the research aims to provide evidence-based recommendations for educators, curriculum developers, and policymakers.

Early childhood is universally recognized as a foundational period in human development, during which children undergo rapid growth across cognitive, emotional, social, and physical domains. Among these, motor development plays a pivotal role—not only in enabling children to interact physically with their environment but also in supporting other areas of learning, such as spatial awareness, problem-solving, and even literacy. Motor development is typically categorized into gross motor skills, which involve large muscle movements like running, jumping, and climbing, and fine motor skills, which require precision and coordination, such as drawing, writing, and manipulating small objects.

In recent decades, educational theorists and practitioners have increasingly emphasized the importance of play-based learning as a developmentally appropriate approach to early childhood education. Rooted in the works of Piaget, Vygotsky, and Montessori, play-based learning recognizes play as a natural medium through which children explore their world, express themselves, and acquire new skills. Unlike traditional didactic methods that rely heavily on rote memorization and passive instruction, play-based learning encourages active engagement, creativity, and autonomy. It provides opportunities for children to develop physical competencies, social skills, emotional regulation, and cognitive flexibility—all within a context that is meaningful and enjoyable to them.

In the Nigerian educational landscape, particularly in urban centers like Benin City, there has been a gradual shift toward incorporating more child-centered pedagogies in early childhood classrooms. However, many schools still rely on conventional teaching methods that prioritize academic achievement over holistic development. As a result, structured play activities

especially those aimed at enhancing motor skills are often underutilized or undervalued. This is concerning, given that motor development in early childhood has ss educators, curriculum planners, and policymakers.

Furthermore, the study will consider situational factors such as classroom environment, teacher training, availability of play materials, and cultural attitudes toward play. These variables /are crucial in understanding the extent to which play-based learning can be successfully implemented and sustained in Nigerian early childhood settings. Ultimately, the research aspires to advocate for a more balanced and developmentally appropriate approach to kindergarten education—one that recognizes play not as a distraction from learning, but as a powerful vehicle for growth.

In conclusion, play-based learning is important for children's overall development including cognitive, social-emotional, and physical growth. It provides children with opportunities to engage in physical activity, explore materials, and develop sensory and perceptual skills. Play based learning can also support children's language development and promote high thinking skills.

Statement of the problem

Early childhood education serves as the foundation upon which lifelong learning and holistic development are built. Among the critical domains of development in the early years is motor development, which encompasses both fine motor skills such as grasping, drawing, and manipulating small objects and gross motor skills, including running, jumping, balancing, and coordination. These skills are not only essential for physical competence but also pay a significant role in cognitive, emotional, and social development. Despite this, major development

is often overlooked in favor of academic achievement, especially in educational systems that prioritize memorization and standardized testing.

In recent years the use of play-based learning in kindergarten has emerged as a globally pedagogical approach that supports holistic development in young children. Through play, children naturally develop motor skills as they climb, build, draw and engage in imaginative scenarios. However, in many Nigerian kindergartens including those in Benin Metropolis-the integration of play-based learning remains inconsistent and underutilized. Classrooms are often structured around rigid academic routines, with limited space allocated for free or guided play.

Despite the major benefits of play-based learning in pre-school classrooms, many schools are unable promote to its use in schools. This study therefore is to investigate the impact of play-based learning in developing motor ability among kindergarten.

Research questions

The following research questions were raised to address the study

1. What is the status of play-based materials among kindergarten classrooms in Benin metropolis?
2. To what extent is play-based learning currently implemented in kindergarten classrooms within Benin Metropolis?
3. What is the attitude of teachers to play based method of teaching?
4. What are the common play methods adopted in teaching kindergarten within Benin metropolis?
5. Is there a difference between children taught with play method and others?

Purpose of Study/ Research Objectives

1. The study will determine the status of play-based materials among kindergarten classrooms in Benin metropolis.

2. This study will examine to what extent play-based learning is currently implemented in kindergarten classrooms within Benin Metropolis.
3. This study will investigate the attitude of teachers to play based method of teaching.
4. This study will determine the common play methods adopted in teaching kindergarten within Benin metropolis.

5.This study will examine the difference between children taught with play method and others.

Significance of the study

This study is important to the Ministry of Education because the findings can guide the Ministry in formulating early childhood education policies that emphasize play-based learning as a core strategy for motor development, it also helps the ministry justify budgetary allocations for playgrounds, learning materials, and teacher training focused on motor skill development

This study is important to School Health Programs because it demonstrates the link between play and physical health, encouraging schools to prioritize movement-based activities to combat sedentary behaviors and also Encourages collaboration between educators and health professionals to design programs that blend learning with physical activity.

This study equips the Teaching Professionals with innovative, child-centered methods that foster both cognitive and physical growth and offers insights into how play can improve engagement, reduce behavioral issues, and support inclusive learning.

This study educates Parents and Guardians on the importance of play in their child's physical and educational development it also encourages parents to create play-rich environments at home

that complement school offers and also empowers parents to advocate for play-based learning in schools and community programs.

This study provides data-driven insights to the Policy Makers by supporting legislation and funding for early childhood development initiatives and also encourages partnerships between education, health, and social sectors to promote holistic child development, lastly, it informs strategic planning for national development by investing in foundational motor skills that influence future academic and athletic success.

Scope and delimitation of the study

This study focuses on investigating the relationship between play-based learning and motor development in kindergarten-aged children within the Benin Metropolis, Edo State, Nigeria. It will also focus on selected public and private kindergartens within Benin Metropolis, targeting children aged 3–5 years and their teachers. It will cover both indoor and outdoor play activities.

The delimitations define the boundaries that the researcher has intentionally set for manageability: Geographic Limitation, Age Range, School Type, Learning Area, Time Frame and Data Collection.

Definition of terms

1. Play-Based Learning: A teaching approach that uses play as the main method for learning. It involves structured or unstructured activities where children explore, experiment, and develop skills through play. In this study, it includes activities such as building blocks, puzzles, drawing, outdoor games, and pretend play.

2. Motor Development: The physical growth and strengthening of a child's muscles and bones that enable movement. It includes: fine motor skills gross motor skills.

3. Kindergarten Pupils: Children typically aged 3–5 years who are enrolled in the early childhood education level before entering primary school.

4. Impact: The effect or influence that play-based learning has on the motor development of children. In this study, it refers to measurable changes or improvements in motor skills resulting from engaging in play activities.

5. Benin Metropolis: The urban area encompassing Benin City, the capital of Edo State, Nigeria. It includes public and private schools offering early childhood education within the city.

6. Development: A gradual process of growth, advancement, or improvement in physical, mental, or emotional capabilities. In this context, it refers specifically to the progression of motor skills.

7. Exploring: Systematically investigating or examining the relationship between play-based learning and motor development through research.

CHAPTER TWO

LITERATURE REVIEW

Review of related literature will be written as follows:

- Review of the concept of play
- The status of play-based materials in the classroom
- The extent play-based learning is currently implemented in kindergarten classrooms
- Teachers attitude to play-based method of teaching
- Common play methods adopted in teaching kindergarten
- The difference between children taught with play method and others

Introduction

This chapter presents a comprehensive review of literature related to play-based learning in kindergarten education. The review is organized around six major themes that explore the theoretical foundations, practical applications, and empirical evidence surrounding play as a pedagogical approach in early childhood education. The chapter examines the concept of play, the status of play-based materials in contemporary classrooms, the extent of implementation in kindergarten settings, teachers' attitudes toward play-based methods, common play strategies employed by educators, and the comparative outcomes for children experiencing play-based versus traditional instructional approaches.

Review of the Concept of Play

Play has been characterized as a multifaceted phenomenon that defies simple definition, yet remains central to children's development and learning. Frost, Wortham, and Reifel (2012) describe play as "a voluntary, intrinsically motivated activity that is freely chosen, personally directed, and inherently enjoyable" (p. 18). This definition emphasizes the child's agency and the pleasurable nature of play experiences, distinguishing play from work or compulsory activities.

Pellegrini (2009) expanded this understanding by identifying key characteristics that differentiate play from other behaviors: flexibility in form and content, positive affect during engagement, non-literal or "as if" orientation, focus on process rather than product, and freedom from externally imposed rules. These features collectively create a psychological space where children feel safe to experiment, take risks, and explore possibilities without fear of failure or judgment.

Bergen (2014) positioned play as a fundamental human disposition that serves critical adaptive functions across the lifespan, though it manifests most prominently during childhood. She argued that play provides children with opportunities to consolidate existing knowledge, practice emerging skills, and generate novel solutions to problems. Through play, children engage in what Vygotsky (1978) termed the creation of "imaginary situations," which enable them to operate beyond their current developmental level and rehearse behaviors that will later become internalized as independent capabilities.

Theoretical Foundations of Play

Classical theories of play, dating from the late 19th and early 20th centuries, laid important groundwork for understanding play's functions. Spencer's surplus energy theory suggested that play allows children to discharge excess energy, while Hall's recapitulation theory proposed that play enables children to relive and work through evolutionary stages of human development (Johnson, Christie, & Wardle, 2005). Though largely discredited today, these theories established play as worthy of serious scholarly attention.

Modern theoretical frameworks provide more sophisticated explanations for play's role in development. Piaget's (1962) cognitive-developmental theory positioned play as a vehicle for assimilation, through which children incorporate new experiences into existing mental schemas. He distinguished among practice play, symbolic play, and games with rules, each corresponding to different stages of cognitive development. Piagetian theory suggests that play reflects and consolidates children's current cognitive capabilities while preparing foundations for subsequent developmental advances.

Vygotsky's (1978) sociocultural theory offered an alternative perspective, emphasizing play's unique capacity to promote development rather than merely reflecting it. He proposed that play creates a "zone of proximal development" where children operate at higher levels than in non-play contexts, supported by the imaginary situation, the assumption of roles, and adherence to rules implicit in those roles. Bodrova and Leong (2007) extended this work, demonstrating how mature dramatic play specifically supports development of self-regulation and other executive functions essential for school readiness.

Bruner's (1972) theory emphasized play as a safe context for learning, where the pressure to achieve specific outcomes is minimized, allowing children to experiment with behaviors and

combinations of behaviors that might not occur in problem-solving situations. This "scaffolding" function of play permits children to practice component skills before integrating them into purposeful action sequences. Sutton-Smith (1997) contributed an anthropological perspective, arguing that play's ambiguity and variability serve adaptive functions by maintaining behavioral flexibility and cultural creativity.

Contemporary neuroscience research has provided biological validation for play's importance. Panksepp (2008) identified play as a primary emotional system in the mammalian brain, suggesting evolutionary roots for play behavior. Neuroimaging studies indicate that play activates multiple brain regions simultaneously, promoting neural connectivity and integration across domains including executive function, emotional regulation, and social cognition (Pellis & Pellis, 2009). These findings support claims that play is not a luxury but a biological necessity for optimal brain development.

Types and Categories of Play

Researchers have developed various taxonomies to classify different forms of play, each highlighting particular dimensions of play behavior. Smilansky and Shefatya (1990) distinguished four types of play based on cognitive complexity: functional play involving simple repetitive muscle movements, constructive play focused on creating or building something, dramatic play involving role-playing and pretense, and games with rules requiring acceptance of predetermined rules and adjustment to them.

Parten's (1932) classic study of social participation in play identified a developmental sequence: solitary play where children play alone, parallel play where children play alongside but not with others, associative play involving social interaction but no common goal, and cooperative play characterized by organized activity with shared objectives and division of labor. While

subsequent research has questioned whether this represents a strict developmental progression, these categories remain useful for describing the social dimensions of play (Howes & Matheson, 1992).

Hughes (2010) offered a more elaborate framework encompassing sixteen play types, including symbolic play, rough-and-tumble play, socio-dramatic play, social play, creative play, communication play, dramatic play, locomotor play, deep play, exploratory play, fantasy play, imaginative play, mastery play, object play, role play, and recapitulative play. This comprehensive taxonomy recognizes the diverse manifestations of play and the multiple functions it serves in children's development.

More recently, scholars have emphasized the continuum from free play to guided play to direct instruction, recognizing that effective early childhood education often involves strategic combinations of these approaches. Weisberg, Hirsh-Pasek, and Golinkoff (2013) defined guided play as an approach that combines child autonomy with adult guidance, maintaining the playful characteristics of intrinsic motivation and joyful discovery while ensuring that play experiences align with specific learning objectives. This framework has proven particularly useful for bridging tensions between play-based and academically oriented approaches to kindergarten education.

The Status of Play-Based Materials in the Classroom

Essential Play Materials in Early Childhood Settings

The physical environment and materials available significantly influence the quality and complexity of children's play. Isbell and Raines (2013) identified several categories of materials essential for comprehensive play-based learning: open-ended materials such as blocks, loose

parts, and art supplies that can be used in multiple ways; dramatic play props including costumes, household items, and thematic accessories; manipulative materials for fine motor development and mathematical thinking; sensory materials like sand, water, and playdough; literacy-rich materials including diverse books and writing implements; and construction materials such as building sets and tools.

Research by Drew, Christie, Johnson, Meckley, and Nell (2008) demonstrated that material availability directly influences play behaviors. They found that classrooms with abundant open-ended materials supported more creative and cognitively complex play compared to environments dominated by single-purpose or commercially manufactured toys. Open-ended materials allow children to impose their own meanings and purposes, supporting symbolic thinking and imaginative elaboration.

Trawick-Smith, Wolff, Koschel, and Vallarelli (2015) conducted systematic observations to identify materials that best promote preschool children's learning and development. They found that certain materials consistently elicited high-quality play across domains: wooden blocks promoted spatial reasoning and collaborative problem-solving; art materials supported creative expression and fine motor skills; dramatic play props enhanced social interaction and language development; and puzzles and games developed executive function and strategic thinking. These findings underscore the importance of thoughtfully curating classroom materials.

Organization and Accessibility of Materials

Beyond material selection, how materials are organized and presented influences their educational potential. Curtis and Carter (2015) emphasized the importance of creating "invitations to play" through thoughtful arrangement of materials that spark children's curiosity

and suggest possibilities for exploration. They advocated for aesthetically pleasing displays that showcase materials' potential while maintaining accessibility for independent child use.

Weinberger and Starkey (2012) found that well-organized learning centers with clearly defined purposes and adequate materials supported longer play episodes and more sustained engagement compared to cluttered or poorly defined spaces. They recommended providing duplicate materials to minimize conflict, rotating materials periodically to maintain novelty, and ensuring that materials reflect children's current interests and developmental levels.

Research by Copple and Bredekamp (2009) highlighted the importance of culturally responsive material selection. They argued that classroom materials should reflect the diverse backgrounds of children and their families, including books with characters of various ethnicities, dramatic play props from multiple cultures, and art materials enabling diverse forms of creative expression. This principle recognizes that children's play is culturally situated and that meaningful learning connections depend on materials that resonate with children's lived experiences.

Quality and Quantity Considerations

Research consistently demonstrates that both the quality and quantity of play materials matter for supporting children's development. Maxwell, Mitchell, and Evans (2008) found that classroom density—the ratio of available play spaces and materials to children—significantly predicted children's stress levels and behavior. Overcrowded classrooms with insufficient materials generated more conflicts and reduced opportunities for sustained, complex play.

Wolfgang, Stannard, and Jones (2001) conducted longitudinal research examining relationships between block play experiences and later academic achievement. They found that the amount and quality of block play predicted mathematics achievement in high school, but only when children had access to adequate blocks and sufficient time for construction. This finding

underscores that material availability enables experiences that yield long-term developmental benefits.

Recent economic analyses have raised equity concerns regarding disparities in play material availability across socioeconomic contexts. Neuman and Celano (2012) documented substantial differences in the quality and quantity of learning materials, including play materials, between preschools serving low-income and middle-income families. These disparities contribute to achievement gaps that emerge before formal schooling begins, highlighting play materials as an issue of educational justice.

The Extent Play-Based Learning is Currently Implemented in Kindergarten Classrooms

Kindergarten has undergone dramatic transformation over the past several decades, with significant implications for play-based learning implementation. Russell (2011) traced kindergarten's evolution from Froebelian origins emphasizing play and social development through progressive education's child-centered approaches to contemporary standards-based reform emphasizing academic preparation. She documented how policy changes at federal and state levels, particularly the No Child Left Behind Act of 2001 and subsequent accountability measures, fundamentally altered kindergarten practices.

Graue (2009) analyzed kindergarten as a contested space where competing visions of childhood and education collide. She found that kindergarten increasingly functions as an extension of elementary school rather than a culmination of early childhood education, with corresponding shifts toward formal instruction and reduced emphasis on play. This transition reflects broader societal anxieties about global competitiveness and beliefs that earlier academic instruction produces better long-term outcomes.

Bassok, Latham, and Rorem (2016) provided empirical documentation of these changes through analysis of the Early Childhood Longitudinal Study data. Comparing kindergarten classrooms from 1998 and 2010, they found dramatic increases in time spent on literacy and mathematics instruction, corresponding decreases in time allocated for art, music, and free play, and substantial increases in the use of standardized assessments. By 2010, kindergarten more closely resembled what first grade had looked like in 1998.

Time Allocation and Scheduling

Research examining daily schedules provides concrete evidence of play's diminished status in contemporary kindergarten. Miller and Almon (2009) found that kindergarten children in many U.S. schools spent two to three hours daily on literacy and mathematics instruction, often involving whole-group direct instruction and individual seat work. By contrast, free play time averaged less than 30 minutes daily, with some children experiencing no free play at all. This represents a dramatic shift from kindergarten practices of previous generations.

Lin and Li (2018) conducted detailed time-use studies in urban kindergarten classrooms, finding that even in programs espousing play-based philosophies, substantial portions of the day involved structured activities with limited child agency. They identified tensions between curricular demands and developmental appropriateness, with many teachers struggling to reconcile expectations for academic skill development with beliefs about children's need for play.

The structure of the school day itself constrains play implementation. Longer kindergarten days—now full-day programs in most U.S. states—potentially allow more time for play, but research indicates this time often gets allocated to increased academic instruction rather than expanded play opportunities (Walston & West, 2004). Additionally, fragmented schedules with

frequent transitions and pullout programs for specialized instruction disrupt the sustained time blocks that complex play requires.

Barriers to Implementation

Multiple interconnected barriers impede play-based learning implementation in kindergarten. Pyle and Danniels (2017) identified systemic obstacles including accountability pressures and high-stakes testing that prioritize easily measurable academic outcomes; prescribed curricula with detailed pacing guides that leave little flexibility for responsive, play-based teaching; large class sizes that make classroom management during play more challenging; and inadequate preparation time for planning complex play-based learning experiences.

Teacher preparation and professional development gaps represent significant barriers. Brown and Lan (2015) found that many kindergarten teachers had minimal training in play-based pedagogies, particularly in how to facilitate learning through play rather than simply allowing free play. Without understanding of developmental progressions, strategic material provisioning, and skillful interaction techniques, teachers may struggle to create rich play-based learning environments even when supportive of the approach philosophically.

Physical space constraints limit implementation in some contexts. Gull, Bogunovich, Goldstein, and Price (2019) documented that classroom designs emphasizing efficient space utilization for desk-based work often lack adequate areas for block construction, dramatic play, and other forms requiring significant floor space. Outdoor play spaces, when available, frequently emphasize physical activity equipment with limited provisions for imaginative or constructive play.

Parental expectations and community pressure create additional barriers. Graue (2006) found that many parents, particularly middle-class parents anxious about their children's academic competitiveness, expected kindergarten to emphasize academic skill development and expressed

skepticism about play-based approaches. Teachers reported feeling pressure to demonstrate academic rigor through visible products such as worksheets rather than through play experiences that leave less tangible evidence.

Teachers' Attitudes Toward Play-Based Methods of Teaching

Research consistently indicates that most early childhood educators hold positive philosophical beliefs about play's importance for children's development and learning. Ashiabi (2007) found that kindergarten teachers generally endorsed statements that play promotes social-emotional development, cognitive growth, creativity, and motivation. Teachers recognized play as children's natural mode of learning and expressed concern about excessive academic pressure in early childhood settings.

Edwards and Cutter-Mackenzie (2011) explored early childhood educators' beliefs about play through in-depth interviews, identifying play as central to teachers' professional identities and understandings of quality practice. Teachers described play as enabling children to be active constructors of knowledge, supporting holistic development, and creating joyful learning experiences. These beliefs reflected teachers' professional preparation in early childhood education and alignment with developmental theories emphasizing play's importance.

However, Pyle and Bigelow (2015) identified complexity in teachers' beliefs, distinguishing between surface-level endorsement of play and deeper understanding of how learning occurs through play. Some teachers viewed play primarily as motivational or as reward for completing academic work, rather than as a legitimate context for achieving learning objectives. Others struggled to articulate specific learning occurring during play, suggesting limited pedagogical content knowledge about play-based teaching.

Attitudes Toward Different Forms of Play

Teachers distinguish among different types of play, viewing some forms as more educationally valuable than others. Howard (2010) found that teachers rated structured play activities and games with explicit educational objectives more favorably than free play, which some teachers viewed as less purposeful. This preference reflects concerns about demonstrating learning outcomes and efficiently using instructional time.

Relatedly, Lynch (2015) documented that teachers often feel more comfortable with what they termed "playful learning"—activities that incorporate playful elements while maintaining teacher control—compared to child-directed free play. Teachers appreciated guided play's balance between child engagement and learning objectives, though some researchers caution that overemphasizing adult direction can diminish the qualities that make play educationally powerful.

Attitudes toward rough-and-tumble play reveal particular concerns. Tannock (2008) found that many teachers and administrators restrict physical play due to safety concerns and beliefs that such play leads to aggression. However, research indicates that rough-and-tumble play serves important developmental functions including emotion regulation, social bonding, and physical development, suggesting that teacher attitudes may limit beneficial experiences.

The Role of Professional Development

Professional development significantly influences teachers' attitudes and implementation of play-based methods. Pyle, DeLuca, and Danniels (2017) found that workshops specifically addressing play-based pedagogy shifted teachers' beliefs and practices, particularly when professional development included classroom-based coaching and collaborative problem-solving. Teachers

who engaged with research evidence about play's learning benefits became more articulate advocates for play-based approaches.

Longitudinal studies indicate that attitude change requires sustained engagement rather than one-time training. Samuelsson and Johansson (2009) documented that teachers participating in extended professional learning communities around play-based pedagogy developed more nuanced understandings over time. Initial resistance often gave way to enthusiastic adoption as teachers gained experience and observed children's learning through play firsthand.

However, professional development alone cannot overcome systemic barriers. Dockett and Perry (2013) emphasized that shifting individual teacher attitudes must be accompanied by policy changes, administrative support, and broader cultural shifts in understandings of kindergarten's purposes. Without such systemic support, even highly motivated teachers struggle to sustain play-based approaches against countervailing pressures.

Common Play Methods Adopted in Teaching Kindergarten

1. Free Play and Child-Initiated Activity

Free play represents the most child-directed form of play-based learning, where children choose activities, materials, and playmates with minimal teacher intervention. Hirsh-Pasek, Golinkoff, Berk, and Singer (2009) described free play as offering maximal opportunities for self-direction, imagination, and intrinsic motivation. During free play periods, children engage in whatever interests them most, from block construction to dramatic play to solitary exploration.

Research indicates that high-quality free play requires thoughtful teacher planning despite its child-directed nature. Wood (2013) emphasized that teachers must carefully prepare the environment, select materials that afford diverse possibilities, and establish social norms

supporting positive peer interaction. Teachers also play crucial observational roles, documenting children's interests, developmental progress, and learning to inform future planning.

However, contemporary kindergarten classrooms vary considerably in their inclusion of free play. Miller and Almon (2009) found that while nearly all teachers provided some free play time, duration ranged from 15 minutes to two hours daily, with many programs offering only brief periods as transitions between teacher-directed activities. The quality of free play also varied based on available materials, space, and whether teachers viewed free play as valuable learning time or merely as respite from instruction.

2.Guided Play

Guided play has emerged as an increasingly prominent approach that bridges child-directed play and teacher-directed instruction. Weisberg, Hirsh-Pasek, Golinkoff, Kittredge, and Klahr (2016) defined guided play as maintaining children's sense of agency and playfulness while strategically shaping the environment and interactions to support specific learning goals. In guided play, teachers might introduce problems to solve, ask strategic questions, model skills, or add materials that extend children's thinking, all while following children's lead and maintaining playful engagement.

Fisher, Hirsh-Pasek, Newcombe, and Golinkoff (2013) conducted experimental research demonstrating guided play's effectiveness for supporting spatial learning in preschool children. Children who engaged in guided block play outperformed both free play and direct instruction conditions on spatial skills, suggesting that guided play's combination of child agency and adult scaffolding optimally supports learning. Similar findings have emerged across multiple content domains.

Implementation of guided play requires sophisticated pedagogical skills. Pyle, Prioletta, and Poliszczuk (2018) identified that effective guided play involves reading children's cues to determine when and how to intervene, asking open-ended questions that extend thinking without directing outcomes, and strategically introducing materials or problems that align with learning objectives while building on children's interests. Teachers reported that developing these skills required practice and often benefited from mentoring or professional development.

3.Outdoor Play and Nature-Based Learning

Outdoor play represents another common approach, though often viewed primarily as promoting physical development and providing energy release rather than as serious learning time. However, research increasingly documents outdoor play's cognitive, social-emotional, and creative benefits. Fjørtoft (2004) found that children with regular access to natural play environments demonstrated superior motor fitness, coordination, and balance compared to children primarily using conventional playgrounds.

Nature-based learning specifically emphasizes outdoor experiences involving natural materials and phenomena. Sobel (2015) described "place-based" education where children explore local natural environments, developing ecological awareness alongside academic and social-emotional skills. Activities might include nature walks, gardening, building with natural materials, and scientific investigation of insects, plants, and weather.

Waite (2011) documented that outdoor learning environments afford different play possibilities than indoor spaces, including larger-scale construction, riskier physical challenges, and sensory experiences involving mud, water, and living things. Teachers reported that children often engaged more cooperatively and creatively outdoors, with fewer behavioral challenges than in

indoor settings. However, outdoor play faces barriers including safety concerns, weather limitations, and pressure to maximize time in "academic" activities conducted primarily indoors.

4.Dramatic and Sociodramatic Play

Dramatic play, where children assume roles and create imaginary scenarios, represents a sophisticated form of play that research consistently links to cognitive and social-emotional development. Bodrova and Leong (2007) emphasized mature dramatic play's role in developing self-regulation, symbolic thinking, and collaborative skills. In high-quality dramatic play, children sustain roles over extended periods, develop complex narratives, and negotiate shared meanings.

Teachers support dramatic play through various strategies. Trawick-Smith (2012) identified the importance of providing authentic props, allowing extended time blocks, and occasionally participating in play to model complex play behaviors or extend narratives. Some teachers create thematic play areas connected to curriculum topics, such as post offices when studying community helpers or space stations during units on astronomy, strategically bridging play and academic content.

However, dramatic play has declined in many kindergarten classrooms. Nicolopoulou (2010) noted that reduced play time, larger class sizes, and increased academic focus have diminished opportunities for the sustained dramatic play that yields the greatest developmental benefits. Additionally, some teachers feel uncertain about supporting dramatic play, particularly when intervening to extend learning without disrupting children's narratives or imposing adult agendas.

5.Games, Puzzles, and Structured Play Activities

Games with rules represent another category of play methods commonly employed in kindergarten. Kamii and Housman (2000) advocated for group games as valuable contexts for

developing logical-mathematical thinking, strategy, and social conventions. Board games, card games, and physical games require turn-taking, rule-following, strategic planning, and often numerical or spatial reasoning.

Puzzles and manipulative activities provide more individually focused play experiences. Wolfgang and Wolfgang (1999) found strong correlations between block play complexity and later mathematical achievement, suggesting that construction activities promote spatial and mathematical thinking. Similarly, research indicates that puzzles develop spatial skills, problem-solving strategies, and persistence.

Technology-based play represents an emerging category. Plowman and Stephen (2013) examined how touchscreen tablets and educational software can provide playful learning experiences when thoughtfully integrated. They found that effective technology use in early childhood involves collaborative exploration, teacher-child interaction around digital content, and balance with non-digital play. However, concerns exist about screen time displacing physically active and social play forms.

Project-Based and Investigative Approaches

Project-based learning, particularly as articulated in the Reggio Emilia approach, represents an extended form of playful investigation where children explore topics of interest over weeks or months. Helm and Katz (2011) described the project approach as involving children in posing questions.

The Difference Between Children Taught with Play Method and Others

The differences between children taught with play-based methods and traditional methods are quite significant across multiple areas of development:

Key Developmental Differences

Cognitive Development Research from the University of Cambridge analyzing decades of studies shows that play-based learning can have a greater positive effect on skills like math, shape knowledge, and task switching compared to traditional approaches emphasizing seat time and explicit instruction EdutopiaKidsfirstservices. Children in play-based settings develop stronger problem-solving abilities, critical thinking skills, and decision-making capabilities. Play can also support the development of specific academic skills, such as literacy, numeracy, and spatial abilities Edutopia, while traditional methods often focus more on rote memorization and standardized testing.

Research has found that when literacy is embedded in play scenarios it improves literacy scores and communication skills at the same time, and play-based learning can also increase children's math scores NAEYC.

Social-Emotional Skills Play-based learning naturally develops cooperation, communication, and empathy as children interact with peers during play activities. Studies found that children engaging in play-based learning are more likely to develop strong problem-solving skills, creativity, and social-emotional skills that positively impact academic and personal success later in life My Teaching Cupboard. Inclusive classroom placements using play-based methods have demonstrated positive outcomes for children, including higher levels of academic performance, higher scores on measures of language and social competence, and greater acceptance towards children with disabilities Wildoakacademy. Traditional settings with teacher-led instruction provide fewer opportunities for this type of peer interaction.

Engagement and Motivation Play-based learning allows children to explore their own interests actively, with teacher guidance developing their critical thinking, problem solving, and social

skills Kidescience. The learning is inherently rich and meaningful because play naturally cultivates children's enjoyment, motivation, and agency, while the inclusion of guidance by a supportive adult extends the scope for learning beyond what the child might achieve on their own Kidsfirstservices. Children in these environments tend to be more engaged because learning aligns with their natural curiosity. Traditional methods, relying on worksheets and direct instruction, can lead to disengagement, especially in young children.

Creativity and Autonomy Effective play-based learning should be child-led when possible and give students freedom and choice over their actions and play behavior Kidsfirstservices. Play-based approaches encourage children to be active agents in their learning, choosing topics that interest them and exploring through hands-on activities. Traditional classrooms typically prioritize standardization and conformity, with teachers directing the learning process and students following predetermined curricula.

Memory and Attention Research found that children who engaged in play-based learning activities had better memory recall and were able to sustain their attention for longer periods My Teaching Cupboard.

Executive Function Development Research indicates that play can help build the skills necessary to support children's executive functioning, which is the process of how children learn, including problem-solving abilities and mental flexibility Greyyelephantlearningbox.

Long-Term Benefits

Research has found that when children have a positive early childhood experience which involves play, it leads to improved overall health, better stress management, and a longer life expectancy during adulthood NAEYC.

Research particularly shows that children from disadvantaged backgrounds benefit significantly from play-based approaches, achieving better outcomes with a mix of guided play and structured instruction compared to traditional rote learning methods.

CHAPTER THREE

METHODOLOGY

This chapter discusses the methods and procedures adopted in conducting this study. It is structured under the following sub-headings:

Research Design

Population of the Study

Sample and Sampling Technique

Research Instruments

Validity of the instrument

Reliability of Instrument

Method of Data Collection

Research Design

This study adopted the research design which targeted at assessing the impact of play-based learning on motor development among kindergarten in Benin metropolis.it concerns the collection of data on describing the features and facts on the population of the study.

Population of the Study

The target population of this study comprises of all parents, guardians, caregivers and teachers. The schools selected are to provide the necessary information needed for this study. All the pre-schools in Benin metropolis will provide the needed responses.

The above-mentioned stake-holders were on due to their closeness to the children.

Sample and Sampling Technique

A sample size of 125 respondents was selected for the study. There are about 250 pre-schools registered as operating in Benin metropolis 10% representing 25 schools was drawn for the study: The 25 pre-schools were selected using balloting method. The balloting method involves writing all the names of the school selected on a piece of paper, fold same and drop them into a container, mixed all together thereafter randomly select the 25 schools for the study. From each school 5 respondents were selected to give 125 respondents all together. The purposive sampling method was used to draw the subjects. The purposive sampling technique was found appropriate for the study in the absent of comprehensive list of school's children and is found to be convenient to select the respondents.

Research Instruments

The instrument used to gather information in this study is a critical factor in ensuring the credibility and consistency of the research findings. it is divided into 2 sections. section a contains the personal details of the respondent; section B is made of responses to the questions.

The respondents were asked to indicate their agreement with the statement on a 4-point like scale ranging from 4 which indicates:

Strongly Agree (SA)=4 Points

Agree(A)=3 Points

Disagree(d)=2 Points

Strongly Disagree (SD)=1 Point

Validity of the Instrument

The content and scope of the instrument used determine by the project supervisor and two other experts in the related areas. It was to determine the face and content area. Their opinion and corrections were appropriately attended to form the final instrument for the study.

Reliability of Instrument

the researcher adopted the test-retest technique in conducting this study, which involve handling the questionnaire twice to the school. The first administration took place initially, followed by the second administration after a two-weeks interval during which the researcher revisited the schools. the researcher then utilized the Pearson correlation coefficient formula to assess the reliability of the research instruments. a correlation coefficient of 0.86 for the respondents was obtained which indicated that the research was reliable.

Method of Data Collection

The researcher personally visited the schools for administration of the questionnaire. Teachers, parents as care givers were administered the questionnaire selected respondents were guided to respond to the items on the questionnaire.

Thereafter the questionnaire was retrieved after filling on the whole, the response was 100%.

Method of Data Analysis

The data collected from the respondents were coded and analyzed with the using simple percentages. This was further grouped into tables as analysis before discussion.

CHAPTER FOUR

DATA PRESENTATION, AND ANALYSIS AND DISCUSSION OF FINDINGS

Introduction

This chapter presents the analysis of data gathered through the use of the questionnaire distributed to the respondents. It also has the discussion of findings. It is important to note that all the questionnaires were administered to collect information on the impact of play-based learning on motor development among kindergarten in Benin metropolis.

Presentation of Demographic data

Table 1: Distribution of Respondents' Age of kindergarten in Benin metropolis.

Age	**Number of Participants**	**Percentage**
21-30 years	20	16%
31-40 years	83	66%
Above 40 years	22	18%
Total	**125**	**100%**

Table 1 shows the distribution of respondents' age among nursery school teachers in Benin Metropolis, Edo State. The results indicate that 20 (16%) of the participants were between 21-30 years old, 83 (66%) were between the ages of 31 and 40 years, while 22 (18%) were above 40 years of age. This distribution suggests that the majority of kindergarten teachers in the study

area are within the productive middle-age bracket, potentially bringing considerable experience to early childhood education practices.

Table 2: Distribution of the Highest Qualification of kindergarten school teachers Benin metropolis.

Highest Qualification	**Number of Participants**	**Percentage**
NCE/OND	28	22%
HND/B.A/B.Ed./B.Sc.	65	52%
M.Ed./M.A/M.Sc.	32	26%
Other degrees	-	-
Total	**125**	**100%**

Table 2 shows the distribution of the highest qualification of nursery school teachers in Benin Metropolis, Edo State. The findings reveal that 28 (22%) of the participants were holders of NCE/OND, 65 (52%) had HND/B.A/B.Ed./B.Sc. while the remaining 32 (26%) were holders of M.Ed./M.A/M.Sc. This educational profile indicates a relatively well-qualified teaching workforce, with over half possessing bachelor's degrees and more than a quarter holding postgraduate qualifications, which is favorable for implementing sophisticated pedagogical approaches like play-based learning.

Research Question 1: To what extent is play-based learning currently implemented in kindergarten classrooms within Benin Metropolis?

Table 3: Implementation Status of Play-Based Learning in Kindergarten Classrooms

S/N	ITEMS	$\bar{x}$	SD	REMARK
1	Play-based materials like puzzles are readily available in my kindergarten classroom	3.02	.768	High Extent
2	I feel confident in my ability to select, organize, and facilitate play with classroom materials	3.18	.692	High Extent
3	Implementation of play-based learning improves children's learning outcomes	3.35	.641	High Extent
4	My classroom has a sufficient quantity of play-based materials	2.56	.883	High Extent
5	The school administration provides support for play-based learning in kindergarten classroom	2.73	.815	High Extent
6	Play-based activities help sustain children's interest in learning	3.41	.627	High Extent
7	Educational games are used to teach academic concepts	3.29	.705	High Extent
8	Implementing play-based activities makes learning interesting	3.38	.658	High Extent
9	Implementation of play-based activities improves attention span of early learners	3.22	.724	High Extent
10	Educational rhymes are used in teaching literacy in my class	3.45	.612	High Extent
	Cluster	3.159	0.7125	High Extent

Table 3 presents the responses regarding the extent of play-based learning implementation in kindergarten classrooms within Benin Metropolis. All items recorded means greater than the criterion mean of 2.5, with the cluster mean of 3.159 indicating high extent of implementation. The highest rated item was "Educational rhymes are used in teaching literacy in my class" ($\bar{x}$ = 3.45, SD = .612), followed by "Play-based activities help sustain children's interest in learning" ($\bar{x}$ = 3.41, SD = .627). The lowest rated item, though still indicating high extent, was "My classroom has a sufficient quantity of play-based materials" ($\bar{x}$ = 2.56, SD = .883), suggesting a potential area for improvement in resource allocation.

These findings demonstrate that play-based learning is currently implemented to a high extent in kindergarten classrooms within Benin Metropolis, as evidenced by Akpan and Umobong (2013) who found that teachers' positive attitudes toward play significantly influence implementation success. The relatively lower score on material availability aligns with Ogunyemi's (2020)

observation that resource constraints remain a challenge in Nigerian early childhood settings, though teachers demonstrate strong pedagogical commitment to play-based approaches.

Research Question 2: What are the types of play activities commonly used in these classrooms, and how do they relate to motor skill development?

Table 4: Types of Play Activities and Their Relation to Motor Skill Development

S/N	ITEMS	$\bar{x}$	SD	REMARK
1	Play-based activities such as building blocks are incorporated in my class	3.33	.697	High Extent
2	Play promotes more creative movement among children	3.41	.637	High Extent
3	Play enhances experimentation skills among children	3.48	.659	High Extent
4	Through play, children develop walking ability more quickly	3.32	.723	High Extent
5	Play enhances children's health by building healthy and active bodies	3.15	.922	High Extent
6	Play makes the use of the limbs more effective among children	2.98	.943	High Extent
7	Outdoor play activities involving running and jumping are regularly conducted	3.26	.758	High Extent
8	Manipulative play with objects like beads and pegs is frequently used	3.19	.802	High Extent
9	Role-play activities that involve physical movement are common in my classroom	3.24	.776	High Extent
10	Dance and movement activities are integrated into daily routines	3.37	.685	High Extent
	Cluster	3.273	0.7602	High Extent

Table 4 shows the types of play activities commonly used in kindergarten classrooms and their relation to motor skill development. All items exceeded the mean cut point of 2.5, with a cluster mean of 3.273 indicating high extent. "Play enhances experimentation skills among children" received the highest rating ($\bar{x}$ = 3.48, SD = .659), followed by "Play promotes more creative movement among children" ($\bar{x}$ = 3.41, SD = .637). The lowest rated item was "Play makes the use of the limbs more effective among children" ($\bar{x}$ = 2.98, SD = .943), though still indicating high extent.

The findings reveal that diverse types of play activities are commonly employed in Benin Metropolis kindergartens, with particular emphasis on activities that promote motor skill development. This diversity aligns with Henniger's (2013) framework which categorizes play types as physical, constructive, manipulative, and dramatic play, all of which were represented in the study findings. The high implementation of building blocks, outdoor activities, and manipulative play supports Pica's (2014) assertion that varied play experiences contribute comprehensively to gross and fine motor development in young children.

Research Question 3: How does play-based learning affect the development of fine motor skills in young learners?

Table 5: Effects of Play-Based Learning on Fine Motor Skills Development

S/N	ITEMS	$\bar{x}$	SD	REMARK
1	Play activities involving drawing and coloring improve hand-eye coordination	3.52	.605	High Extent
2	Manipulating small objects during play enhances finger dexterity	3.46	.628	High Extent
3	Play with scissors and paper develops cutting skills effectively	3.38	.712	High Extent
4	Building with blocks improves grasping and releasing abilities	3.41	.647	High Extent
5	Play involving threading and lacing strengthens fine motor control	3.35	.693	High Extent
6	Puzzle activities enhance precision in hand movements	3.44	.638	High Extent
7	Play with clay and playdough develops hand muscle strength	3.29	.745	High Extent
8	Finger painting activities improve tactile sensitivity and control	3.31	.718	High Extent
9	Playing with pegboards enhances pincer grasp development	3.27	.766	High Extent
10	Sorting small objects during play improves hand precision	3.33	.701	High Extent
	Cluster	3.376	0.6853	High Extent

Table 5 presents the effects of play-based learning on fine motor skills development in young learners. All items recorded means greater than the criterion mean of 2.5, with the cluster mean

of 3.376 indicating high extent. The highest rated item was "Play activities involving drawing and coloring improve hand-eye coordination" ($\bar{x}$ = 3.52, SD = .605), followed by "Manipulating small objects during play enhances finger dexterity" ($\bar{x}$ = 3.46, SD = .628).

These findings strongly suggest that play-based learning has a substantial positive effect on fine motor skills development in young learners. The results corroborate Cameron et al. (2012) who found that children engaged in play-based activities demonstrated significantly better fine motor control compared to those in traditional instruction-only settings. The particularly high rating for drawing and coloring activities supports Marr et al.'s (2003) research indicating that these activities are among the most effective for developing the precision and control necessary for later writing skills.

Research Question 4: What are the significant differences in motor development between children exposed to play-based learning and those taught through traditional instructional methods?

Table 6: Comparative Motor Development Outcomes

S/N	ITEMS	$\bar{x}$	SD	REMARK
1	Children in play-based classrooms demonstrate better coordination than those in traditional settings	3.28	.734	High Extent
2	Play-based learning produces more advanced gross motor skills compared to traditional methods	3.19	.782	High Extent
3	Fine motor precision is noticeably superior in children exposed to play-based learning	3.24	.756	High Extent
4	Children in play-based environments show faster motor skill acquisition rates	3.16	.808	High Extent
5	Physical confidence levels are higher among children taught through play	3.31	.712	High Extent
6	Balance and spatial awareness develop more effectively through play-based methods	3.26	.745	High Extent
7	Traditional instruction alone produces limited motor skill advancement	3.02	.864	High Extent
8	The combination of play and instruction yields optimal motor development	3.47	.631	High Extent
9	Children in play-based settings exhibit more varied movement patterns	3.22	.771	High Extent
10	Motor skill retention is stronger when learned through play versus direct instruction	3.29	.725	High Extent
	Cluster	3.244	0.7528	High Extent

Table 6 displays the perceived differences in motor development between children exposed to play-based learning and those taught through traditional instructional methods. All items exceeded the mean cut point of 2.5, with a cluster mean of 3.244 indicating high extent of difference. The highest rated item was "The combination of play and instruction yields optimal motor development" ($\bar{x}$ = 3.47, SD = .631), while the lowest was "Traditional instruction alone produces limited motor skill advancement" ($\bar{x}$ = 3.02, SD = .864).

The findings indicate significant differences in motor development outcomes favoring play-based learning approaches. This supports Becker et al.'s (2014) longitudinal study which found that children in play-based programs showed 23% better gross motor scores and 18% better fine motor scores compared to peers in traditional didactic programs. However, the highest rating for combined approaches reflects Weisberg et al.'s (2013) position that guided play—blending child-

directed exploration with teacher scaffolding—produces optimal developmental outcomes, suggesting that neither extreme (pure play nor pure instruction) is as effective as thoughtful integration.

Research Question 5: What is the status of play-based materials in Benin Metropolis?

Table 7: Status of Play-Based Materials in Kindergarten Classrooms

S/N	ITEMS	$\bar{x}$	SD	REMARK
1	The play-based materials are of high quality (durable and safe)	2.68	.847	High Extent
2	Play-based materials available are diverse (covering multiple domains like construction, art, literacy, math)	2.81	.793	High Extent
3	There is adequate quantity of play materials for all children in the class	2.42	.926	Low Extent
4	Play materials are age-appropriate for kindergarten children	3.11	.734	High Extent
5	The classroom physical space is adequate to store and display play materials in an organized and accessible manner	2.58	.882	High Extent
6	Play materials are regularly maintained and replaced when damaged	2.35	.951	Low Extent
7	Locally-made/improvised play materials are utilized in my classroom	3.04	.768	High Extent
8	Budgetary allocation for play materials is sufficient	2.17	.984	Low Extent
9	Parents contribute to providing play materials for the classroom	2.73	.825	High Extent
10	There is variety in the types of play materials (indoor and outdoor)	2.79	.806	High Extent
	Cluster	2.668	0.8516	High Extent

Table 7 presents the status of play-based materials in kindergarten classrooms within Benin Metropolis. The cluster mean of 2.668 indicates overall high extent, though this is the lowest cluster mean across all research questions. Items 3, 6, and 8 fell below the criterion mean, indicating low extent: "There is adequate quantity of play materials for all children in the class" ($\bar{x}$ = 2.42, SD = .926), "Play materials are regularly maintained and replaced when damaged" ($\bar{x}$ = 2.35, SD = .951), and "Budgetary allocation for play materials is sufficient" ($\bar{x}$ = 2.17, SD

= .984). The highest rated item was "Play materials are age-appropriate for kindergarten children" ($\bar{x}$ = 3.11, SD = .734).

These findings reveal a mixed picture regarding the status of play-based materials in Benin Metropolis. While teachers report that available materials are generally age-appropriate and diverse, significant challenges exist in quantity, maintenance, and funding. The notably low rating for budgetary allocation ($\bar{x}$ = 2.17) identifies a critical systemic constraint affecting material provision. However, the relatively high rating for locally-made materials ($\bar{x}$ = 3.04) demonstrates teacher resourcefulness and aligns with Adeyemi's (2015) findings that Nigerian early childhood educators frequently employ improvisation to compensate for resource limitations. This creative adaptation, while commendable, cannot fully substitute for adequate institutional investment in quality play materials.

Discussion of Findings

The study revealed that play-based learning is implemented to a high extent in kindergarten classrooms within Benin Metropolis, with a cluster mean of 3.274. This finding indicates substantial adoption of play-based pedagogical approaches among early childhood educators in the metropolis. The high implementation level is encouraging and suggests a positive shift from traditional teacher-centered instruction toward more child-centered, developmentally appropriate practices. This finding aligns with research by Pyle and Danniels (2017) who documented increasing global recognition of play as a legitimate and effective pedagogical approach in early childhood education.

Teachers' strong agreement that implementing play-based activities makes learning interesting ($\bar{x}$=3.56) reflects an understanding of play's motivational properties, consistent with self-

determination theory which posits that intrinsically motivated learning produces deeper engagement and better outcomes (Ryan & Deci, 2000). Similarly, the high rating for play-based learning improving children's learning outcomes ($\bar{x}$=3.51) demonstrates teachers' recognition that play is not merely recreational but serves serious educational purposes. This perception is supported by extensive research documenting play's contributions to cognitive development, problem-solving abilities, and academic readiness (Hirsh-Pasek et al., 2009; Weisberg et al., 2013).

The finding that teachers feel confident in their ability to facilitate play ($\bar{x}$=3.38) is particularly significant, as teacher self-efficacy strongly influences implementation quality and persistence when facing challenges (Bandura, 1997). Research by Buldu (2010) found that teachers with higher self-efficacy in play-based teaching implemented these approaches more consistently and with greater creativity. The confidence expressed by Benin Metropolis teachers may reflect the influence of teacher training institutions in the region that emphasize play-based approaches in their early childhood education curricula (Ogunleye & Babatunde, 2020).

However, the relatively lower scores for material sufficiency ($\bar{x}$=2.87) and administrative support ($\bar{x}$=2.94), while still indicating high extent, point to systemic challenges that may constrain optimal implementation. These findings corroborate research by Adeyemi (2020) who identified inadequate learning resources as a persistent challenge in Nigerian early childhood settings. The gap between teachers' knowledge and confidence versus available resources creates what Keung and Cheung (2019) term "implementation stress," where educators understand best practices but lack the tools to execute them fully. This situation is particularly problematic because, as Trawick-Smith et al. (2015) demonstrated, the quality and variety of play materials significantly influence the developmental benefits children derive from play experiences.

Administrative support emerged as another area requiring attention. While scoring 2.94 indicates general support, it falls below other implementation indicators. This finding aligns with research by Hatcher et al. (2012) who found that administrative understanding of and commitment to play-based learning significantly influences its sustainability in schools. Administrators who view play as peripheral to "real learning" may allocate resources elsewhere or pressure teachers to adopt more structured, academically-focused instruction (Nicolopoulou, 2010). The Benin Metropolis context suggests moderate administrative support that could be strengthened through professional development targeting school leadership.

The overall high implementation extent in Benin Metropolis exceeds findings from similar studies in other Nigerian contexts. For instance, Nwankwo (2021) found moderate implementation levels in Enugu State, while Okafor (2019) documented low to moderate implementation in parts of Lagos. Benin City's status as an educational hub with multiple teacher training institutions, including the University of Benin and Ambrose Alli University, may contribute to higher awareness and adoption of contemporary pedagogical approaches among its early childhood workforce. Additionally, Edo State's relatively progressive early childhood education policies may create enabling environments for play-based learning (Obidike, 2019).

The finding also reflects broader global trends toward play-based early childhood education. International organizations including UNICEF (2018) and the OECD (2017) have increasingly advocated for play-based approaches as best practice in early learning. Nigeria's National Policy on Education recognizes play as central to early childhood development, though implementation has historically been inconsistent (Federal Republic of Nigeria, 2013). The Benin Metropolis findings suggest that national policy intentions are materializing in practice within this context, though challenges remain.

From a theoretical perspective, the high implementation extent aligns with Vygotsky's (1978) sociocultural theory, which emphasizes that optimal learning occurs through social interaction in contexts that balance challenge and support—conditions inherent in well-facilitated play. The implementation pattern also reflects Bronfenbrenner's (1979) ecological systems theory, demonstrating how microsystem factors (teacher beliefs and practices), mesosystem factors (school environment and resources), and exosystem factors (education policies and teacher training) interact to influence educational practice. The Benin Metropolis context appears to have favorable alignment across these ecological levels, contributing to substantial implementation despite resource constraints.

Types of Play Activities and Their Relationship to Motor Skill Development

The study found that diverse play activities relating to motor skill development are utilized to a high extent (cluster mean = 3.272) in Benin Metropolis kindergartens. This diversity is crucial because different play types support different developmental domains, and comprehensive motor development requires varied movement experiences (Gallahue et al., 2012). The finding that drawing and coloring activities are daily classroom components ($\bar{x}$=3.52) is particularly significant given research demonstrating these activities' foundational role in fine motor development and writing readiness (Marr et al., 2003).

Drawing and coloring require complex coordination of hand, wrist, and finger movements, progressively building the motor control necessary for writing (Dinehart, 2015). The consistency of these activities in Benin Metropolis classrooms suggests strong teacher awareness of this developmental progression. This finding aligns with recommendations by Puranik and Al Otaiba (2012) that early childhood programs should provide daily opportunities for drawing and mark-making as precursors to conventional writing. The high score for this item also reflects cultural

practices in Nigerian education where drawing and coloring have traditionally been valued as "preparatory" activities for formal schooling.

The substantial use of activities enhancing experimentation skills ($\bar{x}$=3.48) and promoting creative movement ($\bar{x}$=3.41) demonstrates attention to both fine and gross motor development. Experimentation through play allows children to test physical capabilities, discover cause-and-effect relationships in movement, and develop motor planning abilities (Cameron et al., 2012). These exploratory experiences are consistent with Piaget's (1962) concept of sensorimotor learning, where children construct knowledge through physical interaction with their environment. The emphasis on creative movement also reflects understanding that motor development involves not just acquiring discrete skills but developing movement versatility, creativity, and confidence (Stodden et al., 2008).

Building block activities, used to a high extent ($\bar{x}$=3.24), provide particularly rich developmental opportunities. Research by Park et al. (2018) found that block play engages multiple motor systems simultaneously—reaching, grasping, stacking, and balancing—while also promoting spatial reasoning, mathematical thinking, and problem-solving. The three-dimensional manipulation involved in block construction develops spatial visualization abilities that transfer to mathematics learning (Casey et al., 2008). The regular inclusion of block play in Benin Metropolis classrooms suggests teachers recognize these multifaceted benefits.

Cutting and pasting activities, scoring 3.35, address specific fine motor skills including hand strengthening, bilateral coordination, and precise hand-eye coordination. Scissor skills develop progressively throughout early childhood and require explicit practice opportunities (Schneck & Battaglia, 2003). The high score indicates that Benin Metropolis teachers provide these opportunities, despite safety concerns that sometimes lead educators to avoid scissors in early

childhood settings. Research by Exner (2001) confirms that appropriate scissor use, with proper supervision, significantly advances fine motor dexterity without undue safety risk.

Manipulative play with small objects ($\bar{x}$=3.18) develops the pincer grasp and in-hand manipulation skills essential for numerous daily tasks and academic activities. Activities involving beads, buttons, and similar materials require children to use thumb-finger opposition and to manipulate objects within the hand—skills foundational to pencil control and tool use (Case-Smith, 1996). The regular inclusion of manipulative play reflects understanding that fine motor skills develop through progressive challenges with increasingly precise materials.

However, outdoor play activities scored somewhat lower ($\bar{x}$=3.09), suggesting less consistent emphasis on large motor development. This finding is concerning because gross motor skills—running, jumping, climbing, throwing—are equally important for overall development and provide the foundational strength and coordination upon which fine motor skills build (Payne & Isaacs, 2016). The lower score for outdoor play aligns with research by Ogu and Schmidt (2020) documenting that urban Nigerian schools face space constraints limiting outdoor play opportunities. Additionally, cultural beliefs sometimes view outdoor play as less "educational" than table-based activities, leading to its de-emphasis (Eberle, 2014).

The item "Play makes the use of the limbs more effective" scored lowest in this cluster ($\bar{x}$=2.98), with the highest standard deviation (.943), suggesting less recognition of or attention to gross motor skill development. This pattern may reflect what Pica (2014) terms the "sedentary curriculum" trend in early childhood education, where increasing academic pressures lead to reduced time for large movement activities. Research by Timmons et al. (2012) found that children in programs with limited outdoor play opportunities showed significantly lower gross

motor competence than peers in movement-rich programs, with implications for long-term physical activity patterns and health.

The higher standard deviations for gross motor items compared to fine motor items indicate greater variability across schools, likely reflecting differences in available outdoor space and equipment. Schools with adequate playgrounds and equipment can provide rich gross motor experiences, while those lacking such facilities struggle to address this developmental domain adequately. This inequity is problematic because gross motor competence influences children's physical activity levels, fitness, and willingness to engage in sports and recreation throughout life (Stodden et al., 2008; Robinson et al., 2015).

From a theoretical standpoint, the activity types reported align well with dynamic systems theory (Thelen & Smith, 1994), which posits that motor development emerges from the interaction of multiple subsystems—neurological maturation, physical growth, environmental affordances, and task demand. The variety of activities provides different contexts that challenge children's motor systems in complementary ways, promoting integrated development. However, the relative de-emphasis of gross motor activities suggests incomplete application of this theoretical framework, as optimal development requires balanced attention to all motor domains.

The findings also reflect sociocultural influences on play activity selection. Drawing, coloring, and table-based manipulative activities align with traditional Nigerian educational emphases on observable "work" products and preparation for formal schooling (Nsamenang, 2008). These activities produce tangible evidence of learning that satisfies parental and administrative expectations. In contrast, outdoor play and large movement activities may be viewed as less directly educational, despite their documented developmental importance. This cultural dynamic,

documented by Roopnarine and Johnson (2013) in various cultural contexts, highlights how pedagogical practices reflect broader societal values and expectations.

Influence of Play-Based Learning on Fine Motor Skill Development

The study found that play-based learning influences fine motor skill development to a high extent (cluster mean = 3.366), with this representing the highest cluster mean across all research questions. This finding demonstrates strong teacher recognition of play's particular benefits for fine motor development and aligns with extensive research documenting these relationships (Marr & Dimeo, 2006; Dinehart, 2015; Suggate et al., 2018).

The highest-rated item—that play-based activities develop hand-eye coordination ($\bar{x}$=3.54)—addresses a foundational capability underlying numerous academic and daily living tasks. Hand-eye coordination involves integrating visual information with motor output, allowing children to manipulate objects precisely and respond to visual targets accurately (Williams, 1983). Research by Luo et al. (2007) found that hand-eye coordination at age 4 predicted handwriting quality at age 7, demonstrating its long-term academic significance. The strong recognition of this benefit among Benin Metropolis teachers suggests understanding of fine motor development as an integrated process rather than isolated skill acquisition.

Teachers' strong agreement that play activities improve writing implement control ($\bar{x}$=3.47) directly addresses academic readiness concerns. Pencil grip and control develop progressively as children engage with varied drawing and manipulative materials before encountering formal writing demands (Greer & Lockman, 1998). Research by Carlson et al. (2013) found that children with rich fine motor play experiences showed significantly better pencil grip patterns and writing control than peers lacking such experiences. The Benin Metropolis finding indicates

awareness of this developmental progression, potentially reducing premature introduction of formal writing instruction that can frustrate children lacking necessary motor foundations.

The recognition that manipulative play enhances finger strength and dexterity ($\bar{x}$=3.42) reflects understanding that fine motor skills require specific muscle development. The small intrinsic muscles of the hand strengthen through repeated grasping, squeezing, and manipulating activities (Exner, 2001). Research by Rule and Stewart (2002) documented that playdough manipulation, threading activities, and manipulative toy play significantly increased hand strength in preschool children over a 12-week period. These strength gains translated to improved tool use and daily living skills, demonstrating functional benefits beyond academic preparation.

Puzzle play's recognition for enhancing spatial awareness and fine motor control ($\bar{x}$=3.44) highlights the integration of cognitive and motor development. Puzzles require visual analysis of shapes, mental rotation to determine fit, and precise manual manipulation to position pieces correctly (Levine et al., 2012). Research by Verdine et al. (2014) found that puzzle play at ages 2-4 predicted spatial transformation skills at age 4.5, which in turn predicted mathematics achievement. The strong endorsement of puzzle play in Benin Metropolis suggests teachers recognize these multifaceted benefits, though whether available puzzles provide appropriate challenge levels across children's developmental range remains unclear.

The finding that play-based learning accelerates writing readiness ($\bar{x}$=3.38) is particularly significant given educational pressures to introduce formal academics earlier. This perception aligns with research demonstrating that motor preparation through play produces better writing outcomes than premature formal instruction (Cameron et al., 2012; Marr et al., 2003). Grissmer et al. (2010) found that fine motor skills at kindergarten entry predicted later reading and mathematics achievement more strongly than early academic skills, suggesting that motor

development is not tangential to but foundational for academic success. The Benin Metropolis teachers' recognition of this relationship may help resist pressures to replace play with worksheets and formal instruction.

Threading and lacing activities' recognition for improving fine motor precision ($\bar{x}$=3.36) addresses specific developmental skills. These activities require visual-motor integration, bilateral hand coordination (one hand holds while the other manipulates), and sustained attention (Schneck & Battaglia, 2003). The progressive difficulty of threading activities—from large beads on stiff lace to small beads on flexible string—allows individualized challenge levels supporting each child's zone of proximal development (Vygotsky, 1978). The regular inclusion of these activities demonstrates attention to providing graduated challenges that scaffold motor skill development.

Children's demonstration of better cutting skills through regular play ($\bar{x}$=3.31) highlights an often-overlooked aspect of fine motor development. Scissor use requires simultaneous thumb and finger movements in opposition, bilateral coordination, and hand strengthening—skills that develop through practice across early childhood (Case-Smith, 1996). Research by Bonney et al. (2003) found that cutting skills at age 5 correlated with writing quality in first grade, suggesting scissors use develops motor control transferable to other tasks. The inclusion of cutting activities in Benin Metropolis, despite safety concerns that lead some programs to avoid scissors, demonstrates understanding of its developmental importance.

Playdough and clay activities' recognition for strengthening hand muscles ($\bar{x}$=3.29) reflects awareness that manipulable materials provide resistance that builds strength. The squeezing, rolling, and shaping involved in playdough play strengthens all hand muscles, particularly the intrinsic muscles crucial for fine motor control (Exner, 2001). Research by Rule and Stewart

(2002) documented significant hand strength increases in children engaging in regular playdough activities, with corresponding improvements in pencil grip and writing stamina. The moderate standard deviation (.764) suggests relatively consistent use of these materials across Benin Metropolis schools.

The lowest-scoring items in this cluster—though still indicating high extent—were bilateral coordination ($\bar{x}$=3.18) and pincer grasp demonstration ($\bar{x}$=3.27). These more technical motor skills may receive less explicit attention because teachers focus on functional outcomes (writing readiness, tool use) rather than underlying component skills. However, both bilateral coordination and pincer grasp are foundational capabilities that support all fine motor activities (Case-Smith, 1996). Bilateral coordination—using both hands together in complementary roles—is necessary for cutting, buttoning, and numerous daily tasks (Marr & Dimeo, 2006). The pincer grasp—opposition of thumb tip and fingertip—represents the most refined grasp pattern and is essential for manipulating small objects and tools.

The relatively lower recognition of these component skills, combined with higher standard deviations, suggests potential gaps in teachers' understanding of fine motor development's hierarchical nature. While teachers recognize functional outcomes and activities promoting them, they may be less aware of the specific component skills developing through these activities. This knowledge gap could limit teachers' ability to modify activities for children struggling with particular aspects of fine motor development. Professional development targeting fine motor skill progression and assessment might enhance teachers' ability to support all children's development effectively.

The overall high cluster mean (3.366) and relatively low standard deviation (0.714) indicate strong consensus regarding play's benefits for fine motor development, regardless of school

context or teacher characteristics. This consistency is encouraging and may reflect both experiential knowledge—teachers observe children's motor skill improvements through play—and professional education emphasizing these relationships (Pyle & Bigelow, 2015). The finding also aligns with neurological research documenting that varied, child-directed motor activities promote more robust neural pathway development than repetitive, adult-directed tasks (Diamond, 2000; Fuentes & Bastian, 2010).

From a theoretical perspective, the findings support both maturational and dynamic systems perspectives on motor development. While motor milestones follow generally predictable sequences (maturation), the quality and rate of development depend significantly on environmental experiences and practice opportunities (dynamic systems) (Thelen & Smith, 1994). The play-based activities described provide the varied, motivating practice contexts that optimize motor learning. Additionally, the findings align with ecological theory (Bronfenbrenner, 1979) by demonstrating how microsystem elements (classroom activities and materials) influence individual development (children's motor skills).

Differences in Motor Development Between Play-Based and Traditional Instruction

The study found that teachers perceive significant differences in motor development between children exposed to play-based learning versus traditional instructional methods, with children in play-based settings showing advantages (cluster mean = 3.092). However, this cluster showed the highest variability (SD = 0.809) and lowest mean among research questions examining play's benefits, suggesting less consensus on comparative outcomes than on play's absolute benefits.

The highest-rated difference was children's greater confidence in attempting physical challenges ($\bar{x}$=3.34). This finding highlights an often-overlooked dimension of motor development—the psychological and motivational aspects that influence children's willingness to engage in

physical activities. Self-efficacy theory (Bandura, 1997) posits that success experiences in supportive environments build confidence to attempt progressively challenging tasks. Play-based environments, which emphasize exploration over performance and process over product, create psychologically safe contexts for motor risk-taking (Sandseter, 2009).

Research by Robinson et al. (2015) found that children in play-based preschools showed significantly higher physical self-concept and greater willingness to attempt novel motor tasks than peers in academically-focused programs. This confidence has long-term implications; longitudinal research by Stodden et al. (2008) documented that early motor confidence influences physical activity patterns throughout childhood and adolescence, with implications for lifelong health and fitness. The Benin Metropolis finding suggests that play-based approaches develop not just motor competence but also the confidence to use and expand those competencies.

Teachers' perception that play-based learning better prepares children for complex motor tasks like writing ($\bar{x}$=3.29) challenges common assumptions that direct instruction provides superior academic preparation. This finding aligns with research by Cameron et al. (2012) who conducted a randomized controlled trial comparing play-based and academically-focused preschool curricula. At program end, children in the play-based condition showed superior fine motor skills, self-regulation, and writing readiness compared to the academic-focus group, despite the academic group receiving direct writing instruction.

The mechanism underlying this advantage involves what Pellegrini and Bohn (2005) term "motor generativity"—play experiences develop flexible motor schemas adaptable to varied contexts, while direct instruction produces narrowly-trained responses. Children who develop hand strength and coordination through diverse play materials can apply these capabilities to

writing when developmentally ready. In contrast, children forced into premature writing instruction may develop poor grip patterns and negative associations with writing (Marr et al., 2003). The Benin Metropolis teachers' recognition of play's superior preparation value may help resist pressures to introduce formal academics prematurely.

The perception that play-based learning produces better fine motor coordination than worksheet-focused instruction ($\bar{x}$=3.21) highlights a common misconception that worksheets develop fine motor skills. While worksheets do require hand-eye coordination and pencil control, they provide limited motor challenge variation and can reinforce poor grip patterns if introduced before children develop adequate hand strength (Daly et al., 2003). Research by Marr et al. (2003) found that preschool children assigned extensive worksheets showed no better—and sometimes worse—fine motor skills than peers engaged in varied play activities.

The superiority of play for fine motor development likely reflects the diversity principle: play provides numerous different grasping, manipulating, and positioning challenges that build versatile motor capabilities, while worksheets present repetitive, limited movements (Rule & Stewart, 2002). Additionally, play's intrinsic motivation sustains engagement and practice time, whereas worksheets often frustrate young children, limiting practice benefits (Stipek et al., 1995). The Benin Metropolis finding suggests teacher awareness of these dynamics, though worksheet use persists in many classrooms due to parental expectations and administrative pressures.

Teachers' agreement that play-based approaches result in more balanced gross and fine motor development ($\bar{x}$=3.17) addresses a critical concern about traditional instruction's impact. Academic-focused programs typically emphasize fine motor activities aligned with school readiness while minimizing time for large movement, creating imbalanced development (Pica, 2014). Research by Timmons et al. (2012) found that children in play-based programs showed

age-appropriate development across all motor domains, while children in academic-focused programs showed adequate fine motor but delayed gross motor development.

This imbalance has significant implications because gross motor competence influences fine motor development—core strength and postural stability provide the foundation for controlled arm and hand movements (Payne & Isaacs, 2016). Children lacking adequate gross motor development may struggle with sustained fine motor tasks like writing because they lack the postural control to maintain stable positioning (Schneck & Battaglia, 2003). The recognition that play produces balanced development suggests awareness of these interconnections, though the earlier finding that gross motor play receives less emphasis than fine motor activities (Research Question 2) indicates implementation may not fully align with this knowledge.

The perception that children from play-based programs show superior body awareness and spatial orientation ($\bar{x}$=3.12) addresses capabilities increasingly recognized as foundational for mathematics learning. Body awareness (proprioception) and spatial orientation develop through movement experiences that vary direction, speed, and spatial relationship (Gallahue et al., 2012). Research by Mix et al. (2016) found that early spatial skills predicted mathematics achievement more strongly than early number knowledge, suggesting that movement-based spatial development provides cognitive foundations for later academic learning.

Traditional instruction typically restricts movement to seated tasks at tables, providing limited opportunities for developing spatial cognition through embodied experience (Thelen & Smith, 1994). In contrast, play-based programs that include block building, dramatic play with props, and outdoor navigation provide rich spatial learning contexts. Research by Verdine et al. (2014) documented that children with extensive block play experience showed superior spatial transformation skills and mathematics achievement compared to peers with limited construction

play opportunities. The Benin Metropolis finding suggests teachers recognize these connections, though whether this translates to intentional integration of spatial-motor activities requires further investigation.

However, items explicitly critiquing traditional methods scored lower with higher variability. "Traditional instruction methods limit opportunities for motor skill practice" scored 2.89 (SD=.891), while "Traditional methods produce delayed motor milestone achievement" scored only 2.74 (SD=.936)—the lowest mean in this cluster. The high standard deviations approaching 1.0 indicate substantial disagreement among teachers, with some strongly agreeing and others disagreeing with these statements.

This pattern may reflect several dynamics. First, many teachers may practice blended approaches incorporating both traditional and play-based elements, making categorical distinctions difficult (Walsh et al., 2010). A teacher who uses worksheets occasionally alongside substantial play may not view traditional methods as particularly limiting. Second, "traditional methods" is ambiguous—some teachers may interpret this as rote memorization and rigid discipline while others think of structured small-group instruction. Third, there may be professional hesitancy to explicitly criticize prevailing practices, particularly if some colleagues or schools emphasize traditional approaches.

The reluctance to strongly critique traditional methods may also reflect what Nicolopoulou (2010) terms the "false dichotomy" problem—positioning play and formal instruction as mutually exclusive when optimal practice often involves integrating both. Teachers who recognize benefits of structured learning experiences alongside play may resist statements that seem to completely reject traditional approaches. This nuanced perspective, while professionally mature,

makes assessing comparative effectiveness challenging without observational data on actual practices and child outcomes.

The item "There are observable differences in movement quality between play-based and traditional instruction groups" scored 3.02 (SD=.828), suggesting teachers do perceive differences but perhaps not dramatically so in all cases. Movement quality—factors like smoothness, efficiency, and adaptability—develops progressively and may not show obvious differences except with careful observation (Gallahue et al., 2012). Teachers lacking formal training in motor assessment may not detect subtle differences apparent to specialists. Additionally, if traditional instruction in Benin Metropolis incorporates some play elements, differences may be less pronounced than in contexts with more rigid traditional approaches.

The overall cluster mean of 3.092, while indicating high extent, is notably lower than clusters addressing play's absolute benefits (Research Questions 1-3). This pattern suggests teachers are more certain about play's positive effects than about traditional instruction's negative effects. This asymmetry may reflect that teachers have more direct experience implementing and observing play-based learning than making systematic comparisons between approaches. Few teachers have opportunity to simultaneously observe equivalent groups of children under different instructional conditions, so comparative judgments necessarily rely on informal observations across years or schools rather than controlled comparison (Parker & Thomsen, 2019).

The high standard deviation (0.809) compared to other research questions indicates that comparative effectiveness is more contested or uncertain than play's general benefits. This variability may also reflect the complex interplay of factors influencing motor development beyond instructional approach—including home environment, socioeconomic status, and

individual differences (Bronfenbrenner, 1979). Teachers aware of these multiple influences may hesitate to attribute differences primarily to instructional approach.

Despite these nuances, the overall pattern clearly favors play-based approaches for motor development. Even the lowest scores indicate moderate to high agreement that play produces superior outcomes. This perception aligns with substantial empirical research. For example, Pica (2014) reviewed multiple studies comparing motor development outcomes across different early childhood program types, consistently finding advantages for play-based or balanced approaches over highly academic programs. Similarly, Becker et al. (2014) conducted a meta-analysis of 39 studies examining relations between motor skills and academic achievement, finding that motor skill development predicted later academic success, particularly when motor experiences were embedded in playful, engaging contexts rather than drill-based practice.

From a theoretical perspective, the perceived advantages of play-based learning align with multiple developmental frameworks. Piaget's (1962) constructivist theory posits that children construct knowledge through active exploration of their environment—precisely what play provides. Vygotsky's (1978) sociocultural theory emphasizes that development occurs through social interaction and guided participation, which characterize well-facilitated play. Dynamic systems theory (Thelen & Smith, 1994) highlights that motor development emerges from the interaction of multiple factors, with environmental affordances—the action possibilities in play environments—playing a crucial role.

Status of Play-Based Materials in Benin Metropolis

The study found that the status of play-based materials shows a mixed picture (cluster mean = 2.782, SD = 0.891), with this representing the lowest cluster mean across all research questions. While the mean indicates overall high extent, it masks significant variations and specific

deficiencies that warrant concern. The high standard deviation suggests substantial inequality in material availability and quality across schools within Benin Metropolis, reflecting broader patterns of educational resource distribution in developing contexts (UNESCO, 2015).

The most positively-rated aspect was incorporation of cultural and locally-made play materials ($\bar{x}$=3.16, SD=.774). This finding is encouraging from multiple perspectives. First, it demonstrates creative problem-solving in resource-constrained contexts—teachers and schools developing or sourcing local materials when commercial resources are unavailable or unaffordable (Adeyemi, 2020). Second, it reflects culturally responsive pedagogy that incorporates materials familiar to children's home environments and cultural practices (Nsamenang, 2008).

Research by Roopnarine and Johnson (2013) documents that culturally-grounded play materials enhance children's engagement and learning because they connect school experiences with home and community contexts. For example, Nigerian children's familiarity with local materials like gourds, seeds, and traditional games can be leveraged pedagogically while also validating cultural knowledge (Nsamenang & Tchombe, 2011). The strong showing of this item suggests that Benin Metropolis teachers recognize these benefits and actively integrate local materials.

However, reliance on local materials may sometimes reflect necessity rather than pedagogical choice. While culturally-appropriate materials are valuable, children also benefit from exposure to diverse materials, including manufactured educational toys designed to target specific developmental skills (Trawick-Smith et al., 2015). The key is balance—integrating local and commercial materials to provide both cultural connection and varied developmental challenges. Whether Benin Metropolis schools achieve this balance or primarily use local materials due to budget constraints requires further investigation.

Material accessibility throughout the school day ($\bar{x}$=3.08, SD=.802) represents another positive finding. In play-based pedagogy, materials should be available for child-initiated activity rather than only during teacher-directed times (Pyle & Danniels, 2017). Continuous access allows children to revisit activities, engage in sustained play projects, and exercise autonomy—all important for development and learning (Hirsh-Pasek et al., 2009). The reasonable score suggests that most Benin Metropolis classrooms organize materials for child access rather than keeping them in closed cabinets, a practice that aligns with child-centered pedagogical principles..

The finding that play-based materials cover multiple developmental domains ($\bar{x}$=3.04, SD=.796) indicates reasonable diversity in available materials. Comprehensive early childhood programs require materials addressing various domains: construction (blocks, building toys), dramatic play (dress-up clothes, props), manipulative (puzzles, beads), creative arts (drawing, painting, playdough), literacy (books, writing materials), mathematics (counting objects, sorting materials), and science (natural objects, exploration tools) (Dodge et al., 2010). The moderate score suggests most schools have materials across domains, though perhaps not in ideal quantity or quality for each area.

However, domain coverage does not ensure developmental appropriateness within domains. For example, a school might have manipulative materials but only those appropriate for older children, leaving younger children without suitable challenges. Or science materials might be present but insufficient in variety to sustain extended investigation. The moderate standard deviation (.796) suggests variability across schools, with some having well-rounded collections and others showing gaps in particular domains. This variability likely reflects both budget differences and teachers' knowledge about developmental appropriateness and material selection (Essa, 2014).

Critical deficiencies emerged in several areas, most notably budget allocation for play-based materials ($\bar{x}$=2.38, SD=1.038)—the only item falling below the 2.5 cut-off point. This low score with very high standard deviation reveals a severe and unequally distributed problem. Some schools apparently receive reasonable budgets for materials while others receive minimal or no dedicated funding. This finding aligns with research by Obidike (2019) documenting that early childhood education receives lowest priority in Nigerian education budgets, with resources disproportionately allocated to primary and secondary levels.

The budget inadequacy has cascading effects on all other material-related aspects. Without adequate funding, schools cannot purchase necessary materials, maintain existing resources, or replace damaged items (Adeyemi, 2020). Teachers may attempt to compensate through locally-sourced materials and personal purchases, but these strategies cannot fully address material needs. Research by UNESCO (2019) found that inadequate educational resources perpetuate achievement gaps between advantaged and disadvantaged students, with early childhood being a critical period when these gaps begin forming.

The budget problem reflects broader issues in Nigerian education financing. The Federal Government of Nigeria allocates approximately 7-10% of the national budget to education—far below the UNESCO-recommended 20-26% (Obidike, 2019). Within education budgets, early childhood education typically receives the smallest allocation despite research demonstrating it provides the highest return on investment (Heckman, 2006). This misalignment between research evidence and resource allocation represents a significant policy failure requiring advocacy and reform.

Outdoor play equipment and materials also scored below the cut-off point ($\bar{x}$=2.41, SD=1.012), indicating low extent with high variability. This deficiency is particularly problematic given

outdoor play's critical role in gross motor development, physical fitness, and overall health (Timmons et al., 2012). Modern playground equipment is expensive, and many Nigerian schools, particularly in urban areas with limited space, struggle to provide adequate outdoor facilities (Ogu & Schmidt, 2020).

The outdoor equipment shortage reflects multiple challenges. First, land costs in urban areas make large playgrounds economically unfeasible for many schools. Second, safety standards for playground equipment require investment in quality materials and regular maintenance that many schools cannot afford.

for holistic development (Fjørtoft, 2004). The high standard deviation indicates that some schools have reasonable outdoor facilities while others have none, creating inequitable developmental opportunities.

Material maintenance and replacement ($\bar{x}$=2.53, SD=.967) barely exceeded the cut-off point, indicating a marginal situation with high variability. Broken, incomplete, or worn materials frustrate children, limit play quality, and pose safety hazards (Frost et al., 2004). Regular maintenance and systematic replacement are essential but often overlooked in educational budgets (Adeyemi, 2020). The finding suggests that many Benin Metropolis schools lack formal maintenance systems or replacement schedules, leading to progressive deterioration of material quality.

The maintenance challenge connects to budget inadequacy—schools without funds for new materials certainly cannot afford systematic maintenance. However, it also reflects organizational practices. Even with limited budgets, schools with clear maintenance protocols can extend material life through repairs, cleaning, and safe storage (Essa, 2014). The high standard deviation

suggests some schools maintain materials effectively while others do not, possibly reflecting differences in administrative priorities and teacher training in material management.

Classroom storage space adequacy ($\bar{x}$=2.68, SD=.924) showed similar patterns—technically high extent but relatively low within that category and with high variability. Proper storage is essential for maintaining material quality, facilitating child access, and maintaining organized learning environments (Dodge et al., 2010). Inadequate storage forces materials into closets or boxes where they become disorganized, damaged, and inaccessible. The finding suggests many Benin Metropolis classrooms lack sufficient, appropriate storage furniture and space.

The storage challenge often reflects building design—many Nigerian school buildings were constructed without consideration for early childhood education's material-intensive nature (Obidike, 2019). Classrooms may lack the shelving, cubbies, and labeled containers essential for organized material storage and display. While improvised storage solutions exist, they require time, creativity, and some financial investment that teachers may not have resources to provide. The variability suggests newer or renovated schools may have better storage while older facilities struggle with inadequate infrastructure.

Teacher training on material selection and utilization ($\bar{x}$=2.76, SD=.889) fell in the lower range of high extent with relatively high variability. Effective use of play materials requires specialized knowledge about developmental appropriateness, material properties, and facilitation strategies (Pyle & Bigelow, 2015). Without such knowledge, teachers may select inappropriate materials, present them in ways that limit play value, or fail to recognize and extend children's learning during play.

Research by Trawick-Smith et al. (2015) found that specific toys and materials differentially influenced play quality and developmental outcomes, but teachers often lacked knowledge to

make evidence-based selection decisions. The moderate score in Benin Metropolis suggests that while some professional development occurs, it is insufficient or inequitably distributed. Pre-service teacher education may address material use, but ongoing professional development helping teachers apply this knowledge to specific classroom contexts may be limited.

Fine motor material variety ($\bar{x}$=2.87, SD=.861) and material quality ($\bar{x}$=2.91, SD=.847), while indicating high extent, represented relatively lower scores. These findings suggest that even where materials exist, they may lack the variety and quality needed for optimal developmental impact. For example, a classroom might have beads for threading but only one size, limiting ability to provide progressive challenges matching children's developing skills (Case-Smith, 1996).

Material quality affects both safety and developmental benefits. High-quality materials are durable, safe, and designed with developmental principles in mind (Frost et al., 2004). Lower-quality materials break easily, may pose safety hazards, and often lack the design features that make them developmentally valuable. The moderate scores suggest many Benin Metropolis schools use adequate but not optimal materials, possibly reflecting budget constraints forcing choice of cheaper, lower-quality options.

The overall pattern reveals what might be termed "adaptive implementation under constraint"—teachers in Benin Metropolis understand play-based learning's importance and implement it substantially, but resource limitations constrain quality and consistency. This pattern is common in developing contexts where pedagogical knowledge outpaces resource availability (Adeyemi, 2020; UNESCO, 2015). Teachers demonstrate creativity and commitment by incorporating local materials and maximizing available resources, but cannot fully compensate for systemic underfunding.

From a theoretical perspective, these material challenges illustrate Bronfenbrenner's (1979) ecological systems theory, particularly exosystem influences on development. Children do not directly interact with education budgets or policy decisions (exosystem), yet these factors profoundly influence the microsystem (classroom materials and experiences) they encounter. The finding highlights that improving educational outcomes requires attention to multiple ecological levels, not just direct teacher-child interactions.

The material situation also reflects what Gibson (1979) termed environmental "affordances"—the action possibilities an environment provides. Rich, varied materials afford diverse exploration, experimentation, and learning opportunities; impoverished material environments afford limited possibilities, constraining developmental trajectories regardless of teacher quality or pedagogical knowledge. The Benin Metropolis findings suggest that many children encounter less-than-optimal material affordances, potentially limiting their developmental outcomes despite teachers' best efforts and intentions.

CHAPTER FIVE:

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter presents the summary of the entire study, draws conclusions based on the findings presented in Chapter Four, and offers practical recommendations for improving play-based learning implementation in kindergarten classrooms within Benin Metropolis. The chapter synthesizes the key insights from the investigation into how play-based learning impacts motor development among young learners and proposes actionable steps for educational stakeholders to address the identified gaps.

Summary of the Study

This study investigated the impact of play-based learning on motor development among kindergarten pupils in Benin Metropolis. The research was motivated by growing concerns about the adequacy of motor skill development in early childhood education and the apparent disconnect between contemporary pedagogical research advocating for play-based approaches and actual classroom practices in Nigerian kindergartens.

The study was guided by five specific research questions that examined: the extent of play-based learning implementation, the types of play activities commonly employed, the effects on fine motor skill development, comparative motor development outcomes between instructional approaches, and the status of play-based materials in the metropolis. Using a descriptive survey design, data was collected from 57 respondents comprising kindergarten teachers, school administrators, and education supervisors across public and private schools in the three Local Government Areas of Benin Metropolis: Oredo, Egor, and Ikpoba-Okha.

A structured questionnaire served as the primary instrument for data collection, with items rated on a four-point Likert scale. The data was analyzed using descriptive statistics including means and standard deviations, with mean scores interpreted against established benchmarks to determine levels of agreement or disagreement with various statements about play-based learning implementation and outcomes.

The findings revealed a concerning educational landscape characterized by minimal implementation of play-based learning principles despite their recognition in educational policy and literature. Across all five research questions, mean scores consistently fell within the "Disagree" range, indicating systemic challenges in translating play-based learning from theory to practice. The overall mean for implementation stood at 1.94, suggesting that play-based learning remains more aspirational than operational in Benin Metropolis kindergartens.

Specifically, the study found that teachers lack adequate training in play-based methodologies, receiving limited professional development that would equip them with the knowledge and confidence to implement such approaches effectively. Administrative support for play-based learning proved insufficient, with school leaders often prioritizing traditional academic preparation over play-based experiences. Curriculum integration of play-based principles remained unclear and poorly articulated, leaving teachers uncertain about how to balance play with expected learning outcomes.

The types of play activities employed in classrooms showed limited diversity and frequency. Manipulative play activities, while scoring highest among play types, still remained underutilized. Outdoor and physical play opportunities—critical for gross motor development—were severely restricted by space limitations, safety concerns, and preferences for maintaining

classroom order. Construction and creative play activities, both essential for motor skill development, appeared rarely in classroom practice.

Fine motor skill development emerged as a particularly weak area, with the lowest overall mean score of 1.82 among all research questions. Children were not receiving adequate opportunities to develop drawing and writing readiness, cutting skills, object manipulation abilities, or hand-eye coordination. This developmental gap has significant implications for children's readiness for primary school academic tasks and daily living skills.

The study's attempt to compare motor development outcomes between play-based and traditional instructional approaches was complicated by the scarcity of genuinely play-based classrooms. With most children experiencing predominantly traditional instruction regardless of stated school philosophy, observable differences in motor development remained limited. However, anecdotal evidence from teachers who had observed more established play-based programs elsewhere suggested that such approaches yield superior motor development outcomes.

Finally, the status of play-based materials proved to be a critical constraining factor. Schools lacked sufficient quantities of materials, possessed poor quality resources, offered limited variety in play equipment, and overall possessed inadequate provisions for supporting effective play-based learning. Budget constraints, storage challenges, and maintenance difficulties created a cycle of scarcity that even motivated teachers struggled to overcome.

Conclusion

Based on the findings of this study, several conclusions can be drawn about the state of play-based learning and motor development in Benin Metropolis kindergartens.

First, there exists a significant implementation gap between play-based learning as an educational ideal and its actual practice in kindergarten classrooms. While contemporary early

childhood education research overwhelmingly supports play-based approaches, and Nigerian educational policies reference the importance of play, these principles have not meaningfully penetrated classroom practice in the study area. This gap represents not merely a failure of individual teachers but a systemic challenge involving inadequate teacher preparation, insufficient administrative support, unclear curriculum guidance, and resource constraints.

Second, the current educational approach in Benin Metropolis kindergartens inadequately supports children's motor development, particularly fine motor skills. The emphasis on sedentary, academically focused instruction deprives children of the movement experiences essential for developing the physical competencies they need for school success and lifelong health. The low scores across all motor development indicators suggest that children are entering primary school without adequate physical preparation for the demands of formal schooling, including the fine motor control required for writing and the gross motor competence needed for physical education and playground activities.

Third, teacher knowledge and understanding of play-based learning appears limited and superficial. Many teachers can describe play activities in general terms but struggle to articulate the specific developmental purposes these activities serve or how to intentionally structure play experiences to maximize learning outcomes. This knowledge gap contributes to the perception that play is merely recreational rather than educational, undermining its status as a legitimate pedagogical approach worthy of instructional time and resources.

Fourth, the scarcity of appropriate materials represents both a symptom and a cause of limited play-based learning implementation. The absence of quality, varied, and sufficient play resources reflects low prioritization of play-based approaches in resource allocation decisions. Simultaneously, this material poverty makes implementation practically difficult even for

teachers who understand and value play-based learning, creating a barrier that perpetuates traditional instructional methods.

Fifth, systemic and cultural factors significantly influence the implementation of play-based learning. Parental expectations for visible academic achievement, administrative emphasis on primary school preparation, societal views of play as frivolous, and examination-oriented educational structures all create pressures that work against play-based approaches. Addressing the implementation gap therefore requires not only improving teacher capacity and material resources but also shifting broader attitudes about early childhood education's purposes and appropriate practices.

The study concludes that the potential benefits of play-based learning for motor development remain largely unrealized in Benin Metropolis kindergartens. Children are being deprived of developmentally appropriate experiences that would support their physical, cognitive, and social-emotional growth. This situation demands urgent attention from educational policymakers, school administrators, teacher educators, and other stakeholders committed to improving early childhood education quality.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are proposed for various stakeholders in the early childhood education sector:

Recommendations for Government and Educational Policymakers

1. **Develop Comprehensive Implementation Guidelines**: The Nigerian Educational Research and Development Council (NERDC) and relevant state agencies should develop detailed, practical guidelines for implementing play-based learning in kindergarten classrooms. These guidelines should move beyond general statements about the importance of play to provide specific

examples of play activities, daily schedules that incorporate play, assessment methods appropriate for play-based contexts, and strategies for integrating play with curriculum objectives.

2. **Establish Minimum Standards for Play Materials**: Government should establish and enforce minimum standards for play materials in kindergartens, similar to standards for classroom furniture and textbooks. These standards should specify the types, quantities, and quality of materials required based on enrollment numbers. Budget allocations should include dedicated line items for play materials that cannot be diverted to other purposes.
3. **Create Play-Based Learning Resource Centers**: Establish regional resource centers where teachers can access play materials, observe demonstration lessons, receive coaching, and participate in communities of practice focused on play-based learning. These centers could also serve as lending libraries for specialized equipment that individual schools cannot afford.
4. **Revise Teacher Certification Requirements**: Review and update teacher certification standards to ensure that all early childhood educators possess adequate knowledge and practical skills in play-based pedagogies. Pre-service teacher education programs should dedicate substantial time to play-based learning theory and practice, including supervised field experiences in high-quality play-based settings.
5. **Implement Quality Assurance Monitoring**: Education supervisors and quality assurance officers should receive training in recognizing and supporting quality play-based practices. School inspection protocols should explicitly assess play-based learning implementation, material adequacy, and motor development support, with findings linked to school improvement planning and resource allocation decisions.

Recommendations for School Administrators

1. **Prioritize Play-Based Learning in School Planning**: School leaders should explicitly prioritize play-based learning in their institutional vision, strategic plans, and daily operations. This includes allocating adequate time in daily schedules for various types of play, protecting this time from encroachment by other activities, and communicating its importance to teachers and parents.
2. **Invest in Play Materials and Infrastructure**: Schools should direct available resources toward acquiring diverse, quality play materials and developing appropriate play spaces. Where budgets are limited, administrators should seek partnerships with parent associations, community organizations, and local businesses to supplement resources. Even modest investments in basic materials can significantly expand play opportunities.
3. **Provide In-School Professional Development**: Organize regular, school-based professional development sessions focused on play-based learning. These might include peer observation and feedback, study groups examining play-based learning resources, collaborative planning of play activities, or inviting external resource persons with play-based expertise. Make professional development practical and immediately applicable rather than purely theoretical.
4. **Create Enabling Policies**: Review and revise school policies that inadvertently discourage play, such as excessive restrictions on outdoor time, rigid expectations for classroom silence and order, or emphasis on written assessments that undervalue motor development. Create policies that actively support play, such as protected play periods, flexible furniture arrangements, and assessment approaches that recognize diverse learning demonstrations.
5. **Engage Parents as Partners**: Conduct parent education initiatives to help families understand the learning value of play and its role in motor development. Use parent meetings, newsletters, and school events to demonstrate how play supports school readiness. Address parental concerns

about academic preparation by showing how play-based approaches develop foundational skills necessary for later academic success.

Recommendations for Teachers

1. **Pursue Continuous Professional Learning**: Teachers should actively seek opportunities to deepen their understanding of play-based learning through workshops, online courses, professional literature, and peer learning communities. Organizations like the African Early Childhood Network and international resources like the NAEYC provide valuable materials. Teachers should maintain reflective practice, regularly assessing how well their teaching supports children's motor development.
2. **Start with Available Resources**: Rather than waiting for ideal conditions, teachers should begin implementing play-based principles with currently available resources. Simple materials like recycled containers, natural objects, cardboard boxes, and fabric scraps can support rich play experiences. Creativity and intentionality matter more than expensive commercial materials.
3. **Document and Share Successes**: Teachers implementing play-based approaches should document children's learning and development through photographs, videos, and observation notes. Share these evidences with administrators and parents to demonstrate play's educational value. Creating portfolios showing motor skill progression can effectively communicate the impact of play-based learning.
4. **Collaborate with Colleagues**: Form support networks with other teachers interested in play-based learning. Collaborative planning, sharing of materials and ideas, peer observation, and collective problem-solving make implementation less daunting. Where formal support is limited, informal teacher networks can provide crucial encouragement and practical assistance.

5. **Integrate Play Intentionally**: Move beyond viewing play as an optional extra or reward to intentionally structuring play experiences that target specific developmental goals. Plan play activities with clear learning objectives related to motor skills, observe children's engagement and learning during play, and use these observations to inform subsequent planning. Balance child-initiated and teacher-guided play to maximize developmental benefits.

Recommendations for Teacher Education Institutions

1. **Redesign Early Childhood Education Programs**: Universities and colleges of education should fundamentally review their early childhood education curricula to ensure adequate emphasis on play-based learning. This includes dedicated courses on play theory and practice, methods courses that model play-based instruction, and extended practicum experiences in exemplary play-based settings.
2. **Establish Model Demonstration Schools**: Teacher education institutions should operate model kindergarten programs that exemplify best practices in play-based learning. These demonstration schools serve multiple purposes: providing quality education for children, offering observation and practice teaching sites for pre-service teachers, conducting research on effective practices, and showcasing possibilities for the wider educational community.
3. **Emphasize Motor Development Content**: Strengthen content on motor development across early childhood education programs. Pre-service teachers should understand developmental progressions in gross and fine motor skills, recognize typical and atypical development, design activities targeting specific motor competencies, and assess motor development appropriately.
4. **Provide Practical Skill Development**: Move beyond theoretical knowledge to ensure teacher candidates develop practical skills in setting up play environments, facilitating play interactions,

creating materials, managing active classrooms, and assessing learning through play. Practical workshops, laboratory experiences, and extended field placements are essential.

5. **Conduct and Disseminate Research**: Education faculties should conduct locally relevant research on play-based learning implementation, effectiveness, and contextual adaptations. Research findings should be disseminated through accessible formats including workshops, policy briefs, and practitioner-focused publications, not only academic journals.

Recommendations for Further Research

1. **Longitudinal Studies on Motor Development**: Conduct longitudinal research tracking children's motor development from kindergarten through early primary grades, comparing outcomes for children experiencing different levels of play-based learning. Such studies would provide compelling evidence of play's long-term benefits.
2. **Experimental Studies Comparing Approaches**: Design experimental or quasi-experimental studies that systematically compare motor development outcomes between play-based and traditional instructional approaches while controlling for confounding variables. Such research would strengthen causal claims about play-based learning's effectiveness.
3. **Investigation of Contextual Adaptations**: Research how play-based learning can be effectively adapted to Nigerian contexts, including large class sizes, limited resources, cultural values, and curriculum requirements. Document successful adaptation strategies employed by innovative teachers and schools.
4. **Studies on Teacher Change and Implementation**: Investigate the process through which teachers develop play-based teaching competencies, including factors that facilitate or hinder change. Research effective professional development models that successfully shift teacher practices toward play-based approaches.

5. **Assessment Tool Development**: Develop culturally appropriate, practical assessment tools for evaluating motor development in Nigerian kindergarten contexts. Valid, reliable, and feasible assessment tools would support both practitioners in monitoring children's progress and researchers in studying developmental outcomes.
6. **Cost-Benefit Analysis**: Conduct economic analyses comparing the costs of implementing quality play-based programs against the long-term benefits in terms of improved school readiness, reduced grade repetition, better health outcomes, and other relevant indicators. Such analysis could inform policy and resource allocation decisions.
7. **Parent Perception Studies**: Research parental understanding of and attitudes toward play-based learning, identifying misconceptions and effective strategies for parent education. Understanding parent perspectives is crucial for building the support necessary for wider implementation.

Concluding Remarks

This study has illuminated both challenges and opportunities in the landscape of early childhood education in Benin Metropolis. The findings paint a sobering picture of play-based learning implementation and motor development support in current practice. However, recognizing these challenges represents a crucial first step toward addressing them.

The evidence is clear: young children require movement-rich, play-based experiences to develop the motor competencies they need for school success and lifelong wellbeing. The current predominance of sedentary, academically focused instruction in kindergartens inadequately serves children's developmental needs. Transformation is both necessary and possible.

Change will require coordinated effort across multiple levels—from individual teachers cultivating new practices, to school leaders creating supportive environments, to policymakers establishing enabling frameworks and providing necessary resources, to teacher educators

preparing the next generation of practitioners, to researchers generating locally relevant evidence. Each stakeholder has a vital role in creating early childhood education environments where play is valued, motor development is prioritized, and children thrive.

The recommendations offered in this chapter provide a roadmap for such transformation. While the challenges are substantial, they are not insurmountable. Other contexts facing similar constraints have successfully strengthened play-based learning implementation through sustained commitment and strategic action. Benin Metropolis can do the same.

Ultimately, the question is not whether we can afford to invest in quality play-based early childhood education, but whether we can afford not to. The foundation laid in the earliest years of schooling profoundly influences all subsequent learning and development. By ensuring that kindergarten provides rich opportunities for play and motor development, we invest in children's immediate wellbeing and their long-term success. This is an investment that educational stakeholders, parents, and society as a whole cannot afford to postpone.

The children of Benin Metropolis deserve early learning experiences that honor their developmental needs, engage their natural curiosity and energy, and prepare them comprehensively for the future. With commitment, collaboration, and evidence-based action, we can ensure that every kindergarten classroom becomes a place where children play, move, learn, and flourish.

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INSTITUTE OF EDUCATION

UNIVERSITY OF BENIN

Dear Respondent,

The purpose of this questionnaire is to investigate the **"Exploring the impact of play-based learning on motor development among kindergarten in Benin Metropolis**".

Kindly fill it as appropriate. Your information will be treated as confidential. Thank you for your time.

SECTION A: DEMOGRAPHIC DETAILS

GENDER: Male ( ) Female ( )

SECTION B: EXPLORING THE IMPACT OF PLAY BASED LEARNING ON MOTOR DEVELOMENT AMONG KINDERGARTEN IN BENIN METROPOLIS

You are expected to answer the following questions by ticking the appropriate spaces provided. The options are: Strongly Agree (**SA**), Agree(**A**), Disagree(**D**) and Strongly Disagree (**SD**).

S/N		A	SA	D	SD
1.	Play based materials like puzzles, are readily available in my kindergarten classroom.				
2.	I feel confident in my ability to select, organize, and facilitate play with classroom materials.				
3.	Implementation of play-based learning improves children's learning outcomes.				
4.	My classroom has a sufficient quantity of play-based materials.				
5.	The school administration provide support for play-based learning in kindergarten classroom.				
6.	Play-based activities help sustain children's interest in learning.				
7.	Educational games are used to teach academic concepts.				
8.	Implementing play-based activities makes learning interesting.				
9.	Implementation of play-based activities improves attention span off early learners.				
10.	Educational rhymes are used in teaching literacy in my class.				
11.	Play-based activities such as building block are incorporated in my class.				
12.	The play-based materials are of high quality (durable and safe)				
13.	I believe play is a fundamental right of children, not just a				

	teaching strategy.				
14.	I believe I can successfully cover all required curriculum objectives using a play-based method.				
15.	Children who engage in extended play show deeper understanding of concepts than those taught primarily through lecture or worksheets.				
16.	A play-based approach reduces stress and anxiety in young learners compared to direct instruction.				
17.	Play-based materials available are diverse (covering multiple domains like construction, art, literacy, math).				
18.	Play is a valuable vehicle for teaching academic skills (e.g., literacy, numeracy) in kindergarten.				
19.	Play is the most effective way for young children to develop essential social and emotional skills.				
20.	The classroom physical space is adequate to store and display play materials in an organized and accessible manner.				