

Parents Perception on the Role of Play Based Learning in Numeracy and Literacy Development of Children Aged 3 to 5.

By

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**A thesis submitted to BRAC Institute of Educational Development in partial fulfillment
of the requirements for the degree of
Master of Science in Early Childhood Development**

BRAC Institution of Educational Development

BRAC University

12th April 2025

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Declaration

It is hereby declared that

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

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Ethics Statement

Title of Thesis Topic: Parents Perception on the role of Play Based Learning in Numeracy and Literacy Development of Children aged 3 to 5.

Student name: Anika Shama

1. Source of population: Chattogram
2. Does the study involve (yes, or no)
 - a) Physical risk to the subjects (no)
 - b) Social risk (no)
 - c) Psychological risk to subjects (no)
 - d) discomfort to subjects (no)
 - e) Invasion of privacy (no)
3. Will subjects be clearly informed about (yes or no?)
 - a) Nature and purpose of the study (yes)
 - b) Procedures to be followed (yes)
 - c) Physical risk (yes)
 - d) Sensitive questions (yes)
 - e) Benefits to be derived (yes)
 - f) Right to refuse to participate or to withdraw from the study (yes)
 - g) Confidential handling of data (yes)
 - h) Compensation and/or treatment where there are risks or privacy is involved (yes)
4. Will Signed verbal consent for be required (yes or no)
 - i) from study participants (yes)
 - f) from parents or guardian (no)
 - j) Will precautions be taken to protect anonymity of subjects? (yes)
5. Check documents being submitted herewith to Committee:
 - a) Proposal
 - b) Consent Form
 - c) Questionnaire or interview schedule

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Abstract:

This qualitative study explored parents' perceptions and practices regarding the role of play-based learning in the numeracy and literacy development of children aged 3 to 5 in Chattogram, Bangladesh. Employing in-depth interviews (IDIs) with six parents and focus group discussions (FGDs) with another six, the research aimed to understand parents' understanding, practices, and challenges related to play-based learning. Thematic analysis of the transcribed data revealed diverse parental understandings of play-based learning, ranging from child-led exploration to structured educational approaches. Parents recognized the importance of play in developing numeracy and literacy skills, utilizing activities like role-play, storytelling, and manipulatives. However, challenges such as time constraints, parental anxiety, and balancing digital and traditional play were prevalent. Notably, the study implicitly highlighted differences in mothers' and fathers' roles, with mothers appearing more actively involved in implementing play-based learning. Parents consistently reported that play-based learning strengthened parent-child relationships and contributed to children's future academic success. The study recommends providing practical guidance and support to parents, addressing parental anxieties, fostering collaboration between educators and parents, and promoting balanced digital and traditional play. Furthermore, it emphasizes the need for future research to actively engage fathers and explore their perspectives on play-based learning. The findings underscore the importance of supporting parents in creating enriching learning experiences through play.

Keywords: Play-based learning, Numeracy and Literacy development, Parental perceptions, Early childhood development.

Dedication:

To my incredible Parents and Husband, whose everlasting support, patience, and sacrifices have always motivated me to do my best and reach for the stars. My inspiration has always come from them courage and support.

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My deepest gratitude goes to my supervisor, Zarrin Tasnim, Lecturer at BRAC Institute of Educational Development, BRAC University. Her unwavering support, insightful guidance, and patient mentorship were pivotal to this research. I am profoundly thankful for her dedication and the invaluable impact she's had on my academic journey.

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I would like to thank all of my batch mates for their nice cooperation, and friendly behavior, for them

The journey was very enjoyable. I am very much grateful to the mothers & fathers who participated in

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List of Acronyms

IDI	In-depth interview
FGD	Focus group discussion
ECD	Child Development & Social Relationship

Chapter I (Introduction & Background)

Introduction

Play-Based learning is more than just children's play; it's an effective teaching strategy that encourages children's inherent creativity and curiosity to promote holistic development (Brightwheel, 2024). One of the main components of play-based learning is its emphasis on child-initiated activities, giving children autonomy to decide how, when, and what they play. This independence not only fosters a love of learning but also develops critical abilities like creativity, problem-solving, and decision-making.

In addition to these benefits, play-based learning significantly supports children's numeracy and literacy development. Children's numeracy development involves acquiring foundational mathematical skills and concepts such as number sense, counting, and understanding quantities (Reid, 2020). Similarly, Children's literacy development involves learning to recognize, understand, and use words and sounds from an early age. This process starts with phonological awareness, the ability to discriminate and manipulate sounds, and advances to combining sounds into meaningful words and sentences. Early literacy skills are vital for reading and writing and can be nurtured through activities like joint reading, drawing, singing, storytelling, and rhyming (2U Wordpress, 2023). These areas of development are crucial for children's overall academic success and are naturally encouraged through play-based activities.

Children find play-based learning to be naturally entertaining, which fosters a positive and stimulating learning environment. With no rigid aims or end goals, children are free to explore and experiment at their own pace, leading to deeper learning

experiences. Teachers and parents play essential roles in supporting play-based learning by providing the necessary scaffolding for children to succeed. By using open-ended questions, suggestions, and interactions, they can guide children's play and foster critical thinking and inquiry (Brightwheel, 2024).

“Globally, there's a growing recognition of the pivotal role play-based learning plays in shaping children's holistic development, particularly in disadvantaged communities. Studies conducted across various countries, including Bangladesh, Rwanda, and Ethiopia, indicate that children exposed to play-rich environments demonstrate significant improvements in literacy, numeracy, and socio-emotional skills (Mader & Mader, 2022).” The global conversation surrounding literacy, numeracy, and lifelong learning has become more focused, especially in relation to the Sustainable Development Goals (SDGs) of the United Nations. By 2030, SDG 4.6 wants to guarantee that every young person and a sizable percentage of adults be literate and numeracy proficient. The COVID-19 pandemic has exacerbated challenges in evaluating and reporting functional reading and numeracy on a global basis, notwithstanding progress. While UNESCO and the OECD have suggested criteria for tracking development, differences in national proficiency levels underscore how difficult it will be to meet these goals. To address these issues and improve educational outcomes globally as 2030 draws near, more work must be done (Grotlüschen et al., 2020). Moreover, play has a difficult time being included into pre-primary education systems around the world. A significant obstacle is the ignorance of education stakeholders about the importance of play as a basis for academic ideas. Many teachers, administrators, and even parents view play as frivolous because they believe it detracts from "true learning" activities. This misperception results from a lack of demand for

play opportunities in pre-primary settings due to a low knowledge of the benefits of play in children's education (UNICEF, 2018).

Bangladeshi parents often lack sufficient knowledge about the benefits of literacy and numeracy development through play-based learning, instead placing greater emphasis on academic learning. This can result in children feeling pressured and bored, hindering their natural curiosity and love of learning. Understanding parents' perceptions of play-based learning in the development of numeracy and literacy for children aged 3 to 5 is essential for shaping effective early education strategies. In Bangladesh, where early childhood education initiatives are expanding, pre-primary education is crucial for early child development, emphasizing play-based learning to prepare children for primary school and promote cognitive and emotional growth. The government has made strides by implementing a mandatory pre-primary year and a two-year pre-primary program (Importance of Pre-primary Education in Bangladesh, n.d.). Despite these efforts, challenges such as high dropout rates, influenced by poverty, child labor, early marriage, and social norms, persist (High Rate of Dropouts at Primary Level Is Top Challenge, n.d.). Initiatives like the Play Lab, supported by BRAC USA and the LEGO Foundation, have demonstrated significant improvements in children's development, highlighting the importance of play-based learning (McLaughlin, 2023b). Understanding parents' perceptions of such approaches is vital for enhancing educational practices and policies, ensuring equitable access, and fostering holistic development in early childhood education.

One important aspect of how parents assist their children's early numeracy development is their perspectives. Their views on their own mathematical prowess, their children's mathematical aptitudes and interests, and the significance of early math

education are all included in these perceptions. Parents' overall perceptions of how children acquire numeracy and the roles that schools and parents play in this process are also present. The frequency and methods by which parents teach their young children about numbers at home are ultimately determined by these divergent viewpoints. According to the research presented (Mutaf-Yıldız et al., 2021), there are significant differences in the frequency and methods by which parents involve their young children in numeracy-related activities and discussions. It has been demonstrated that the way parents engage with their children regarding numbers has an impact on how well children grasp numbers now and in the future. In order to establish strategies for assisting all children in acquiring good early numeracy abilities, it is crucial to determine what factors affect the amount of support parents provide at home.

This passage emphasizes how crucial early literacy abilities are to children's long-term academic achievement by tying good foundational literacy to better academic performance, critical thinking, and a lower chance of dropping out of school. It draws attention to the fact that early literacy development frequently starts at home, impacted by the attitudes and involvement of parents. Even though some research shows that parents usually think early literacy is important, their assistance strategies might not always be the best. Rich home literacy experiences might also be limited by socioeconomic status (Rosepti et al., 2023).

This thesis aims to investigate parents' varied perspectives on the contribution of play-based learning to children's literacy and numeracy development between the ages of three and five. It is essential to comprehend these parental viewpoints since they have a big impact on the early childhood education support system and the home learning

environment. This study intends to offer important insights into how parents view and value play in fostering these crucial developmental areas, given the growing recognition of play as an essential pedagogical tool and the proven correlation between early literacy and numeracy skills and later academic success. By clarifying these beliefs, this research will advance a more thorough knowledge of how to use play-based learning to enhance young children's literacy and numeracy development, assisting parents, educators, and legislators in making the most of early learning opportunities.

Statement of the Problem: As a developing nation, Bangladesh has made great advancements in its higher education system, with multiple of its universities receiving international acclaim (Dr Md Alam, J., 2022). In an effort to encourage students' abilities and originality, Ex-Prime Minister Sheikh Hasina of Bangladesh proposed modifications to the curriculum and teaching strategies that would lessen the emphasis on memorization. The government is educating teachers and increasing their pay at the same time that it implemented play-based pre-primary education. Hasina emphasizes the importance of education for the growth of the country and sees funding for education as an investment in reducing poverty. Following the release of the SSC 2024 results, which showed that female students had a better pass rate and participation rate, a request was made to look into the lower rates among male students. With intentions to raise the rate to 30% by 2030 and 41% by 2041, the government is also concentrating on increasing technical education. As part of this endeavor, they will develop a technical training school in each upazila. (Curriculum Being Changed so Students Not Only Learn by Memorization: PM | News Flash, n.d.).

Early Childhood Education (ECE) field does, however, confront significant difficulties. Play-based learning is still mainly out of reach for ECE students due to a lack of infrastructure and supportive learning environments. Play-based learning is not often implemented in primary schools with ECE facilities because they lack the essential resources, particularly qualified teachers. A lack of qualified instructors makes it difficult to incorporate play-based learning into Bangladesh's early childhood education system (Dr Md Alam, J., 2022).

There are several obstacles to play-based learning's acceptance in Bangladesh. Parents find play unnecessary and are not experienced with this method, which makes it difficult to adopt and use. In the 21st century, educational methods have evolved significantly, leading to increased pressure on children as academic goals take precedence over play. This shift contrasts with the traditional emphasis on cognitive development and socialization in early childhood education (ECE) (Dr Md Alam, J., 2022). It has increased the pressure of parents and government place on children. This change, which prioritizes academic rigour above exploratory play, has sparked worries that children would not have a happy childhood. Researchers such as George and Bennett distinguish between two dominant philosophies that are prevalent in many Western countries: one emphasizes play and social interaction in early childhood education (ECE), while the other places more emphasis on cognitive development and academic preparedness. Different viewpoints regarding the development of children are reflected in this dichotomy. The importance of play-based learning in forming children's early years is acknowledged in the global discourse on early childhood education (ECE). However, because academic outcomes are prioritized, this approach presents implementation challenges. Even though play is known to promote creativity

and problem-solving abilities as well as holistic development, many early childhood institutions are facing a "play crisis." The pressure preschool instructors' face to prioritize academic subjects—often at the expense of playtime—exacerbates this dilemma. Recognizing the global crisis in play-based learning, this research aims to highlight the importance of play-based learning in ECE in Bangladesh (Dr Md Alam, J., 2022).

Furthermore, play-based learning activities and teaching strategies are frequently underrepresented in curricula and early learning standards. Even though curricular requirements are recognized in many nations, playful learning principles are rarely included in them. Furthermore, there is a lack of professional development for teachers that emphasizes play-based learning. Many teachers are not adequately prepared or equipped to use play-based learning in their classrooms. Enormous class sizes make it much harder to include play into pre-primary schooling. It becomes challenging to give children the freedom to participate in meaningful play activities when classrooms are packed. Additionally, instructors' capacity to properly encourage children's play is hampered by a lack of resources and inadequate training (UNICEF, 2018). The prevailing mentality among South Asian parents regarding the importance of play in children's learning is a significant concern. Unlike the growing recognition of play-based learning in early childhood education worldwide, many South Asian parents perceive play as unimportant for their children's development. This mindset reflects a gap in understanding the pivotal role of play in fostering cognitive, social, and emotional skills during the formative years. Such beliefs may hinder the adoption of play-based learning approaches in educational settings and limit children's opportunities for holistic development. Addressing this issue is crucial for promoting

effective early childhood education practices, and ensuring that children in South Asia receive the full benefits of play-based learning experiences.

Purpose of the Study: The purpose of this study is to explore the effects of play-based learning on young children's literacy and numeracy skill development, with an emphasis on the attitudes and behaviors of parents. The study aims to emphasize the significance of play-based learning as a vital technique for improving children's literacy and numeracy skills by synthesizing existing research, empirical data, and parental viewpoints.

This qualitative study specifically aims to find out the way parents in Bangladesh perceive the contribution of play-based learning to literacy and numeracy development of children between the ages of three and five. It seeks to comprehend parents' perspectives, convictions, and encounters with play-based learning in fostering these vital abilities. The research initiative will look into the way parents use play-based learning to promote reading and numeracy, the challenges they encounter when doing so, and how these practices affect their children's skill development. Through exploring these facets, the research seeks to offer perspectives on surmounting hindrances and advocating efficacious play-based learning methodologies that culminate in enhanced academic achievements and comprehensive growth for young children residing in Bangladesh.

Significance and Justification of the Study : The roots of literacy and numeracy are set early in a child's life, influencing their future educational experiences and academic achievement. The crucial relevance of early childhood education is emphasized by Mistral, who argues so poignantly that the moment to foster a child's development is now (Mistral, 1998). In addition to being necessary for academic success, early reading

and numeracy abilities are also necessary for negotiating the challenges of the modern world. In order to clarify the complex nature of these fundamental skills, this paper explores the concepts and importance of reading and numeracy development in early life, focusing on research and educational frameworks (G. French, 2013).

Literacy used to be strictly defined as the capacity for reading and writing. Nevertheless, modern comprehension expands this definition to include a variety of communication mediums, such as spoken language, written text, digital media, and visual literacy (DES, 2011). Literacy develops progressively in early life, starting with language learning and interaction with books and other media. The four pillars of literacy development—listening, speaking, reading, and writing—promote learning and communication (Department of Education and Science, 2005).

Numeracy, on the other hand, goes beyond simple arithmetic to include problem-solving, mathematical reasoning, spatial awareness, and data interpretation (DES, 2011). Numeracy development in the early years includes play, songs, sorting exercises, and spatial exploration as ways to introduce mathematical concepts to young children (Epstein, 2007; NCCA, 2009). Children who participate in these activities acquire the fundamental abilities needed for numeric reasoning and problem-solving in a variety of social settings (French, 2013).

Children's general development and future performance depend heavily on their early acquisition of reading and numeracy skills. The declining performance of post-primary students in Ireland demonstrates the need for prioritizing literacy and numeracy skills. Children who lack sufficient reading and numeracy skills run the danger of dropping out of school early, being unemployed or working in low-skilled jobs, being in poor mental and physical health, becoming impoverished, or even becoming involved in

criminal behavior. There is a connection between literacy problems and substance misuse, marginalization, truancy, and fewer opportunities in life. Furthermore, illiteracy might hinder one's ability to succeed academically, make professional decisions, and enjoy financial security as an adult. In a similar vein, numeracy abilities are fundamental to many topics, including chemistry and physics, and are necessary for everyday chores. Youngsters who don't have these abilities may struggle to succeed and grow in confidence. Providing all people with access to high-quality education that promotes reading and numeracy strengthens families, empowers individuals, and improves societal well-being. In the end, lifelong learning is built on reading and numeracy, which are also necessary for realizing one's fundamental rights and reaching one's full potential (G. French, 2013).

It is impossible to overestimate the impact that early literacy and numeracy instruction has on children's academic and long-term achievement. Early literacy starts with language and communication, laying the groundwork for vocabulary growth, story comprehension, and phonological awareness from infancy. In a similar vein, early numeracy includes the fundamental ideas of counting, patterns, forms, and measures—all of which are essential for developing mathematical competence in the future. Research shows how important rich literacy experiences are for developing children's language skills. On the other hand, varied experiences and problem-solving exercises are beneficial for developing children's numeracy skills. Furthermore, parent and teacher involvement in reading and numeracy has a considerably greater impact than socioeconomic considerations, highlighting the vital role that supportive surroundings play in early childhood settings. Prioritizing early reading and numeracy interventions

can have a significant impact on children's academic trajectories, as I investigate in my thesis, setting the foundation for future learning and success (G. French, 2013).

It is important to comprehend the effects of parental play, particularly in developing nations like Bangladesh where a number of issues like poverty, poor literacy rates, and limited educational opportunities continue to exist. Parental play involvement can play an important role in alleviating these issues and promoting holistic development in such circumstances. Due to their financial situation, parents in many developing nations, such as Bangladesh, frequently encounter mental obstacles and difficulties that might cloud their comprehension of and perception of their involvement in their children's development. High dropout rates, limited access to high-quality education, and a lack of understanding of child development exacerbate these issues. Due to conflicting demands and little resources, parents may find it difficult to give play and early childhood development activities top priority (Khan, 2023).

However, a wealth of evidence indicates that, even in settings with limited resources, encouraging parental play can have a profoundly positive impact on children's development. Interventions that equip parents with early childhood development, literacy, and numeracy knowledge and skills can break the cycle of poverty and enhance educational results. Furthermore, lowering dropout rates and expanding access to high-quality education helps foster a more conducive atmosphere where parents can interact with children more successfully.

Research on parental play involvement and early childhood development can help shape policy and programmer design and implementation in the context of government initiatives and policymaking, with the goal of enhancing the well-being and academic achievements of children. Policymakers can customize initiatives to fit the unique

requirements of parents in low-income contexts and establish conducive circumstances for parental engagement by gaining an awareness of the obstacles and problems experienced by them.

Consequently, carrying out studies on parental play involvement advances academic understanding and has applications for government programs and policymaking. Such study can help with attempts to enhance the lives of children and families in underdeveloped nations like Bangladesh by emphasizing the value of parental involvement in play and early childhood development.

Research question:

- a. What are parents' understanding on the role of play – based learning in children's numeracy and literacy development?
- b. What are parents' practices regarding the role of play based learning in children's numeracy and literacy development?
- c. What challenges do parents' face regarding the role of play- based learning in children's numeracy and literacy development?

Operational Definition:

- **Play-Based Learning:** A teaching strategy known as "play-based learning" makes use of play as the main way that children learn, which is especially important for young children from birth to age eight. This methodology capitalizes on children's innate inquisitiveness and inventiveness, facilitating the rapid development of their cognitive, affective, social, and motor abilities. In the pre-primary stage, play-based learning fosters exploration of the surrounding environment, improves linguistic and cognitive skills, and establishes the fundamentals of reading and numeracy. It promotes holistic

development, cultivates important social-emotional skills, and establishes the foundation for future academic success and lifetime learning (Learning through play. UNICEF, 2018).

- **Literacy Development:** The process by which children learn to read, write, listen, talk, and produce texts is known as literacy development. They are able to interact with others in an effective manner because of this fundamental skill. For someone to succeed in school, in social situations, to solve problems, make decisions, become independent, manage money, and find work in the future, they must be literate. The development of literacy in early childhood includes building blocks, including speaking, listening, and understanding, watching, and sketching. This foundation supports the link between sounds and letters, which is essential for reading and writing. Talking, reading, humming, singing, sketching, and other activities with kids help them develop these abilities and fortify the neural pathways that underpin understanding, language, and thought processes (Developing Literacy, 2023).
- **Numeracy Development:** These are foundational mathematical abilities developed in early childhood, such as counting, recognizing number symbols, understanding quantities, and performing basic arithmetic operations like addition and subtraction. These skills are crucial for later success in mathematics and overall academic achievement (Raghubar, 2017).
- **Parental Perceptions and Involvement:** Parental perceptions and involvement encompass awareness, attitudes, and active participation of parents in facilitating play-based learning experiences for their children. It involves understanding how parental views and engagement contribute to or hinder the effective implementation of play-based approaches for numeracy and literacy

development. Parental involvement in literacy extends beyond reading and writing, encompassing technical and information literacy. Challenges like parental inadequacy persist, emphasizing the need for collaborative partnerships between schools, families, and communities (Someketa, A. et al., 2017).

- **Challenges Faced by Parents in Implementing Play-Based Learning for Numeracy and Literacy Development:** Parents often face several challenges when trying to implement play-based learning for their children's numeracy and literacy development. One significant issue is a lack of familiarity with play-based learning methods, leading to uncertainty about how to effectively combine educational goals with playful activities. Additionally, misconceptions about play-based learning—such as the belief that it is not as effective as traditional, more structured methods—can hinder parents' willingness to fully engage in this approach. Parents may also struggle with time constraints, balancing work, household responsibilities, and the time needed to engage in meaningful play-based learning sessions. Limited resources, such as educational toys and materials, can also pose a barrier. Furthermore, parents might find it difficult to maintain a consistent routine, especially if they are unsure of how to measure progress or if their children exhibit varying levels of interest and engagement. Finally, there can be a tension between the desire for structured learning and the open-ended nature of play, making it challenging to ensure that play remains educational while still being enjoyable and spontaneous for the child.

Chapter II (Literature Review)

Literature Review

This review of literature critically looks at the studies that have been done on the use of play-based learning to help children develop their reading and numeracy skills. The review is divided into multiple areas, such as the difficulties parents have, common misperceptions about play-based learning, and methods for successful integration into educational environments. The review seeks to offer a thorough grasp of the advantages, difficulties, and useful considerations of play-based learning in early childhood education through a review of these issues.

- **Theoretical Foundations of Play-Based Learning:** Play-based learning creates educational environments that are stimulating for children by utilizing a variety of child development ideas. Play-based learning is highly supported by Jean Piaget's theory of cognitive development, which has four stages: sensorimotor, preoperational, concrete operational, and formal operational. According to Piaget, toddlers actively learn through interacting with their surroundings. This active learning is made possible by play, which enables children to either adapt by developing new understandings or integrate new information into what they already know (McArdle, 2024). Different developmental phases can be accommodated by play-based learning; for example, pretend play can be used for the preoperational stage and sensory play for the sensorimotor stage. Play that involves social engagement improves negotiation, communication, and comprehension of other people's viewpoints. Teachers can expand on the knowledge that students already possess by introducing well-known subjects. Additionally, pretend play develops diverse

thinking, creativity, imagination, and cognitive flexibility. All things considered, Piaget's theory emphasizes the importance of play for children's cognitive growth and education.

Erikson's Psychosocial Development Theory emphasizes the value of social and emotional development at all life stages and supports play as a way for children to express their feelings, gain confidence in themselves, and form identities (McArdle, 2023). The Psychosocial Development Theory of Erik Erikson places a strong emphasis on social and emotional development over the course of a lifetime. Key stages for play-based learning in childhood are highlighted: school age (6–12 years: industry through skill-building and identity development via collaboration and self-expression), toddlerhood (1-3 years: autonomy through safe exploration), preschool (3-6 years: initiative via imaginative play and encouragement), and infancy (0–1 year: trust vs. mistrust). In order to navigate these phases and develop emotional intelligence, self-worth, and a strong sense of self, play becomes an essential tool (McArdle, 2024).

On the other side, according to Lev Vygotsky's thesis, social contact and cultural background are extremely important for children's cognitive development. The Zone of Proximal Development (ZPD), or the difference between what a youngster can accomplish on their own and what they can accomplish with the help of more experienced people (MKOs), is central to his theory. The required support inside the ZPD is provided via "scaffolding" by peers or professors, which promotes higher-order thinking. Vygotsky also suggested that learning should use cultural instruments like language and technology, emphasizing their significance in forming cognition (McArdle,

2024). A key component of play-based learning environments, collaborative learning is essential for fostering empathy and social skills. Children's self-regulation is aided by private communication during play. Playing pretend is important for fostering creativity, imagination, and social role awareness. Play-based learning should provide continual, developmentally appropriate opportunities since Vygotsky believed that development is a continuous process impacted by social and cultural variables. All things considered, play-based learning is highly supported by Vygotsky's theory as a setting that fosters social and intellectual development via cooperation, cultural engagement, and social interaction (McArdle, 2024).

According to Froebel's Play Theory, which emphasizes the self-expression, social engagement, and sensory exploration, play is essential to children's natural growth. In order to encourage intrinsic motivation and delight in learning, Maria Montessori's method places a strong emphasis on intentional play within a prepared setting. She also encourages autonomy, sensory exploration, and mixed-age groups (McArdle, 2023). Susan Isaacs' perspective highlights the role of educators as facilitators and emphasizes the importance of child-led play as a potent instrument for communication and emotional expression. The stages of play defined by Mildred Parten help teachers understand and organize activities that are appropriate for different age groups. Last but not least, the Reggio Emilia Play Theory by Loris Malaguzzi views children as capable learners and promotes play as a language of communication and inquiry inside a collaborative, emergent curriculum. When taken as a whole, these theories help educators understand the importance of play in promoting holistic development and provide direction for designing dynamic,

captivating learning settings (McArdle, 2023). This comprehensive approach underlines the significance of integrating diverse theoretical perspectives to foster a holistic developmental framework in early childhood education. By acknowledging and incorporating the principles of these foundational theories, educators can create enriched learning experiences that not only support cognitive growth but also nurture emotional, social, and sensory development. Children actively participate in their learning, according to Jean Piaget, a prominent expert in child development and play theory. The preoperational stage (ages 2 to 7) is marked by symbolic play, language use, egocentric thinking, and a lack of concrete logic; the sensorimotor stage (birth to 2 years) is when infants learn through senses and actions and develop object permanence; and the concrete operational stage (ages 7 to 11) is when children develop concrete logical thought and comprehend concepts like conservation, reversibility, and cause-and-effect. Ages 12 and up make up the official operational stage, which is the last stage. Adolescents develop their capacity for abstract thought, hypothetical thinking, and problem-solving at this time (McArdle, 2024).

This multidimensional approach to play-based learning ensures that children are provided with opportunities to explore, express, and engage in ways that are developmentally appropriate and intrinsically motivating, thereby laying a robust foundation for lifelong learning and well-being.

- **The Consequence of Play-Based Learning on Early Numeracy & Literacy Development:** Play incorporates problem-solving, communication, and the development of motor skills. It is widely acknowledged as being essential for early development. This study looks at how parents view and participate in

play-based learning with their three to five-year-old children. Results from 12 parents show differing opinions; some highlight the happiness of play, while others voice concerns about their safety. Improved educational play products and the creation of neighborhood play areas are among the recommendations. The report recommends more extensive research with bigger sample sizes, national parenting education initiatives, and play-based learning facilities specifically designed for young children (Muhammad Shakandar Ali et al., 2019). This study supports broader theories of how active engagement promotes cognitive development by highlighting the possible influence of play-based learning on early learning outcomes. Building on known frameworks for early childhood curriculum development (e.g., National Association for the Education of Young Children [NAEYC] guidelines), future research should examine particular play-based activities and their direct association with quantifiable gains in literacy and numeracy in order to fully realize this promise.

- **Parental Perceptions and Attitudes towards Play-Based Learning:** Play incorporates problem-solving, communication, and the development of motor skills. It is widely acknowledged as being essential for early development. Surprisingly, American parents believe that play—free play, games, and directed play—has a higher learning potential than direct instruction, with free play being the most preferred. Play advocacy and experiences during the COVID-19 epidemic may have contributed to this predilection for child-led pedagogies (Wright et al., 2023). Parents may overlook the benefits of guided play, which research indicates is more beneficial for learning particular concepts, even if they acknowledge the learning benefits of play and typically equate it with unplanned, spontaneous activities. Notably, Black and Hispanic

parents preferred direct instruction, but Hispanic parents preferred guided play less. Higher income and education also correspond with a bigger preference for free play (Wright et al., 2023). Sons' parents were likewise more likely to support organized education. Crucially, parents' perceptions of the educational value of play are positively influenced by their understanding of child development and self-efficacy, underscoring the need for improved communication and culturally sensitive support to help all parents comprehend the many advantages of both unstructured and supervised play (Wright et al., 2023).

In order to assist their children's literacy, parents' views on literacy development are influenced by their personal experiences and beliefs. According to research (Parental Engagement in Early Literacy: A Qualitative Exploration of Practices and Beliefs in Northern Mexico. Psychology in Russia: State of the Art, n.d.), these attitudes affect carers behaviors and the efficacy of interventions, and they are shared by both mothers and fathers. Children's early literacy skills are correlated with parents' attitudes towards writing and reading. Infant literacy development is frequently supported more when parents have higher levels of education and have had favorable reading experiences themselves. On the other hand, parents who have less education might take part in less literacy-promoting activities. Additionally, providers have differing opinions about their involvement in literacy training; some consider it primarily the responsibility of the school, while others see it as a key parental duty. In the end, the home setting is thought to be the fundamental setting for the development of reading. Parents' opinions about their children's aptitudes and mathematical interests, their own attitudes and sentiments towards numeracy, and their general

opinions about how parents and schools should help children learn numeracy are all part of their perspectives of numeracy development. The frequency and complexity of the numeracy support they give their child are influenced by these ideas. According to research, children's numeracy abilities are especially correlated with parents' support of more complex early numeracy ideas. This implies that the frequency and complexity of parental numeracy support are influenced differently by various forms of numeracy beliefs (Mutaf-Yıldız et al., 2021).

This study looks at how parents view and participate in play-based learning with their three to five-year-old children. Results from 12 parents show differing opinions; some highlight the happiness of play, while others voice concerns about their safety. Improved educational play products and the creation of neighborhood play areas are among the recommendations. The report recommends more extensive research with bigger sample sizes, national parenting education initiatives, and play-based learning facilities specifically designed for young children (Muhammad Shakandar Ali et al., 2019). Play incorporates problem-solving, communication, and the development of motor skills. It is widely acknowledged as being essential for early development. This study looks at how parents view and participate in play-based learning with their three to five-year-old children. Results from 12 parents show differing opinions; some highlight the happiness of play, while others voice concerns about their safety. Improved educational play products and the creation of neighborhood play areas are among the recommendations. The report recommends more extensive research with bigger sample sizes, national

parenting education initiatives, and play-based learning facilities specifically designed for young children (Muhammad Shakandar Ali et al., 2019).

- **Sociocultural Influences on Parental Perceptions:** The use of digital technology into play-based learning environments is an issue of great significance in the current early childhood education landscape. Several sociocultural factors, along with educational issues, influence and shape parents' attitudes and viewpoints regarding this integration. Parental mediation is essential as children navigate a world that is becoming more and more reliant on digital tools and media (Children, Basel, 2023). However, social norms, cultural beliefs, and health advice influence and shape parental views on the use of digital technology in early childhood education. Some parents worry about the possible drawbacks of screen time and exposure to digital media, while others acknowledge the potential advantages of digital technologies for literacy development and cognitive growth. Furthermore, the lines separating real-world and virtual play spaces are becoming increasingly hazy as the post-digital era challenges conventional ideas of play and materiality. To effectively integrate digital technology into play-based learning curricula, educators and researchers need to traverse the complicated interaction of parental perspectives and societal factors. In order to create inclusive and responsive learning environments and fully utilize the potential of digital technology for children's holistic development, educators must first understand the complex nature of parental attitudes and the sociocultural contexts in which they emerge (Children, Basel, 2023).
- **Challenges and Barriers to Implementing Play-Based Learning:** A complex network of interrelated components characterizes Bangladesh's educational

system, affecting children's learning outcomes, access to education, and general well-being, especially in light of the difficulties surrounding the COVID-19 pandemic. There are ongoing worries about children aged 7-14 years' core literacy and numeracy skills, despite high rates of attendance and completion in primary school. Concerns about child marriage, child functioning, and the effects of extended school closures on learning loss have also come to light as important topics that need to be addressed. In addition, the shift to online education during the pandemic has brought attention to differences in parents' perceptions of the efficacy of distant schooling as well as access to technology. Policymakers, educators, and other stakeholders must have a thorough understanding of these complex issues in order to develop focused initiatives that will reduce educational disparities and guarantee that all Bangladeshi children have fair access to high-quality education (Survey on Children's Education in Bangladesh 2021 (March 2023) - Survey Findings Report - Bangladesh, 2023). Concerning the rate of mental illnesses in adults in Bangladesh increased to 18.7% in 2019, during the COVID-19 pandemic. In children, the rate decreased slightly to 12.6%, with boys being more impacted. Yet there are several obstacles in the way of mental health care. Annually, the number of psychiatrists graduating is low, services are few, and access is difficult in remote areas. There is only one national mental health institute, and its outpatient clinics are primarily located in urban areas. Inadequate mental health awareness contributes to inadequate care, which is even worse in times of crisis. There is still insufficient access to necessary psychiatric medications, even with programmes like the mhGAP. Rarely are patients referred to experts, and many turn to traditional healers due to superstitious beliefs even though

they are useless for severe diseases, putting patients at danger (Hasan, M. T . et al., 2021). This information highlights the challenges and gaps in mental healthcare delivery in Bangladesh, including limited resources, inadequate infrastructure, and cultural barriers to accessing proper treatment.

- **Outcomes and Benefits of Play-Based Learning:** Play-based learning is an effective strategy that promotes cognitive, social, and emotional development in young children. It is well-known for this effect. In addition to improving social skills and emotional intelligence, it fosters creativity, critical thinking, and problem-solving abilities. Play-based learning gains even more power when parents participate in it; this strengthens the link between parents and children and expands learning chances outside of the classroom. Parents can acquire valuable insights into their child's development and communicate the importance of learning by actively engaging in play activities with their children. Having a designated play area at home, letting children take the lead in play, and smoothly integrating instructional components are all helpful strategies for encouraging parental involvement. Play-based learning is an essential part of the Early Years Foundation Stage curriculum at All Hallows School, promoting holistic development and individualized attention. Accepting the value of play and parental participation fosters children's development and helps them make enduring memories (The Power of Play: Benefits of Play-Based Learning and Parental Engagement | All Hallows School, n.d.).

In conclusion, this literature review highlights the critical influence that parents' opinions have on the effectiveness of play-based learning for the development of reading and numeracy in children between the ages of three and five.

Chapter III (Methodology)

Research Approach/ Design: A qualitative research design was employed in this study, with an emphasis on focus group discussions (FGD) and in-depth interviews (IDIs). Six parents were involved in the IDIs, and each was interviewed separately to gather their opinions on the role of play-based learning on children's numeracy and literacy development. Furthermore, a focus group consisting of an additional six parents explored the difficulties in putting play-based learning into practice. Guidelines were developed to ensure consistent and comprehensive data collection for both IDIs and the FGD.

Research Participants: A total of 12 people participated in the qualitative study, comprising 6 fathers and 6 mothers with children aged 3 to 5. Individual in-depth interviews (IDIs) were conducted with 3 mothers and 3 fathers. Additionally, a focus group discussion (FGD) involved the remaining 3 mothers and 3 fathers. This approach ensured that insights were gathered both individually and collectively, providing a comprehensive understanding of the parents' perspectives on play-based learning and its role on children's literacy and numeracy development.

Research Site: Various area In Chattogram city.

Participant Selection Procedure: The sampling method for this research employed purposive sampling, selecting parents with children aged 3 to 5. Both mothers and fathers participated to capture diverse perspectives, ensuring a comprehensive

understanding of parental views on the play-based learning's role in numeracy and literacy development.

Data Collection Methods: This qualitative study used focus group discussions (FGDs) and in-depth interviews (IDIs) to explore parents' perceptions. The IDIs and FGDs were conducted in-person. The duration of each IDIs was 45-60 minutes and FGD was 1.30 minutes. The research methodology adhered to a tailored set of guidelines with the aim of offering a thorough comprehension of the parents' viewpoints regarding play-based learning and its influence on the development of children's literacy and numeracy skills. Experts examined the guidelines for revisions and comments before they were utilized for IDIs and FGDs. Prior to the interviews, all participants received a detailed explanation about the purpose of the interview and notice that the data would be recorded and used only for academic purposes, adhering to stringent confidentiality and anonymity guidelines. After obtaining consent, appointments were set up, and on the day of the interview, data was gathered through in-person meetings. Introductions were made first, and a casual questioning style was used to build rapport and create a relaxed atmosphere where participants felt free to share their thoughts and experiences. With the participants' consent, data was collected using an audio recording device, and important information was also manually recorded. Finally, there were closing meetings where participants received recognition for their cooperation, time, and input.

Data collection tool: A set of guidelines for focus group discussions (FGDs) and in-depth interviews (IDIs) was utilized to gather comprehensive insights from parents regarding play-based learning and its role in children's literacy and numeracy development.

Data Management and Analysis:

- **Data Transcription and Organization:**

After conducting the interviews and focus group discussions, I had audio recordings and handwritten notes. To make the data usable, i converted these recordings and notes into complete, word-for-word written documents called transcripts. This was done for each individual interview (IDI) and for each focus group discussion (FGD). To keep track of each individual interview, I assigned a serial number to each transcript. This helped me organize and refer to specific interviews easily. Because the interviews and discussions were conducted in Bengali, I translated all the transcripts into English.

- **Data Review:**

After the transcripts were completed, I carefully read through them multiple times. This process of repeated readings allowed me to become deeply familiar with the data and to identify any recurring patterns, ideas, or themes that emerged from the participants' responses.

- **Theme Identification:**

I then took the data from both the individual interviews and the focus group discussions and summarized the key points. Then grouped these summarized points into categories based on common ideas or themes. This allowed me to organize the data in a meaningful way.

- **Capturing Thoughts and Insights:**

Throughout the analysis, I paid close attention to the participants' thoughts, feelings, and insights. I aimed to understand not just what they said, but also

what they meant. This involved considering the context of their responses and looking for underlying meanings.

- **Thematic Content Analysis:**

I used thematic content analysis, which is a method for identifying, analyzing, and reporting patterns (themes) within data. In this step, I looked for connections and relationships between the identified themes, and I interpreted the meaning of these themes in relation to our research questions.

- **Data Presentation:**

Finally, I organized and presented our findings according to the themes and that had identified. This made it easy to see the main ideas that emerged from the data and to understand the participants' perspectives

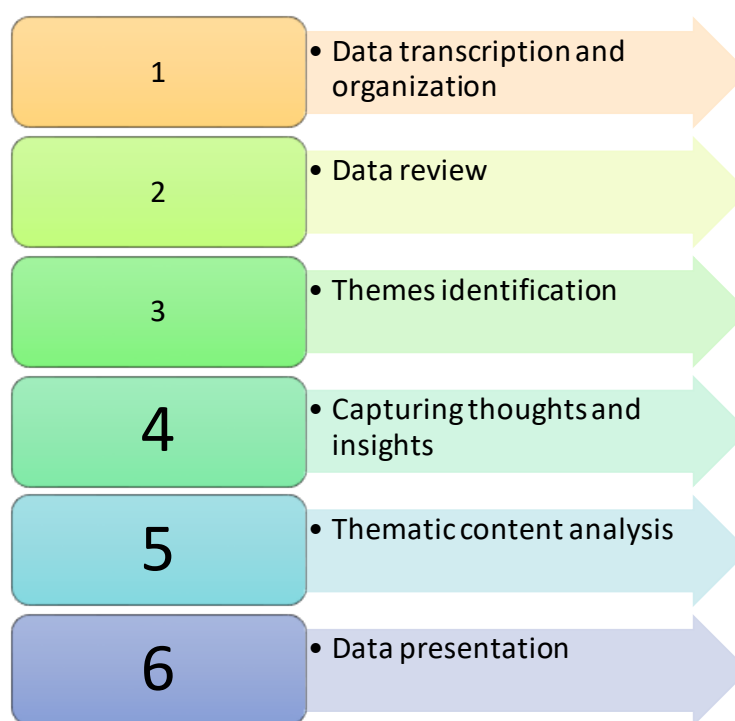


Figure of Thematic content analysis techniques

Validity and Reliability of the Research Tool:

Experts from BRAC Institute of Educational Development (BRAC IED), BRAC University, reviewed the research tool to ensure its validity and reliability. Experts also reviewed the translated versions, strategies, and techniques based on research objectives and questions. Both the in-depth interview (IDI) and focus group discussion (FGD) guidelines were verified. For confirmability and reflexivity, a reflective diary was kept. The study's dependability was maintained by defining the questionnaire clearly and revising it based on expert feedback. Triangulation methods were used to enhance the study's overall validity and reliability.

Ethical Issues: Ethical guidelines guided the conduct of research. Before starting the research, BRAC University's consent was sought first. In order to participate in the IDI and FGD, participants were asked for their oral agreement, during which they were assured that their information would be kept private and used only for research. The study only included participants who voluntarily consented to take part. Participants received all relevant information about the study, including its background, goals, purpose, and the researcher's biography, if required. The desires of those who chose not to participate or answer certain questions were honored. Rather than using their true names, participants were given code numbers or pseudonyms to ensure confidentiality.

Chapter IV (Results/Findings & Discussion)

This section summarizes the results of in-depth interviews (IDIs) and focused group discussions (FGDs) and that were conducted to analyze *"Parents Perception on the role of Play Based Learning in Numeracy and Literacy Development of Children aged 3 to 5."* The data were collected from parents residing in various areas of Chattogram.

Employing a thematic analysis approach, the data were systematically analyzed, leading to the identification of key themes that illuminate the research questions.

Demographic Details of the Participants

To provide context for the findings, a detailed overview of the participants' demographic information is presented below.

In-Depth Interviews (IDIs)

Six participants were recruited for the IDIs, ensuring a balanced representation of parental perspectives. The demographic profile of the IDI participants is presented in

Participant's Name	Age	Date of interview & duration	Educational Qualification	Occupation	Monthly Income (BDT)	Child's Age	Child's Interests	Location
Fardin Hasan (Father)	36	2025-01-02, 1 hour	Bachelor's in Marketing	Marketing Executive	80,000	4	Playing with dolls, coloring, storytelling	Muradpur
Ahmed Kamal Jimi (Father)	43	2025-01-02, 45 mins	Bsc in Engg.	Design Engineer	150,000	5	Building blocks, toy cars, cartoons	Khulshi
Shahraim Shimi (Mother)	33	2025-01-03, 1 hours	Bachelor's in Early Childhood Education	Preschool Teacher	50,000	3	Nursery rhymes, pretend play, outdoor play	2 No. Gate
Shakil Hossen (Father)	40	2025-01-04, 45 mins	Diploma in Computer Technology	IT Technician	65,000	5	Tablets, digital drawing, puzzles	Agrabad

Nubah Pushpa (Mother)	39	2025-11-05, 50 mins	Higher Secondary Certificate (HSC)	Small Business Owner (Tailoring)	90,000	4	Fabric play, dressing up, simple chores	Khulshi
Mohona Mahbub (Mother)	31	2025-01-06, 1 hour	Bachelor's in Agriculture	Agricultural Officer	75,000	3	Garden play, insects, planting	Khulshi

Table 1: Demographic Profile of IDI Participants

Six participants were interviewed, comprising three mothers and three fathers. The participants' ages ranged from 31 to 43 years. Educational qualifications varied, including Bachelor's and Master's degrees, as well as a diploma and HSC. Occupations included marketing executive, bank manager, preschool teacher, IT technician, small business owner, and agricultural officer. Monthly incomes ranged from 50,000 to 150,000 BDT. All participants resided in different areas of Chattogram, including Muradpur, Khulshi, 2 No. Gate, Agrabad. The children's ages were between 3 and 5 years, and their interests spanned a wide range, from creative play to digital engagement and outdoor activities.

Focused Group Discussion (FGD):

Six participants participated in the FGDs, providing a collective perspective on the research topic. The demographic profile of the FGD participants is detailed in Table 2.

Participant's Name	Age	Education Qualification	Occupation	Monthly Income (BDT)	Child's Age	Child's Interests	Location
Roksana Nipu (Mother)	35	MSc	Business woman	200,000-300,000	5	Drawing	Muradpur

Johura Zara (Mother)	34	MSc	School Teacher	20,000 - 30,000	5	Play	Hamjarbag
Najnin Ara (Mother)	38	MSc	Housewife	N/A	4	Play	Oxygen
Shorafot Khan (Father)	36	MBA	Banker	70,000 - 80,000	3	Play	Khulshi
Limon Rahman (Father)	38	BBA	Businessman	90,000 - 100,000	3.5	Mobile/TV	Khulshi
Siam Ahmed (Father)	39	MSc	School Teacher	50,000 - 60,000	5	Dancing, drawing	Pachlais

Table 2: Demographic Profile of FGD Participants

Six participants were involved in the FGDs, comprising three mothers and three fathers. The participants' ages ranged from 34 to 39 years. All participants held MSc or MBA degrees, with occupations including businesswoman, school teacher, housewife, banker, and businessman. Monthly incomes varied significantly, with one participant indicating "N/A" (housewife). The incomes of the other participants ranged from 20,000 to 300,000 BDT. All participants resided in Chattogram, in areas such as Muradpur, Hamjarbag, Oxygen, Khulshi, and Pachlais. The children's ages were between 3 and 5 years, and their interests included drawing, general play, and watching mobile/TV.

All the information gathered from parents has been categorized into seven themes, corresponding to the research questions and interview/FGD guidelines. These are presented below:

Theme 1: Parents' Understanding of Play-Based Learning

Most of the Parents presented a spectrum of understanding regarding play-based learning. Some viewed it as a natural, child-led process, while others saw it as a structured educational approach. One parent described play-based learning as *"a fun and effective way of teaching young children... mainly letting children learn through play"* (02-01-2025_IDI #1). Another parent emphasized the structured nature of this approach, stating, *"Play-based learning is an educational approach in which children acquire knowledge and skills through structured play, facilitating exploration of concepts, problem-solving, and skill development in an engaging context"* (02-01-2025_IDI #2). However, some parents expressed uncertainty about how play translates to "real learning." One FGD participant stated, *"Honestly, I thought it was just kids playing. I'm still not sure how it translates to real learning"* (07-01-2025_FGD #4). Others worried about the effort required to create "learning moments" and the balance between play and structured learning. As one parent noted, *"It's learning through engagement, which I think is great. But I worry about balancing it with structure"* (07-01-2025_FGD #5). Some parents also included digital play in their definition, but expressed worry about quality time.

i. Sub theme: Parents' Perceptions Regarding Numeracy Development:

Some parents defined numeracy development as understanding numbers, counting, basic math, and applying mathematical concepts in everyday life. One parent stated, *"By hearing Numeracy Development I think it would be the process of acquiring and improving how a children can learn and understood numbers, counting and basic math skills. It's about how to use numbers in our daily life and where to implement it"* (02-01-2025_IDI #1). Each of the six In the focus group talks, parents tended to view numeracy development as

including the development of fundamental mathematical skills and their practical application in everyday situations, such as counting, comprehending simple numbers, and their significance in play and daily life. One parent, clearly linked it to *"Numbers, counting, basic math's"* (07-01-2025_FGD 04), emphasizing the fundamental abilities they connect with numeracy. One parent's perception of the fundamental components of numeracy is highlighted in this statement. *"How numbers relate to everyday life"* (07-01-2025_FGD 01) - This highlights the important awareness that numeracy is not merely theoretical but has real-world applications.

ii. Sub theme: Parents' Perceptions Regarding Literacy Development:

Literacy development was defined as learning to read, write, and communicate effectively. One parent explained, *"Literacy development means helping children learn to read, write, and communicate effectively. It is about teaching them the basics of language, like recognizing letters, understanding words, and forming sentences"* (02-01-2025_IDI #1). Another parent said, "Literacy development is the process of learning words, sounds, and language. It's a foundation for communication, socialization, and teach other subjects" (03-01-2025_IDI #3). Almost all six of the parents when asked to define "literacy development," focus group participants typically linked it to the core abilities of writing and reading. For example, one parent said bluntly, *"Reading and writing, obviously"* (07-01-2025_FGD 02). Adding to this, another parent provided a more comprehensive viewpoint, characterizing it as *"Understanding language and communication"* (07-01-2025_FGD 05). It emphasizing that literacy is more than merely decoding and encoding. These preliminary answers

show a basic comprehension of literacy that includes both expressive and receptive language.

Theme 2: Parents' Play-Based Practices for Numeracy and Literacy Development

The findings of this study show that parents use a wide range of play-based strategies, including both scheduled and unstructured activities, to support their children's reading and numeracy development.

i. Sub theme: Parents' activities for Numeracy Development

Nearly In order to help their children develop their numeracy skills, parents reported using a range of play-based activities. *“These activities included employing musical toys” (02-01-2025_IDI #2), “combining blocks and puzzles” (03-01-2025_IDI #3), “sorting toys” (04-01-2025_IDI #4), and “role-playing” a “grocery shop” (02-01-2025_IDI #1).* Participants in focus group discussions also brought up the usage of educational applications, board games, and baking as means of incorporating numeracy into play.

Furthermore, while some parents employ more inventive approaches like forming and counting play dough, one of them said, *“We use play dough to make shapes and count them. It’s fun, but it's hard to keep it engaging” (07-01-2025_FGD 03).* or utilizing the interactive features of educational apps with number puzzles and counting games, others stick to more conventional techniques like singing counting songs and using flashcards like another one said, *“We sing counting songs and use flashcards. He learns some, but gets bored easily” (07-01-2025_FGD 02).* These many strategies show a deliberate attempt to include mathematical ideas into the activities of children.

ii. Sub theme: Parents' activities for Literacy Development

In order to promote literacy development, parents in the study reported actively involving their children in a variety of play-based activities. *“Word searches” (02-01-2025_IDI #1) and “regular bedtime stories” (02-01-2025_IDI #2)* were examples of these shared experiences. *“Activities such as creative arts” (03-01-2025_IDI #3) and “even basic interactive games like peek-a-boo” (04-01-2025_IDI #4)* were mentioned as ways to show creativity. The use of letter tracing, ongoing storytelling, and the integration of interactive app stories into their literacy practices were also emphasized in focus group talks. On the other side, FGD In order to help their children develop their reading and writing abilities, the parents in this study use a variety of play-based activities, frequently incorporating them into their everyday routines. Letter tracing and word games , acting out stories with characters , reading books together and pointing out letters , using magnetic letters , and using interactive stories and letter-matching games on apps such as one of parents said, *“The apps have interactive stories and letter-matching games. They are good, but I limit the time” (07-01-2025_FGD 03)* are some examples of these activities.

Theme 3: Challenges and Obstacles Faced by Parents

For parents attempting to successfully incorporate play-based learning into their children's life, these interrelated barriers of time, inexperience, and navigating the internet world posed significant difficulties.

i. Sub-theme: Time Constraints and Energy Depletion

A common challenge was finding time for play-based activities due to work and other responsibilities. One parent noted, *“Yes, sometimes it’s hard to find*

enough time because of heavy work load of office and other responsibilities” (02-01-2025_IDI #1). The practical difficulty of allocating enough time for play-based learning in the face of work and other family obligations was a major obstacle for many of the parents in this study. Another parent said, *“To be honest, incorporating these deliberate 'learning through play' moments frequently feels like another item on an already overflowing to-do list”* (02-01-2025_IDI #2). The problem of "time constraints and finding the energy" to regularly participate in meaningful play-based activities was a recurrent theme, which was further highlighted in a focus group discussion. FGD participants highlighted challenges such as *“time constraints and finding the energy”* (07-01-2025_FGD #1). The main challenges parents have when attempting to integrate play-based learning are highlighted by these three sub-themes. Parents find it challenging to commit regular time and effort to play because of time limits and energy depletion, which are practical limitations of hectic modern living.

ii. Sub-theme: Feelings of Inexperience and Doubt

Among all parents 5 of them struggled with activity planning, a perceived lack of awareness and training, and a sense of inexperience and ambiguity about the best ways to support learning via play. One parent claimed, *“I can't help but feel inadequate after seeing all these complex ideas online, I frequently wonder if what I'm doing is actually helpful or simply... playing because I don't have any experience in early childhood education”* (02-01-2025_IDI #4). Some parents expressed anxiety that unstructured play might not sufficiently prepare their children for more formal learning contexts, and this lack of perceived expertise contributed to "doubts about the academic value" of their efforts. In

FGD one parent mention, *“doubts about the academic value”* (07-01-2025_FGD #4). Feelings of uncertainty and inexperience highlight the emotional and cognitive hurdles, as parents frequently question their own skills and the value of play in the learning process.

iii. Sub-theme: Navigating the Digital Landscape

Adding another layer of complexity was the pervasive presence of digital media, leading to a constant struggle with *“balancing screen time and traditional play”* (07-01-2025_FGD #5). In a focus group, one parent said, *“It's a never-ending battle. Although some of the applications are instructive, I'm concerned that children may be missing out on the practical, hands-on experiences that play-based learning is meant to provide. They are naturally drawn to tablets and phones. It seems like a never-ending negotiation to find that healthy balance”* (07-01-2025_FGD #3). Navigating the digital environment these sub-theme emphasize how difficult it may be to control children' screen usage while maintaining a healthy balance with more conventional, hands-on play activities. For parents looking to use play as an effective teaching tool, these interrelated challenges pose serious challenges.

Theme 4: Parental Resources, Relationships, and Academic Expectations of Play-Based Learning

In order to comprehend how parents approach play-based learning, it is necessary to look at the academic goals they have for their children as a result of these early experiences, in addition to the tools they use and the relationships they create through play. This theme explores these interrelated aspects.

i. Sub theme: Information and Support Sources for Parents:

Parents frequently used online resources like parenting websites and YouTube. Parents actively sought information and support from a range of sources in their quest to comprehend and apply play-based learning, reflecting the various ways that modern parenting knowledge is learnt and disseminated. With online resources like parenting websites and platforms like YouTube acting as easily accessible knowledge sources, the digital sphere was a popular path for many. One parent stated, *"I usually look for information online, like on parenting websites or YouTube"* (02-01-2025_IDI #1). Another parents noted, *"Oh, of course! Ms. Rachel's YouTube videos are truly revolutionary, in my opinion. Her material focusses on learning via play, and she simplifies tasks in a way that is both easy and interesting for young children. She clearly has a thorough understanding of how small children learn. Her films frequently inspire me to include music, gestures, and enjoyable activities into our everyday routine to aid with skills like letter recognition and counting. She seems to give useful, understandable examples of how play-based learning is implemented"* (03-01-2025_IDI #3). This parent specifically remarked finding Ms. Rachel's toddler learning videos on YouTube particularly useful. This creator's emphasis on play-based learning offered useful suggestions for using songs and gestures to enhance early reading and numeracy abilities, indicating a favorable interaction with particular online learning materials. Some parents received support from teachers, school programs, and community groups. FGD participants also mentioned online forums, parenting blogs, and educational app reviews. This

dependence on the internet was further emphasized by FGD participants who reported using, *“online forums and parenting blogs”* (07-01-2025_FGD #1) to find advice and experiences from other parents, and reading "educational app reviews" to make well-informed decisions about digital learning resources. Some parents received support from teachers, school programs, and community groups. Outside of the digital realm, conventional support sources were also quite important. It was determined that teachers and school programs were important sources of information about child development and pedagogy. Participants indicated that *“Teachers and educational resources”* (07-01-2025_FGD #4) provided a more straightforward and frequently reliable source of direction. Additionally, the value of peer and community support became apparent as parents interacted with other moms and maybe community organizations to share their thoughts and experiences regarding play-based learning. The proactive efforts of parents to manage the challenges of supporting their children's development through play are highlighted by this multifaceted approach to information searching, which frequently combines easily accessible internet resources with more traditional, face-to-face sources of help. Someone said, *“Chatting with other mums at school has been really helpful. We swap tips and it's reassuring to know we're all figuring things out”* (06-01-2025_IDI #6.)

ii. Sub theme: Play-Based Influence on Parent-Child Relationships:

Parents consistently reported that play-based activities strengthened their relationships with their children. One parent noted, *“Playing with my child helps us bond and have fun together. It makes our relationship stronger because we*

spend quality time and learn about each other" (02-01-2025_IDI #1). Another parent said, "Expressing a deeper understanding that was acquired through play. We spend quality time together and get to know one another better, which strengthens our connection. We are aware of one another's preferences. Through play-based activities, we had a great day and experienced adventure. It fosters a strong bond between them" (06-01-2025_IDI #6). This implies that play involved more than simply group activities; it also involved learning about and comprehending one another's interests and personalities. Another original idea surfaced regarding the function of play in promoting social learning in the family. As one parent put it, "Playing with a parent has unique advantages. My child learns how people respond in social situations as he begins to engage with me. One of the best ways to develop a solid bond with my child is to play together. Play makes relationships happier, more vibrant, and more resilient. It can mend hurt, disputes, and resentments" (03-01-2025_IDI #3). In the secure environment of the parent-child bond, play serves as a microcosm of social interaction, educating children about relational dynamics and emotional control. FGD participants implied similar positive impacts through their descriptions of shared activities. Furthermore, one parent who participated in puppet presentations, said "We use puppets to act out stories. Although it takes a lot of time, she finds it enjoyable" (05-01-2025_FGD #5). This demonstrates the parent's readiness to devote time and energy to an activity just for the child's enjoyment, indicating a stronger bond based on putting the child's interests first. In a similar vein, another parent who engaged in "letter games in the bathtub" (07-01-2025_FGD #2) demonstrated how integrating education into daily

activities might also be a special means of establishing a memorable and enjoyable connection with their child.

iii. Sub theme: Parents' opinions of the Enduring Academic Value of Play-Based Learning in Numeracy and Literacy development

This theme clarifies parents' opinions about the long-term effects of early play-based learning on their children's eventual academic paths, especially in the areas of literacy and numeracy. Parents frequently expressed their belief that the fundamental abilities and dispositions developed by play will have major long-term advantages. *“Play-based learning is a very important part of a child’s growth, and I believe it will help my child a lot in their future academic success” (02-01-2025_IDI #1)* is how one parent explicitly articulated this forward-looking viewpoint. This demonstrates a conviction that early play-based learning is not only pleasurable but also an essential investment in their child's academic path. The formation of a favorable attitude towards learning was a crucial component of this view. As one parent explained, *“Children are more eager to try new things when learning feels like play. I think these abilities will help my child succeed academically in the future. They will be more adept at problem-solving, collaboration, and original thought. Because they will view learning as something they love rather than merely something they must do, they will also have a positive attitude towards it” (03-01-2025_IDI #3)*. This implies that parents view play-based learning as a way to foster a lifelong love of learning and intrinsic drive, two qualities thought to be crucial for long-term academic success and engagement. Parents also believed that the development of critical cognitive abilities through play will benefit their children's academic performance. One FGD participant acknowledged the natural potential in play

for the development of these crucial academic competencies and expressed the expectation that play-based learning will “*build critical thinking and problem-solving skills*” (07-01-2025_FGD #4). Another parent agreed, saying that they thought play would help children develop “creativity and imagination” (07-01-2025_IDI #6), which are abilities that are becoming more and more appreciated in a variety of academic fields. Another important long-term advantage was the development of resilience and adaptation. According to one FGD participant, it would “*help them become adaptable and resilient*” (07-01-2025_FGD #5), implying that play's inquisitive and flexible nature could give children the tools they need to successfully handle future academic obstacles. Last but not least, it was believed that play was a crucial component in promoting independent learning habits and future academic autonomy. Given that play's intrinsic self-directed exploration and discovery may foster the independence required for future academic achievement, one parent expressed the hope that play-based learning “*teaches them to learn independently*” (07-01-2025_FGD #3).

Parents in this study essentially saw play-based learning as a fundamental approach that fosters critical skills, positive attitudes, and a love of learning, rather than as a distinct or less rigorous form of early education. They were convinced that this approach would provide a strong and long-lasting foundation for their children's future academic success in reading, numeracy, and other subjects.

Discussion

This study looked into parents' perceptions and practices regarding play-based learning for numeracy and literacy development in children aged 3 to 5. The findings reveal a multifaceted understanding of play-based learning, coupled with practical

implementation challenges and clear aspirations for children's future success. However, the data also implicitly reveals differences in the roles and relationships of fathers and mothers in engaging with play-based learning.

The diverse interpretations of play-based learning among parents, ranging from child-led exploration to structured educational approaches, align with broader discussions about the nature of play in early childhood education. This spectrum highlights the need for clearer definitions and practical guidance for parents. While many parents recognized the intrinsic value of play in fostering learning, a significant portion expressed uncertainty about translating play into tangible academic outcomes. This resonates with debates surrounding the perceived rigor of play-based approaches (My_Sec_Entrance & My_Sec_Entrance, 2024). The struggle to balance "fun" with "learning outcomes" suggests a potential disconnect between idealized concepts and the practical realities of parenting. Notably, the interviews and FGDs primarily reflect mothers' perspectives. While fathers were not explicitly excluded, their voices were less prominent, hinting at potential differences in engagement with play-based learning. Mothers often detailed specific activities and emotional investments, suggesting a more hands-on role in implementing play-based strategies.

Regarding numeracy and literacy development, parents demonstrated a practical understanding, linking these skills to everyday life. The use of everyday activities as learning opportunities supports the importance of contextualized learning (Salminen, 2024). Similarly, the use of storytelling and manipulatives reflects common literacy practices (Kelley, 2022). In line with suggestions in early childhood education literature, parents in this study reported utilizing a variety of play-based activities for reading and numeracy, including role-play, manipulatives, storytelling, and interactive

games (e.g., Whitebread et al., 2012). However, time constraints, parental fatigue, and doubts about effectiveness hindered consistent implementation. This underscores the need for strategies that integrate learning into existing routines and provide parents with tools to assess their children's progress. The anxieties surrounding screen time and the need for balanced "real-world interaction" highlight the ongoing debate about technology's role in early childhood (Brightwheel, 2025). Again, the detailing of daily routines and the emotional labor of balancing screen time and play fell predominantly to mothers, suggesting a potential difference in how fathers and mothers perceive and manage these challenges.

The study revealed significant emotional and practical barriers, including parental anxiety and feelings of inadequacy. This aligns with research on the emotional demands of parenting young children [(PDF) parenting and children's emotional development]. The reliance on online resources underscores the digital age's influence on parenting practices, while the desire for community and professional input highlights the value of formal and informal support networks (UNICEF). The emotional burden of consistency and the feelings of "not doing enough" were predominantly expressed by mothers, indicating potential differences in parental guilt and self-perception.

Parents' heavy dependence on online resources in this study is indicative of the growing importance of digital platforms in providing parenting support and information, which has been noted in recent studies (Rideout & Katz, 2016). The favorable mention of particular producers of instructional content draws attention to the possible impact of internet celebrities on parenting styles. Peer support and traditional sources like teachers are still important, which emphasizes the necessity for a multifaceted approach to parent advice.

Parents consistently emphasized the positive impact of play-based learning on parent-child relationships, reflecting the role of shared activities in fostering bonding (Admin, 2024). The regular reports of improved parent-child bonds as a result of play-based activities are consistent with well-established theories that highlight the emotional and social advantages of play (PLAYLINK and Hughes, B. 2006). Play fosters safe attachment and constructive parent-child relationships by offering chances for bonding, communication, and shared experiences. Their optimism about the long-term academic benefits highlights their aspirations for their children's future. The fundamental ideas of play-based pedagogy (e.g., Piaget, 1962; Vygotsky, 1978) are in line with parents' strong confidence in the long-term academic benefits of play-based learning, which include cultivating a love of learning, improving cognitive abilities, and encouraging adaptation. Their perception of play as a basis for future academic achievement demonstrates an innate understanding of the importance of early play experiences for development. The desire for children to be adaptable in digital learning environments reflects a growing awareness of the importance of digital literacy within education. While both mothers and fathers likely value these outcomes, the data suggest that mothers are more actively involved in the day-to-day implementation and emotional support of play-based learning.

Recommendations:

This study has several recommendations for educators, policymakers, and parents

- **Practical Guidance and Support:** Educators should provide parents with practical, hands-on guidance on implementing play-based learning, including strategies for integrating learning into everyday routines and assessing children's progress.

- **Addressing Parental Anxiety:** Professionals should address parental anxieties and doubts about the effectiveness of play-based learning by providing evidence-based information and reassurance.
- **Balancing Digital and Traditional Play:** Educators and parents should collaborate to develop strategies for balancing digital and traditional play, ensuring that technology enhances rather than replaces real-world interaction.
- **Community and Professional Collaboration:** Schools and community organizations should create opportunities for parents to connect with each other and with professionals, fostering a supportive learning environment.
- **Digital literacy considerations:** Early childhood education systems should consider how to properly integrate digital literacy into their programs.
- **Further Research and Targeted Interventions for Fathers:** The current study, while valuable, primarily reflects mothers' perspectives on play-based learning. There is a noticeable gap in understanding fathers' knowledge, attitudes, and practices regarding this educational approach. Therefore, it is strongly recommended that future research specifically focuses on fathers' experiences, barriers, and potential contributions to play-based learning. Additionally, targeted interventions and educational programs should be developed to address any potential knowledge gaps among fathers and to encourage their active involvement in their children's early numeracy and literacy development through play.

Limitation of the Study:

Practical considerations like focus group scheduling challenges and participant time constraints limited the study's ability to collect data. Furthermore, some parents'

hesitation to go into great detail about their experiences may have had an impact on the depth of information obtained. Last but not least, it is important to keep in mind that the results are based on the particular cultural context of Chattogram, which implies that they could not be directly applicable to groups with diverse cultural origins and parenting styles. The extent and generalizability of the study's findings should be evaluated in light of these limitations.

Conclusion

In conclusion, while parents recognize the value of play-based learning, they face implementation challenges and emotional barriers. The study implicitly reveals potential differences in the roles and experiences of mothers and fathers. By providing practical guidance, addressing anxieties, fostering collaboration, and actively engaging fathers, educators and policymakers can support all parents in creating enriching learning experiences. Adding to this, it is clear that merely recognizing the benefits of play-based learning is not enough. A multifaceted strategy is needed to fully realize its promise for early reading and numeracy development. This calls for the creation and distribution of easily accessible, useful materials that enable parents to include play into everyday schedules. Additionally, addressing parental concerns and misunderstandings regarding the educational rigor of play requires open and sympathetic channels of communication. Children will learn in a consistent and encouraging atmosphere if strong collaborative partnerships are fostered between the home and the school. We can unlock play's full potential by proactively addressing these issues and creating a supportive environment that enables both parents to confidently embrace play as a potent educational tool. This will result in dynamic and enriching early learning experiences that not only develop fundamental literacy and

numeracy skills but also foster a lifelong love of learning, putting young children on the path to long-term academic and personal success.

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Annex 01

Research Tools

In-Depth-Interview (IDI) Guideline

Demographic Information:

Participant's name	
Gender & Age	
Date of interview & duration	
Participant's Educational qualification	
Participant's service	
Monthly Income	
Child's name, age & number	
Child's interests	
Location	

1. How would you describe play-based learning?
2. Do you think play affects children's learning? If yes, why? If no, why?
3. Are there any specific examples where you've seen play positively impact your child's learning? If yes, how it was?
4. What comes to mind when you hear the term "Numeracy Development"? Please explain.
5. Do you believe play-based learning helps your child develop numeracy skills?
If yes, please share specific play activities that have helped your child learn numbers or mathematical concepts?
6. How do you support your child's literacy development?
7. What comes to mind when you hear the term "Literacy Development"? Please explain.

8. Do you believe play-based learning helps your child develop literacy skills? If yes, please share specific play activities that have helped your child's literacy development?
9. How do you support your child's literacy development?
10. What activities do you use to support your child's reading and writing skills?
11. Are there any obstacles or difficulties you face in ensuring play-based activities that support your child's numeracy and literacy development? If yes, what are those? Please elaborate.
12. Where do you usually seek information or advice about play-based learning for your child's development?
13. Have you received any formal training on play-based learning methods, and if yes, how has it influenced?
14. Do you receive support or guidance from your child's school, teachers, or community programs regarding play-based learning? If yes, please explain.
15. How do you think engaging in play-based activities with your child affects your relationship?
16. How do you envision play-based learning contributing to your child's future academic success?

Focus Group Discussion (FGD) Guideline

Target Group: Parents of children age (3 to 5)

FGD Date:

Start Time:

End Time:

Demographic Information:

Participant's name	Gender & age	Education al qualification	Professi on	Monthl y Incom e	Child's name, age & number	Child's interests	Locatio n
1	-----	-----	-----	-----	-----	-----	-----

1. How would you describe play-based learning?
2. Can you share examples of how playing has helped your child learn?
3. What do you think of when you hear "numeracy development"?
4. Can you give examples of play activities that you believe have helped your child learn numbers or mathematical concepts?
5. How do you support your child's numeracy development through play?
6. What do you think of when you hear "literacy development"?
7. What play activities do you use to support your child's reading and writing skills?
8. How do you support your child's literacy development through play?
9. Are there any challenges you face in making sure play-based activities help with numeracy and literacy development?
10. Where do you usually get information or advice about play-based learning for your child?
11. How do you think play-based learning will help your child succeed academically in the future?

Annex 2

(Consent form)

Title of the Thesis Proposal: Parents Perception on the Role of Play Based Learning in Numeracy and Literacy Development of Children aged 3 to 5.

Researcher: Anika Shama

Purpose of the research

I am conducting this research as a part of my Master's Degree requirement from the Institute of Educational Development (IED) - BRAC University. The aim of this research is to explore Parental perceptions regarding Play Based Learning on the role of Numeracy and Literacy Development of Children.

Expectations from you

If you agree, you will be asked to discuss how you believe play-based learning influences children's development of literacy and numeracy from the ages of three to five. The purpose of this study is to comprehend the variables, sociocultural settings, and barriers influencing parents' perceptions of play-based learning. The goal of the research is to improve early childhood education practices for better educational outcomes and holistic development by investigating these elements.

Risks and benefits

There is no risk to you for participating in this study; directly or indirectly parents, children, Policy makers may be benefited in the future.

Privacy, anonymity and confidentiality

All information collected from you will remain strictly confidential. I would be happy to answer. Any of your queries about the study and you are welcome to contact me.

Future use of information

Some of the information collected from this study may be kept for future use.

However, in such Cases information and data supplied to other researchers, will not conflict with or violate the. Maintenance of privacy, anonymity and confidentiality of information identifying participants in any way.

Right not to participate and withdraw

Your participation in the study is voluntary, and you are the sole authority to decide for and against your participation in this study. Refusal to take part in the study will involve no penalty. If you agree to my proposal of participating in my study, please indicate that by putting your

Signature in the specified space below-

Name of the Parents:

Name of the Researcher:

Signature of the Parents:

Signature of the Researcher:

Thank you very much for your cooperation. For any further query, you may contact me. My Contact no is 01832062733, or you can email at

anika14shama.akif@gmail.com