

**The Implementation of Play-Based Pedagogical Strategies in Early Childhood
Education Curriculum in Primary Schools in Ethiopia**

By

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submitted in Accordance with the Requirements f

or the Degree of

DOCTOR OF PHILOSOPHY

in the Subject

Education

at the

UNIVERSITY OF SOUTH AFRICA

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JULY, 2024

Declaration

I declare that “The implementation of play-based pedagogical strategies in early childhood education curriculum in selected primary schools in Ethiopia” is my own original work in both design and execution, and that all sources that I have used or quoted have been indicated and duly acknowledged by means of complete referencing.

Signature:  Date 17 September 2024

Mr. Solomon Wolde

ACKNOWLEDGEMENT

Research is conducted with the support of several stakeholders. Therefore, I must thank many participants in this study for their valuable contribution, advice, devotion of time, tolerance, understanding, support, friendship and willingness.

In particular, I would like to thank my Almighty God for carrying me all the way and giving me the strength from the conception to the end of this study.

I am very grateful to my advisor, Professor Tebogo Mogashoa, for his generous advice, professional guidance, and kind support throughout the research process. His insight and contribution is a milestone to realize this dissertation from the starting to the present status. I thank him for his encouragement and constructive assistance to keep me on track throughout the research. Without his kind support, it would have been impossible to reach this stage.

Then, my special thanks go to my wife Dr. Tigist Kebede, my daughter Maedot, and my son Henos Solomon for their unwavering love and support. Their encouragement and understanding have been a constant source of strength for me throughout this journey. In addition, I thank my colleague Dr. Girma Moti for his proofreading and meticulous attention to detail and dedication to ensuring the accuracy and clarity of this dissertation. Similarly, I thank Dr. Alemayehu Esayas for proofreading and constructive comments for the success of this dissertation. It is persuasive to thank the Sidama National Regional State Education Bureau for their prompt reactions in granting permission to carry out the study. I also thank all primary data sources for their insightful feedback during both the pilot and major studies. I am truly grateful for the support and guidance I have received from all mentioned above. I could not have completed this dissertation without their support. My heartfelt thanks to all.

DEDICATION

I dedicate this dissertation to my beloved wife, Dr. Tigist Kebede, whose steadfast love, patience, and support have been the cornerstone of my success. Your inspiration, empathy, and understanding have been my beacon of hope and guiding light during this challenging journey.

My precious daughter, Maedot Solomon, and son, Henos Solomon, you have served as my source of inspiration and motivation to pursue excellence in everything I do. I feel joy and purpose in my life because of you.

Dear mother Emahoy Belaynesh Yilma and Sister Mulunesh Wolde, I have found strength and encouragement from your unending love, sacrifice, and wise words. Your unwavering support has been a constant reminder of the importance of family and the power of love.

I dedicate this dissertation, with sincere thanks and admiration, to each of you. I am grateful for your support and guidance. Thank you for being my rock and my guide!

Abstract

This study aimed at investigating the practice of implementing play-based pedagogical strategies in the ECE curriculum in Ethiopia. Five basic research questions related to play-based pedagogy practices in pre-school were used for the study. The study used a descriptive survey design with a mixed convergent parallel research approach. The study was carried out in nine woredas (districts) and two city administrations of Sidama National Regional State. A total of 48 pre-primary schools, 24 public and 24 private, and 388 participants were selected as a study sample using simple random sampling techniques. The instruments used to collect quantitative and qualitative data were questionnaire, interview, and observation checklist. Interview was conducted with ten pre-primary school coordinators and two regional education experts. The data obtained through the questionnaires was then analysed using percentage, mean value, p-value, and logistic regression. Interview data was qualitatively analysed. The findings of the study indicated that a large number of pre-primary school teachers did not value play-based learning as a mediating pedagogy for indoor and outdoor activities. This lack of emphasis on play-based learning was attributed to misconceptions and lack of awareness about effective pedagogical practices. As a result, the traditional teaching methods were prevalent, prohibiting the implementation of play-based pedagogy in early childhood education. Most public and some private school teachers did not use indoor and outdoor facilities in their respective schools. In most public and some private schools, buildings, classrooms, chairs, and tables are below the standard. Respondents from most of the public and private schools affirmed that the play equipment in their respective schools is inadequate and inappropriate. The challenge identified in the implementation of play-based pedagogy was scarcity of learning materials, narrow classrooms, lacks of chairs, tables, books, and other play in most public schools. The ECE principles and guidelines were not implemented according to the national and regional guidelines. It was concluded that play-based pedagogy lacks proper implementation in the study area. To overcome the challenges identified, pre-primary school teachers must be trained with appropriate teaching model that can enhance their awareness to implement play-based pedagogy in the instructional process. The concerned body must provide the necessary resources by allocating adequate budgets to pre-primary schools. Pre-primary schools have to use the national guidelines and principles of early childhood education to examine the practice of children's playful learning to reach their Zone of proximal development.

Keywords: play, early childhood education, curriculum, play-based pedagogy, implementation

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LIST OF ACRONYMS

DF	Degree of Freedom
EC I and II	Experts of Curriculum 1 and 2
CSA	Central Statistics Agency
ECE	Early Childhood Education
ESC	Ministry of Education Strategy Center
ESDP	Educational Sector Development Program
GER	General Enrollment Rate
MD	The mean difference
MoE	Ministry of Education
MoFDPT	Ministry Of Federal Education and Professional Training
MoWCD	Ministry of Women and Child Development
P I - X	Principal 1-10
PTA	Parent Teacher Association
SEM	The Standard Error of the Mean
SD	Standard Deviation
SNNPR	Southern Nations, Nationalities, and Peoples' Region
Sup I and II	Supervisor 1 and 2
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nation International Children's Emergency Fund
UNISA	University of South Africa

CHAPTER ONE

1. AN OVERVIEW OF THE STUDY

1.1 INTRODUCTION

This chapter presents the background of the study. It discusses the significance of play in early childhood development and the importance of play-based pedagogy in helping children develop their physical, mental, social, and emotional well-being. It also discusses the significance of the study in terms of explaining the current practices of early childhood education (ECE) program implementation and providing information to the different stakeholders.

1.1 Background of the study

Early childhood education (ECE) contributes to the all-rounded development of children and consequently serves as a building block for modern human society. In addition, it offers the children the chance to reach their fullest potential and lays fundamental foundation for their future education and entire life development. Children in their early childhood age are in a state of rapid physical and mental changes and development. Their age-related developmental processes influence them. Early childhood (from birth to age six) is considered a very critical time for their cognitive, psychomotor, personality, and social development (Addisu and Wudu, 2019). Thus, very young children need serious attention, strong follow up and care so as to bring about all-rounded development and changes through careful designing of their learning experiences.

In most African countries, ECE starts at home where parents share their experiences, traditions, cultural and social values that have been learned, experienced, and accumulated through their life paths. The indigenous knowledge of their ancestors is mainly transferred and received from one generation to the other through folklore and oral literature, the only ways of transferring knowledge for children for many years before models of foreign curriculum and teaching methodologies were imported. Curriculum-based early childhood education is not yet accessible for most African nations. The traditional African ECE is based on organizational rationality orientation which helps to transfer cultural heritage from one generation to another. Parents teach their children about moral values, participative skills, social values, economic and cultural skills, and ways of the world (Onuora-Oguno, 2019).

In Ethiopia, as is the case in other African countries, children start learning the indigenous education at home. Such education is used mainly for transferring the cultural heritage of the society to their children. To this effect, children should learn the values, norms, beliefs, ideals, taboos in the culture of the social group to which they belong to prepare themselves for their future life and their responsibilities in society. Modern ECE was first introduced in the town of Dire Dawa in 1908 by the French railway workers [Aregash, 2005 as cited in Tolossa (2019)]. Ethiopia has given official recognition to ECE by including it as one of the main components in its national education and training policy produced in 1994. The design of ECE was to bring all-rounded development to children that can subsequently prepare them for formal schooling.

In Ethiopia, ECE has been given significant consideration due to its perceived key role in improving the quality of child education and reducing school dropouts and class repetition. As

stated in the national education and training policy, early childhood Education Policy Framework (MoE, 2010b), agreement was signed between the Ministry of Education, Ministry of Health, and Ministry of Women, Children and Youth Affairs to enhance children's access to ECE. The signing of the agreement is considered a remarkable achievement in the history of ECE in the country that aimed at bringing significant change in the stated issue. Moreover, the Ethiopian government has developed National Policy Framework for early childhood education which emphasizes the advantage of learning at early age and which helps to acquire knowledge, change attitudes and develop skills in a short time with less endeavor (G/Egziabher, 2014). The policy framework also contributes to the expansion of pre-primary schools in different modalities which are stated in MoE (2020a) as:

1. **Kindergarten:** lasts three years, mainly operated by non-governmental, religious-based, and private institutions. This modality adequately prepares children for primary education in a better way.
2. **Child to child:** a one-year education program provided by the supervision of a qualified teacher through older children who play with their younger siblings or other children in the community to teach basic skills such as counting, differentiating colors, and identifying letters before joining the primary school.
3. **'O' class:** is a one-year duration program which is found only in public schools. The children whose age is six can join the school before they start primary school. The introduction of this class has brought remarkable change in increasing the pre-primary school enrollment rate (Ministry of Education Strategy Center (ESC), 2018).

All the above-mentioned pre-primary programs have played a significant role in incrementing the enrollment rate of pre-primary education in the country. They also serve as a reception year

prior to Grade 1 and contribute enormously in raising awareness and interest of the community for the program at large (MoE, 2017).

Table 1. 1Pre-Primary Gross Enrollment Ratio

ESDP V Indicator	2013/14	2019/20	2019/20
	Baseline	Target	Actual
Pre-primary GER female	33	80	44.1
Pre-primary GER male	35	80	46.6
GPI in Pre-primary (index)	0.95	1.00	0.95

Source MoE, Education Statistics Annual Abstract September 2019-March 2020

As shown in Table 1:1, the gross enrollment ratio of pre-primary school for both girls and boys was 44.1% and 46.6% in 2019/2020 academic year, respectively. The gross enrollment ratio shows that the general level of children participation in pre-primary education is 95%, irrespective of whether the children are of the correct school age or not (MoE, 2020a).

In collaboration with the United Nations Children’s Fund (UNICEF), the Ministry of Education has also introduced O-class, which is a one-year program that is given at each public school for children of age six before they get enrolled into primary schools. O-class was introduced in Ethiopia in 2011/2012 academic calendar as a new initiative to provide educational access to children who did not get the opportunity to attend a three-year kindergarten program. The introduction of O-class for very young children has remarkably increased the pre-primary school enrollment rate. It has also played a significant role in raising public awareness and interest in the program (Ministry of Education Strategy Center (ESC), 2018).

Age-appropriate curriculum in integrated play-based pedagogical strategies for very young children is crucial since it determines their future. When children have the opportunity to develop their cognitive capacity, it makes **lifetime learning** possible and helps them replicate similar or even better opportunities when they grow up (Molla Bekalu, 2019). This indicates that an age-based curriculum and appropriate practice is quite vital for ECE. Thus, the implementation of play-based pedagogical strategies in the ECE curriculum has paramount importance in enhancing students' learning and improving the quality of the teaching-learning process. Moreover, it is also helpful in promoting the development of children's cognitive and social skills. Play-based pedagogical strategies are vehicles for both the facilitators and the children to transfer information and construct the lesson's knowledge easily. Thus, they benefit children in different ways like cognitive, physical, social, and emotional developments (Zosh et al., 2017). Moreover, learning through play helps children stay well and increases their participation in their actual classroom lessons. So, through play, children boost their creativity, critical thinking, and imagination for their future and the country. Research findings show that play-based pedagogical strategies have positive effect on children's academic success (Zosh et al., 2017). To mention some of the contributions:

- a) **Play facilitates holistic development:** play is not only helpful in the cognitive and academic process of building knowledge and acquiring skills, but it is also helpful in the physical, social, linguistic, emotional, and creative development of children. Thus, play permits children to learn different skills in an integrated way by exposing them to multiple domains of learning simultaneously.
- b) **Play is a natural way of learning:** play and learning are two sides of one coin that cannot be separated when teaching children. They naturally engage children in playful

learning activities. Play is a means for children to engage actively in learning about their surroundings and interacting with them. Moreover, in play children develop essential abilities which allow them to continue learning in their entire life.

c) **Play provides opportunities for children to actively explore and interact with other**

children, adults, and the environment: this is related to cognitive and social constructivist learning theories. The theory states that children construct knowledge through their active interactions. That is why learning is called a collaborative process.

d) **Play increases well-being and involvement:** play is a natural activity that gives children different opportunities to learn and understand their lessons. It also gives a chance to them to select what, with whom, and how to play. Children's play preference stimulates their active motivation to enhance their well-being because play is naturally a joyful activity. For children playing in a safe environment gives them an outstanding skill that is very crucial to solve future challenging situations.

The notion mentioned above implies that early childhood education is planned to enhance children's mental and physical development and social relations. Play-based pedagogical strategy has a significant role in providing education related to age-appropriate curriculum to bring development. Thus, children can learn their education formally and informally in school.

The main objective of early childhood education is to implement a standard curriculum that can address the all-rounded development of a child. This idea is also strengthened by MoE (2009) that early childhood education focuses on the overall development of children enhancing their interest to learn and helping them make sense of the world and prepare them for an entire life both in and out of school. To benefit children with educational experiences, early childhood

education curriculum has to be age-appropriate and integrated with play-based pedagogy. The teachers also need to know how children grow and develop together with expectations consistent with growth patterns. The above idea implies that a play-based pedagogical strategy is vital for preschool education to teach children better.

Therefore, the role of play is crucial in the lives of children starting from early childhood to their later age. Teaching through play-based pedagogical strategies is vital to maintain the quality of education in the instructional process. It is also helpful to children to build knowledge and construct skills to be taught in the classroom situation which are vital in their future life (Zosh et al., 2017). The earlier idea indicates that play-based pedagogy is a base for children in their entire education lifetime. Therefore, play is significant in implementing the ECE curriculum at pre-primary school. Based on the present literature, the study investigated the implementation of play-based pedagogical strategies in the early childhood education curriculum in Ethiopia.

1.2 Significance of the study

The study assessed the implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopian preschools. In other words, the study provides information to policymakers on the existing gaps in the implementation of play-based pedagogical strategies in the ECE curriculum. In particular, it provides insightful information about the current practices of ECE program implementation to the Regional Education Bureau, Zonal and *Woreda* education offices to train untrained teacher and fulfill the required material for play-based learning. Pre-primary schools principals work on assisting facilitators to implement play-

based pedagogy. The results encourage early childhood education facilitators, principals, supervisors, and teacher training institutions to understand the problems and design a remedial intervention to improve the existing drawbacks. The results of the study inform stakeholders and parents about their role in early childhood education in the teaching and learning process. Besides, it serves as a source of information for further research on related and similar issues.

1.3 Problem statement and research questions

The 1994 Education and Training Policy of Ethiopia suggest early childhood education that focuses on the all-rounded development of children as part of the preparation of formal schooling. Preschool education program in which children could stay up to three years supports children to join formal education at primary school (MoE, 1994). In this program, children aged between four to six years are offered fun-like education that enables them to express their feelings, appreciate beauty, and learn to distinguish and form letters and numbers (Tadesse, 2015). Education at this level creates a foundation for formal education that leads learners to concrete learning. As the scholars and curriculum advisors suggest, age-related curriculum with play-based pedagogical strategies facilitates the holistic development of the child including cognitive, socio-emotional, physical as well as social life skills (Ministry of Education Strategy Center (ESC), 2018).

In the past, ECE in Ethiopia was not compulsory and no budget was allotted by the government for it. However, after the introduction of the education sector development program (MoE, 2015a), ECE has been prioritized by the government with the establishment of a national steering committee that provided access to O-class as a reception year prior to Grade one (MoE, 2015b). According to MoE (2015a), the government has given priority to ECE with the intention to

provide all children access to preschool education. The national policy framework states that preschool education should be provided to children of age 4 - 6 throughout the country (Tassew, Rossiter, Belay, and Tirussew, 2018). The policy framework demonstrates how much attention has been given by the Ethiopian government to the implementation of ECE.

Different studies have shown that the quality of education in Ethiopia from preschool to tertiary level is not as expected. The education quality problems emanate from poorly designed curricula, their implementation, and improper instructional provision (Daniel, 2019). Few studies also indicated that there are problems of age-appropriate curricula and their implementation, teaching methods, and lack of assessment techniques which happen due to lack of ECE professionals, low participation of stakeholders, and support (Molla, 2019).

As the Ethiopian education development roadmap affirmed, ECE is still full of problems that arise from governance, curriculum, teachers' training, and qualification, school location, facilities, and lack of allocated budget (Ministry of Education Strategy Center (ESC), 2018). The Ethiopian education development roadmap findings also indicated a gap in the implementation of play-based pedagogical strategies in the ECE curriculum in the country.

Therefore, the intention of this study was investigating the existing practices of the implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia. Accordingly, the main guiding research question of the study was "How can play-based pedagogical strategies are implemented in the ECE curriculum in Ethiopia?" The

Sub questions of the study were:

1. How do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
2. What are the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
3. Why do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia implemented in particular ways?
 - i. What are the available facilities in the Ethiopian pre-primary schools to implement play-based pedagogical strategies in the ECE curriculum?
 - ii. What are the challenges in implementing play-based pedagogical strategies in the ECE curriculum in Ethiopia?
 - iii. How are the principles and guidelines of ECE utilized in the Ethiopian primary school context?

1.4 Aim and objectives of the study

1.4.1 Research Aim

The aim of this study was to investigate the implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia.

1.4.2 Research objectives

In order to achieve the intended aim, the study set specific objectives. The specific objectives of the study were to:

- ❖ Scrutinize the awareness of teachers on the values of play in the implementation of the ECE curriculum.
- ❖ Identify the strategies teachers use to implement play-based pedagogical strategies in the implementation of the ECE curriculum.

- ❖ Assess the existing facilities in school to help practice play-based pedagogical strategies.
- ❖ Find out the challenges of play-based pedagogical strategies in the implementation of the ECE curriculum.
- ❖ Assess the implementation of ECE principles and guidelines in Ethiopian primary schools.

1.5 Clarification of pertinent concepts

This part defines the key concepts in this study so as to clarify the way they are used. Below are clarifications of the key concepts that are identified in this study:

1.5.1. Play

Play is the children's way of expressing themselves in their context, with their own culture, family, and community where they were born and grown-up. While playing, they are also trying to solve a problem they have met, exploring, and experiencing something new or an idea that interests, concerns, scares, or excites them can express through their playtime. They are also using a play to express and communicate their feelings related to their experiences (Smidt, 2011 p.2). In this study, it is a natural activity of children in the school compound, mainly in their learning classroom, which is denoted as a learning means which comprises free and adult-guided play.

1.5.2 Early childhood education

Early childhood education is an education that is provided for the children by child care service givers from birth through age 8 (Bredekamp, 2017, p. 539). In this study, it is an educational service which is provided to children between ages 4 to 6.

1.5.3 Play-based pedagogy

Play-based pedagogy refers to an approach that is provided to the children through learning with meaning which is embedded by play experiences (Nugent, 2017, p.24). This study focuses on the teacher who facilitates the learning process and provides a play-based experience to students.

1.5.4 Implementation

Implementation is the process of putting an idea into practice, the officially set off the subject or set of activities and structures which help the learner acquire knowledge or experience (Chaudhary, 2015). In this study, implementation is the process of putting the planned curriculum into action in the actual classroom in order to bring a positive behavioral change to students.

1.5.5 Curriculum

A **curriculum** is a written plan that describes the goals of children's learning and development, the learning experiences, materials, and teaching strategies used to help children achieve those goals. The goals include the knowledge, skills, and dispositions that we want children to achieve (Bredekamp, 2011, cited in (File et al., 2012, p. 94). In this study, the curriculum is a written document implemented at school by the teachers to achieve the intended learning outcomes in the teaching-learning process.

1.6. Delimitation of the study

The spread of ECE in primary schools has been increasing all over the country to provide educational access to children in governmental schools and probably to make profit in private schools. The study investigates the implementation of play-based pedagogical strategies in the ECE curriculum in primary governmental and private schools in the Sidama National Regional State, Ethiopia. The scope of the study was limited to showing age-appropriate curriculum practices in the region and showing how education could provide to solve these problems by implementing ECE in the school. The magnitude of the implementation of play-based pedagogical strategies in the ECE curriculum was the focus of the study. The research used data the ECE curriculum as a primary source for the implementation of play-based education. Thus, the study involved preschool facilitators, experts, principals, supervisors, and parents, and used curriculum materials and documents as a primary source. It was limited to the Sidama National Regional State in Ethiopia.

1.7. Possible limitation of the study

Most research works cannot be free from limitations (Getnet, 2016). In this study, there were some limitations due to time and financial constraints. As a result, one of the challenges was not including all schools in the study area. Besides, accessing all study respondents was a limitation of the study. The other challenge that the researcher encountered during data collection was negligence of some respondent to fill the questionnaire and return on time. Besides some of the study respondents were also not willing to be recorded during interview that forced the researcher to take note. This constraint used much time of the researcher's during data collection period.

1.8. Chapter division

The study is divided into six chapters, discussed as follows:

Chapter one: Introduction

Chapter one covers the introduction and describes the context of the study. It presents an overview of the study in terms of its background, significance, problem statement, aim and objective of the study, and research questions. Moreover, it deals with the clarification of pertinent concepts, limitations, and delimitations of the study.

Chapter two Theoretical frameworks

This Chapter two outlines the theoretical and conceptual frameworks of the study that are expected to guide the researcher to arrive at solid conclusions about the implementation of play-based pedagogical strategies in the early education curriculum.

Chapter three Literature review

Chapter three presents literature on relevant and related concepts, the strategies teachers use to implement play-based pedagogy in the early childhood curriculum. Challenges of play-based pedagogy implementation in pre-primary schools were discussed.

Chapter four research design and methodology

The focus of chapter four is describing the research design and methodology employed in investigating the aims and the research questions of the study in detail. It presents the reasons for choosing an adapted design, sample and data collection methods, and analysis and interpretation of data. Measures taken to ensure trustworthiness and maintain ethics in the study are also presented.

Chapter Five presentation, discussion interpretation and analysis of research findings

In chapter five the data of the study are presented, analyzed, interpreted and discussed based on the research questions and the literatures reviewed.

Chapter Six Summary, Conclusions and Recommendations

The focus of chapter six is presenting the summary of the study, conclusions of the findings, and recommendations.

CHAPTER TWO

2. THEORETICAL AND CONCEPTUAL FRAMEWORKS

2.1 INTRODUCTION

The theoretical and conceptual framework section outlines the foundational theories and concepts that support the research investigation. It offers a lens through which the study questions will be investigated and interpreted, founding a context for understanding the importance of the study result. The theoretical framework synthesizes relevant literature and identifies key theories that inform the study's design, methodology, and analysis. The conceptual framework reflects the researcher's perspective on how the research problem is defined and investigated, emphasizing the significance of the reason for the selected topic and the suitability and thoroughness of the proposed methods (Ravitch and Riggan, 2017).

The theoretical foundations of play-based pedagogical strategies are rooted in a number of educational philosophies that highlight the importance of play as an essential part of learning and development. Understanding these theories offers valuable perspective on how to integrate play into educational practices, fostering holistic development in children. Some of the key theories that support play-based pedagogy are constructive, socio-developmental theory, and sociocultural theories. Constructivist theory is based on Piaget's theory of cognitive development, which emphasizes play is important to children to acquire ideas through active engagement and interaction with their environment and construct their own knowledge through exploration. Sociocultural theory is based on Vygotsky theory, which stresses social interaction and play as sources for accelerated learning through zone-of proximal development (Taylor and Boyer, 2020). Froebel promoted that play is an essential element for children's intellectual,

emotional, and physical development. Montessori added to the theory of Froebel when she advocated a play-based learning approach where she brought a hands-off approach to play. The above theories imply that children can learn when they are involved in uninterrupted play (Lunga et al., 2019)

In summary, the theoretical foundations of play-based pedagogy come from constructivism, sociocultural theory, and developmental psychology, as articulated by famous theorists including Piaget, Vygotsky, Froebel, and Montessori. These theories collectively assert that play is a crucial medium through which children learn, develop, and make sense of their world, ultimately guiding educators in constructing enriching learning settings that value play as a major component of education.

Thus this chapter deals with the theoretical and conceptual frameworks of the study. The theoretical framework describes the theories that are relevant to the study. The conceptual framework refers to the relationship between the variables addressed in the study. According to Crawford (2020) conceptual framework deals with the general structure of the study, and the theoretical framework clarifies the relationship that the study can investigate in the study.

2.2 Theoretical and Conceptual Frameworks

2.2.1 The concept of early child education

Early childhood education is the starting point for the child's future academic performance and a stepping stone for the child's entire life. Early childhood education (ECE) provides the crucial

foundation for learning. It helps children develop cognitive and non-cognitive skills such as thriving and minimizing the probability of being infected by diseases and illnesses. It also helps develop cognitive, emotional, language, social, and thinking skills essential for their all-rounded future success (Stephanie Wall, 2015). It implies that early plan of childhood education program is to enhance children's mental, physical, and social relations. Early childhood education plays a significant role in providing education related to age-appropriate curriculum in a play-based pedagogy to develop the skills mentioned above. Thus, children can learn their education both formally and informally in the school compound.

The main objective of early childhood education is to design and implement a standard curriculum that can address the all-rounded personality development of the child. Early childhood education focuses on the holistic development of children enhancing their interest to learn and helping them to make sense of the world around them, and helping them to prepare for their future academic life both in and out of school (MoE, 2009). For children to benefit from educational experiences, the early childhood education curriculum has to integrate with play-based pedagogical strategies in implementing the early childhood education curriculum. Teachers should know how children grow and develop together with expectations consistent with their growth patterns.

2.2.2 Theories of early childhood education

Theories of early childhood education has to be linked with the use of appropriate age-appropriate curriculum development and implementation, including play-based pedagogy that provides the theoretical bases for understanding the nature of early childhood education

curriculum implementation. The curriculum is a starting point to transfer information, establish attitude and develop practical skills for students at school by using appropriate pedagogy, teaching material, proper assessment techniques, and suitable learning environment that inspires children to feel safe and free to explore to learn. Thus, it is required for educators to design a curriculum that is age-appropriate for the early childhood education program. The curriculum has to integrate with play-based pedagogical strategies that demand a variety of balanced activities for children to realize the intended learning outcome. (Katz and Chard, 1999 as cited in Tolossa, (2019). That can bring the all-round development of children with accessible play-based pedagogy.

Play-based pedagogical strategies construct their learning as play can provide them free chance to test and operate on their interest, with the direction and motivation given by facilitators when appropriate. Consequently, formal instruction could be a destitute choice of strategy *for most preschool and primary youngsters. In its place, children should be allowed to be researchers. That means they ought to be permitted to watch, classify, hypothesize, anticipate, test, compute, and communicate the outcomes of their discoveries. When they experience the learning environment on their terms and are accordingly involved in sciencing, they can be directed towards several thinking skills that adult researchers utilize.* Children, of course, will utilize these practices at a level convenient to their age and development (Slentz, 2001). Other researches reinforced this idea as an appropriate curriculum provides activities that include opportunities for children to learn by observing and experimenting with natural objects; facilitate conditions to each child to use innate abilities in all areas of development; balance of child-and teacher-initiated activities; group projects in which cooperation can occur naturally; a range of

activities requiring the use of large and small muscles; exposure to good literature and music of children's own cultures and of other cultures represented in the class (Tolossa, 2019).

Consequently, a good curriculum assists early childhood education facilitators identify essential concepts and skills and effective methods for fostering children's learning and development. When adequate awareness is created for the facilitators regarding knowledge of individual children and well-articulated curriculum guides, they can provide knowledge and skill to the children with experiences that foster growth across a broad range of developmental and content areas. A curriculum also helps ensure that the facilitator intentionally plans a daily schedule that maximizes children's learning through effective use of time and learning materials. These enhance children's interest in play, self-initiated learning, and creative expression and offer opportunities to them to learn individually and in groups according to their developmental needs and interests by creating a good classroom (physical) and social environment (Whiren, 2014). It implies that a well-designed curriculum helps facilitators to deliver appropriate lessons to the level they teach.

This study intends to investigate the practices of play-based pedagogical strategies implementation of early childhood education curriculum. The early childhood education curriculum has to integrate play-based pedagogical strategies with learning instruction. The goal of play-based pedagogy is to encourage students to think about play in pedagogical terms in implementing early childhood curriculum. Thus, the study will focus on the theoretical and conceptual framework of child-centered constructive learning approach that advocates thorough

play-based pedagogy in curriculum implementation. In this sense, children are at the center of instruction to construct their knowledge through interaction (Ridgway and Ridgway, 2012).

2.2.2.1 The origin of early childhood education

The origin of early childhood education is related to the works of psychologists Lev Vygotsky and Jean Piaget. Vygotsky's theory of language learning and language development focuses on the social interaction among teachers and learners between their age-mates in and out of the classrooms. He emphasized the importance of language, which plays a vital role in developing the intellectual thought of a child through interaction. He believed that the origin of a child's language was social interaction with his family members and could be developed and applied with his age mates, classmates, teachers, and society around him. In other words, the child's language resulted from his /her need for social interaction. In addition, Vygotsky introduced activity centers that enable students to work independently and with their peers to accomplish academic tasks. He also developed a zone of proximal development that could help the child achieve things that are not possible without the guidance and support of a skilled person; it might be his/her family member or another child. Thus, a zone of proximal development is the means of filling the gap of the child through scaffolding until he reaches the actual academic, developmental level. Moreover, Vygotsky has valued children's interaction among themselves because that benefits them when they get support from adults or other children who are more experienced about the activity (Allen et al., 2011). The idea raised here shows that in early childhood education, children need support from skilled individuals to reach their intended level of academic development.

Piaget's cognitive theory of development described how children think, learn, develop concepts, remember, understand relationships among different things, and solve academic problems. From his practical experiment, Piaget believed that children's knowledge could be constructed gradually through active exploration of the world by themselves. It aligns with the constructivist's approach that children become active participants when they try to learn by themselves, allowing them to choose their learning styles. In constructivist theory, the meaning of education is then much more than rote memorization. It integrates and assimilates knowledge to be further used and explored by engaging learners in the instructional process. The constructivist strategy is believed to ignite a child's interest and needs of learning through activities. Piaget's theory emphasized making the play exciting and challenging and facilitating the environment to enable children to engage in concrete experiences and encourage them to actively explore the world (Allen et al., 2011). The above points imply that the strategies mentioned earlier would help and motivate the children in their daily learning process.

From these theories, one can believe that children can learn through play and interaction with each other and with the material in the instructional process. Active participation in the play helps to construct knowledge through the assistance of adults, using playing objects, and by interacting in different activities. These require a curriculum integrated with play-based pedagogical strategies that inspire children to participate actively in the instructional process. In order to construct knowledge, children have to be inspired and involved in active learning process that encourages them to play and learn. In addition to this, child-centered play-based pedagogy of early childhood education is given more attention by Montessori, Steiner, Froebel, Reggio Emilia, and Forest Schools (Pound et al., 2006). This study will focus on play-based

pedagogical strategies and follow the Montessori, Steiner, and Froebel theories, which were early child education founders and contributors. Their theories also go in line with Vygotsky and Piaget's learning theories that are related to the constructive approach. Ellison (2012) strengthens this idea as, “according to Piaget and Vygotsky, play is a crucial baseline in the development of children. They believed that children are active in learning through play activities. They emphasized inquiry-based teaching approaches, in which children use prior knowledge to construct new knowledge.

The focus of Montessori theory is that a child's early years are the period when their capacity to learn is the greatest. The children need special attention and are eager to explore their world using their sense organs, which cognitive-constructivist theory acknowledges. She believes that children learn when materials are accessible, and adults observe them critically without limiting their freedom. The curriculum that she proposed to implement in the classroom is child-centered, focusing on care for their environment, oneself as an individual, and others in the community. On the other hand, Steiner stresses that making children to concentrate on learning, inventive, adaptive play, and imitation contributes significantly to their academic achievement. Like the constructivist's pedagogy, Steiner is more concerned with a humanist approach that embraces holistic spiritual development. He stresses that the involvement and participation in play and imitation could prepare them for meaningful life experiences such as gardening, cooking, and cleaning in their real future life. He believes that the curriculum combines creativity and practical activity (Allen et al., 2011).

Froebel has a firm stand on play and its place in child development. He states that play promotes enjoyment, emotional well-being and is also a fundamental source of knowledge for their

learning. The curriculum Froebel introduced was active, which includes; self-expressive activities through play, rhyming, which they use to express their thoughts, language, hand works, and gifts to stimulate motor skills. He thought that kindergarten education has to contain songs, games, and skill-involved activities that benefit children to learn through all their sense organs (Allen et al., 2011).

Based on the theorists mentioned above, this study has been completed areas of concern related to implementing play-based pedagogical strategies of early childhood education curriculum. As a result, through a formative evaluation, the implementation of play-based pedagogy in the study area and the gap is also identified in the early childhood education curriculum implementation. The evaluation focused on the implementation of play-based pedagogy, the utilization of teaching materials, learning assessment, and environment as shown in the following figure:

2.3 Conceptual framework of the study

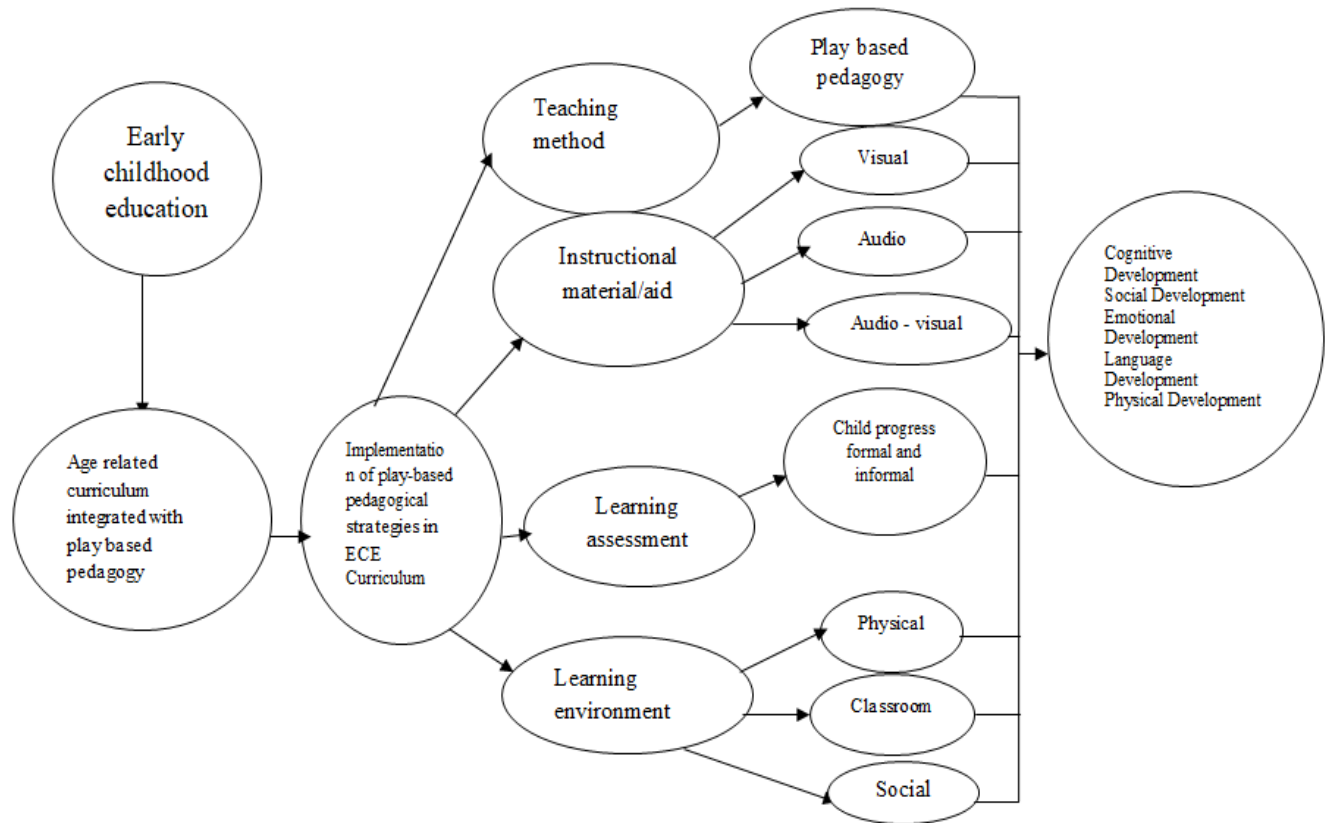


Figure 2.1 Conceptual framework of the study adapted from (L. Allen and Kelly, 2015)

Figure 2.1 shows that the study intended to assess practices of play-based pedagogical strategies in the implementation of early childhood education curriculum. It determines whether the designed curriculum achieves the intended learning outcomes, the objective set, and meets the stated standard. Further, the evaluation helped to gather vital information to identify issues that require improvement or change. The assessed by evaluating teaching methodology, learning materials, students' assessment, and learning environment. These can help evaluate students' cognitive, social, emotional, language, and physical development. Things incorporated in any curriculum should be associated with the stated objectives of education that ensure the relevant teaching-learning standard and contribute to students' learning achievements (MoE, 1994).

The first circle shows the general concepts of early childhood education that can be provided at school to the child before entering primary school. The second circle shows that the integration of age-related curriculum with play-based pedagogy used to shape early childhood children to the intended learning behavior. The third circle shows that “curriculum implementation” is the central part of this study, referring to how early childhood education provides and the content that indicates the information and issues provided to learners to bring cognitive development delivered in the instructional process. The fourth circle indicates that the “teaching method” refers to the strategy of teaching used in the classroom that enables facilitators to deliver their lessons appropriately. The method also helps them utilize teaching materials through play-based pedagogy that facilitates communication with the learning materials in the classroom context. According to the theorists mentioned above, play has been the heart of early childhood education since its inception. Thus, it plays a vital role in self-regulating and helps to develop children’s skills to control their behavior and feelings. Play benefits children to involve actively in the instructional process through hands-on activity by using their all sense organs. If play is metaphorical, it allows players to explore different perspectives and imagined contexts and safely test their responses to their engaged play. It also has a role in assisting children to use their senses and feelings impulsively to make new and unexpected connections between stimuli (Wong and Logan, 2016).

Play is a natural phenomenon that children perform in their surroundings like, at home, in the field, at school, and wherever they have access. Play can help them develop cognitive, emotional, social interaction, and physic and enhance their language and usage. Children living in this world, from any nation industrializing and emerging countries, play anywhere in garden

and playgrounds, in refugee camps, in countryside or town situations, in residence or communities play help them learn their lesson quickly (Wong and Logan, 2016). Thus, using play as an instructional instrument can benefit children's cognitive development and academic performance at large.

In the expression of the overall development of children, the five key domains should be addressed: physical development, which is related to the development of gross and fine motor skills; cognitive development concerned with cognitive functions like perception, communication, critical thinking, creativity, and information processing; and academic performance that is related to a capacity to learn from formal and informal educational opportunities; emotional development which is aware of feelings and enhanced ability to self-regulate emotions; develop confidence and motivation, physical development which is concerned with fine motor skills development, and lastly social development concerned with personal identity, interpersonal relationships, and self-awareness concerning social structures and norms (Sileshi, 2014). Concerning how play supports children in understanding their surroundings, using their extra energy, and developing their health theories has been developed. Thus, even though concerning play theories consist of cognitive, physiological, and psychological well-being and development, the study will focus on the cognitive theory of learning.

2.4 Cognitive theory of learning

Cognitive theorists argue that children use play to make sense of their world. According to these theories, play has a significant role in fostering cognitive functioning, language, problem-solving

skills, and reasoning mastery. Jean Piaget (1896–1980) and Lev Semenovich Vygotsky (1896–1934) are the most significant theorists about a play (Wong and Logan, 2016). Piaget’s attention was primarily on understanding how the individual child disguised their world. He works on observing a child who naturally engages in play with a close examination of his children. For Piaget, the play has three stages: practice play /symbolic play/games with rules. He understands that the stages followed a specific order; however, a child passed through them at their own pace of development. Vygotsky also understands that children recognize their world through play. For Vygotsky, play is a foundation of development and creates the zone of proximal development through social interaction (Wong and Logan, 2016).

2.2.1 Instructional material

The fifth circle shows instructional materials, which refers to the teaching resources those facilitators used to support instruction, help children visualize and concretize the lesson. *Instructional materials* are instruments and equipment used in the teaching-learning process to facilitate classroom instruction. It can increase participation and enhance the interest of the learners to participate actively in the classroom activity. Without it, the proper transferring of instructional lessons becomes a question mark in the quality of child education. The scarcity of learning materials at the early childhood education level and institutional process affects curriculum implementation in many ways. Thus, children need adequate learning materials in the classroom and outdoor activities that facilitate their learning through hands-on tasks. Children need a lot of hands-on experience with varied materials to challenge their ability to perceive similarity and difference in numerous dimensions. Children's activities and gaming experiences within the math and manipulative materials lead them towards a progressively complex

organization of motor behavior, thinking skill and perceptual development, and mathematical concepts with appropriate language and symbols (Whiren, 2014). The sixth circle shows that "learning assessment" indicates the means of judging child's progress by a formal and informal mechanism in the practice of curriculum implementation. Assessment refers to how facilitators know when they achieve the intended learning outcomes in the curriculum. Moreover, it is used to determine the changes in children's behavior that are taking place (Claire McLachlan, Marilyn Fler, 2010).

The seventh circle shows that the "learning environment" refers to the physical setting, social, and cultural context children learn. Early childhood intends to welcome and invite the children to feel at home and like their learning environment. The physical environment, including infrastructure, classrooms, plants, animals, soil, water, etc. is vital. The physical environment of early childhood education program needs a reasonable adjustment that fits all children appropriate to their age. It must be safe, comfortable, and has adequate space in the classroom and outdoors. In a more homelike classroom and less institutional support, children feel secure and prepared to learn. Organizing the physical environment safe for the children is an effective predictor of early childhood education program quality since it affects what children do; determine the ease with which they can carry out their activities and plans, determines how they use materials (Whiren, 2014). The facilitators attempt to involve a child in an environment that should be prepared in an artistic way that is warm and joyful. It helps the child feel nurtured and at ease and motivates him to explore and play. The classroom has to be painted in attractive color. The materials in the classroom should be natural and at children's age level, and stored in aesthetic containers such as simple baskets or wooden boxes, which may themselves be incorporated into play (Pound et al., 2006).

2.2.2 Learning environment

The learning environment is further classified as a physical and social environment. It is an instant image of the facilitator's planning and the child's learning. It is also the design and arrangement of students' classrooms and learning areas. It is a place where facilitators and children spend most of their time together. Facilitators have to plan the environment by arranging the existing places equipped with adequate materials to enhance children's learning opportunities and engagement in instructional activities. It ought to be well prepared, orderly, planned, welcoming, comfortable, pleasant, safe, attractive and provide a variety of manipulates for their cognitive, social, emotional, language, and physical development (Kimberly A. Gordon Biddle, Ana Garcia-Nevarez, Wanda J. Roundtree Henderson, 2014).

Moreover, Kimberly et al. (2014) further elaborate on the physical environment for preschool children; the classroom has to consist of eating, napping, diapering, toileting, and playing areas. Play continues to be very important, and learning centers become more evident for this age group. Children want spaces that allow them to experiment, explore, investigate and discover matters around their surroundings. The classroom areas are partitioned into dramatic, block, art, library, manipulative, and science learning focuses. Children continually move or shift from place to place and want many possibilities to exercise strange skills.

The social environment has an impact in influencing and supporting children to engage in the instructional process attentively. A favorable learning environment simplifies the interaction between the facilitators and the children, children among themselves, and children with teaching aids. To make a favorable learning environment that can help good social interaction, teachers

need to plan play-based activities to help children engage in different learning activities (Obaki, 2017).

Early childhood education programs give children a chance to learn through play-based pedagogy, indoor and outdoor activities. Playing and exploring is a normal and natural activity in which most children engage. They are indispensable to the children's well-being, an essential learning method, naturally motivating and fulfilling to the child. Physical development can be promoted through play and exploration that lessen pressure and help to refresh attention. Play and exploration have enormous potential for advancing innovation, creativity, assisting children to know their environment, and work with learning in a wide range of areas. Play and outdoor and indoor exploration with natural materials can support children in providing a significant way to develop understanding and sympathy. Moreover, indoor and outdoor places and spaces give freedom to children to improve social, emotional, physical, and cognitive development domains (Need and Want, 2016).

Kimberly et al. (2014) have summarized the benefits of play as follows:

Some of the benefits of play include social, emotional, cognitive, and physical development. They cannot be achieved in any other way. Children learn how to interact with peers when they are engaged in play activities while also building on important schemas about the real world. Play is an enjoyable experience for all children. Children of all ages will spend many hours participating in play activities because play supports the understanding of their social environment and facilitates their efforts to build a realistic sense of self (Spodek and Saracho, 1994). Play has a great value in that it assists children in exploring and understanding various roles and social interaction techniques.

CHAPTER THREE

3. Literature Review

3.1. Introduction

This chapter deals with a literature review on the implementation of play-based pedagogical strategies in early childhood education curriculum at international and national level. A *literature review* is a carefully crafted summary of the current studies on a topic with significant findings and research methods. It determines what previous researchers found out so that the present researchers can benefit from the work of others (Neuman, 2014). A literature review aims at showing ways of previous research works and how the existing project is connected to them. Thus, it serves as the backbone of the research problem. The literature review in this particular study covers; the role of a teacher in implementing play-based pedagogy in pre-primary school, the importance of play in the teaching-learning process, the contribution of play in child development and learning, types of play and their benefits. Besides, the literature review encompasses facilities required to run play-based pedagogical practices and the practices used by teachers in implementing early childhood education (ECE) curriculum in different contexts. It also includes the challenges of implementing play-based pedagogy.

3.2. The concept of early childhood education

Early childhood education has gained recognition throughout the world as a base for determining the future of the children. Early childhood education is considered a valuable investment for children to develop social, emotional, moral, cognitive, and physical characteristics that define their overall personality in later life, although the starting time of ECE varies from country to

country. The environment the children spend their time in and the people they meet will have a huge impact on their future. During this stage, they develop all the critical elements of emotional intelligence, namely confidence, curiosity, purposefulness, self-control, connectedness, the capacity to communicate, and cooperativeness (Ministry of Federal Education and Professional Training, 2017).

Early Childhood Education is important for a child as it lays a foundation for overall development and lifelong learning. It is a starting point for social interaction with many children. As formal education comprises literacy, numeracy, and joyful play, children must get a developmentally appropriate curriculum integrated with play-based pedagogical strategies that provide overall personality development.

Early childhood education will enable children to be better prepared to meet not only the immediate challenges of primary education but also to learn throughout life (Tolossa, 2019). This shows that the attendance of early childhood education is vital for children to be aware of formal learning and their well-being for their education and their entire life.

Moreover, early childhood education is designed with an all-rounded approach to help children with early cognitive, physical, social, and emotional development and allows them to arrange instruction outside the family setting. The early childhood education program aims at developing socio-emotional skills, which are fundamental for participation in school and society, and further building up some of the skills that are required for academic readiness for formal education (Tsegaye, 2014). In the past, early childhood education around the world used to prepare

children for entry into formal school. However, after the curricular reform, school programs have been adapted to children's growth level and appropriate pedagogical strategies that suit their age level to enhance the learning process (Ahmad, 2016).

Pre-primary education is typically developed with a holistic approach to help children's early cognitive, physical, social, and emotional growth and to familiarize them with formal instruction outside the family context. The program has a deliberate education component that intends to improve children's socio-emotional skills that are essential for engagement in school and society. Children also develop some of the skills required for academic readiness and prepare them for entry into formal education. To prepare children for formal education at early childhood, purposeful set of instructions are delivered in an organized and safe learning environment. This gives chance for the children to learn through interaction with other children with the guidance of facilitators, mainly through creative and play-based pedagogy (UNESCO, 2011). The purposeful instruction provided at early childhood education shows that pre-primary education is a base to help children develop holistically through learning and social interaction with a loosely structured approach.

3.3. Early childhood education in Ethiopia

Ethiopia's specific calendar, alphabet, writing system, music art, poetic forms, and numeration system have laid a foundation for introducing traditional education. The intention of establishing traditional education in Ethiopia was to transmit the community's cultural heritage from one generation to the other (Solomon, 2020). Traditional early childhood education in Ethiopia was started through religious education. Since the 4th century C.A.D., after king Ezana accepted

Christianity, the Ethiopian Orthodox Church has become the formal traditional education institution and has been recognized as one of the oldest educational systems globally. For an extended period, Orthodox monasteries and churches were the only formal learning centers of the country. The primary purpose of Church education was teaching doctrines of Christianity, and the ultimate goal was to produce priests and deacons that serve the church. The Orthodox Church education also produced civil servants who worked in government offices like governors, teachers, and administrators. The Orthodox Church as a traditional guardian of the nation's culture, tradition, and religion provided education that is equivalent to modern elementary to university level education to Ethiopian children and adults since its establishment as a national institution (Meskerem, 2014).

The second traditional religious education that laid down a foundation for modern education was Islam education. Islamic education began in the 16th century after Ahmed Gragh introduced Islam religion in Ethiopia. Kuran Schools were started mainly to teach the doctrines of Islam (Meskerem, 2014). This shows that the education system in Ethiopia had been linked mainly with the Ethiopian Orthodox Church and Islam religious education systems until the middle of the nineteenth century.

Early childhood education started in Ethiopia with the help of western missionaries. Since the early twentieth century, Western educational ideas have flourished in Ethiopia. The first modern early childhood education (kindergarten) was begun in the eastern part of the country, Dire Dawa, in 1908. Modern early childhood education was started for children of French consultants who came to Ethiopia to build the first railway. There was no such fertile ground to expand early childhood education to other parts of the country at that time. Hence, until 1974 (the socialist era/Derg regime), there were few kindergarten schools. Kindergarten schools were also limited

to urban areas of the country and were operated by missionaries, private organizations, and the Ministry of Social Affairs and Development. Because of scarcity of resources at that time, the federal government gave little attention to early childhood education (G/egziabher, 2014). The history of early childhood education shows that kindergarten schools were serving children of foreigners in restricted areas. Its expansion was also limited to the urban area of the country.

In the socialist era, the involvement of women in economic activities necessitated facilities to care for children and that facilitated the expansion of early childhood education. The expansion of early childhood education required the establishment of daycare centers for early childhood education. The Ministry of Education also introduced a department which is responsible for early childhood education (Fedlu, 2018). Moreover, in the late 1970s, UNESCO contributed to the expansion of early childhood education in supporting literacy campaigns in the cities and rural parts of the country where a large portion of the country's population lives. The introduction of early childhood education program to the national education policy was the result of the socialist revolution of Ethiopia. A curriculum was developed for early childhood education program for the first time in this era (G/Egziabher, 2014). The points mentioned above show that in the socialist era different factors contributed to the expansion of early childhood education both in urban and rural areas of the country, and to the development of the curriculum.

The 1994 Education and Training Policy of Ethiopia encompass general and specific objectives and implementation strategies for formal and informal education starting from kindergarten to higher education. The policy document mentions that early childhood education focuses on children's overall development to prepare them for formal schooling though not in an integrated

manner. The policy recognizes the importance of early childhood education for youngsters (MoE, 2010c). Early childhood education was emphasized in Ethiopia as an essential part of children's life to prepare them for formal schooling. Private sectors and non-governmental organizations took the leading role in expanding early childhood education throughout the country. The predominant operators of kindergartens were non-governmental organizations such as communities, private institutions, and faith-based organizations (G/Egziabher, 2014). Nevertheless, the provision of early childhood education succeeded much better with private providers than with communities (MoE, 2015b). The above condition implies that although the policy emphasized early childhood education for the holistic development of children, the implementers are only private sectors and non-governmental organizations. As a result, early childhood education is not in a position to give equal opportunity to all citizens throughout the country, and cannot impact the practices and achievement of the intended learning objectives.

The reason that forced the government to develop early childhood education policy was specified to be the fact that the service provided in the program is inadequate, fragmented, and lacks coordination. As a result, there is poor utilization of the scarce resources targeted for early childhood education programs. This hinders children from getting proper educational participation. Thus, the policy framework intends to fill the gap and give all children the chance to learn.. It can provide the children with opportunity of best start and stimulation in life; improve quality, accessibility, and equitable distribution of services of the program (MoE, 2010c). This implies that the policy framework focused on implementation in order to fill the identified gaps.

The Ethiopian government has introduced "O" class and child programs into the education system in the last few years. It gave priority to early childhood education and established a national steering committee, regional councils, and *woreda* technical committees for the rapid expansion of access to O-Classes as a reception year prior to Grade 1. These structures operate in collaboration with other relevant ministries to coordinate, support, and monitor stakeholders' involvement in ECE. They have given the base from which rapid expansion of ECE is possible (MoE, 2019). The government is also engaged in curriculum development, teacher training, and provision of supervisory support. As a result, the enrollment of pre-essential training is increasing from year to year (G/Egziabher, 2014). This illustrates that the government has given attention to early childhood education as an essential element in the education sector for children before they start formal education both in the private and government schools.

3.4. Objectives of Early Childhood Education

The main objective of early childhood education is to bring about the development of children in the teaching-learning process through play. It focuses on the overall development of children encouraging their learning interest and supporting them to make sense of the world around them in preparation for primary education and the entire life both in and out of school (MoE, 2020b).

Ministry of Women and Child Development (2014) states that early childhood education is intended to facilitate children's optimum development of full potential, and it lays the foundation for overall growth and lifelong learning. The aim early childhood education intends to achieve can be summarized as follows:

- Develop a positive self-concept;

- Establish a sound foundation for a good physique, adequate muscular coordination, and basic motor skills;
- Enhance verbal and non-verbal communication skills;
- Develop the five senses and cognitive skills and concepts;
- Develop emotional maturity by guiding the child to express, understand, accept and control feelings and emotions;
- Absorb values, social attitudes, and manners important in their socio-cultural context and become sensitive to the rights and privileges of others;
- Develop independence, aesthetic appreciation, and creativity by providing the child with sufficient opportunities for self-expression and active exploration, investigation, and experimentation (Bhattacharya, Saxena and Maurya, 2020).

The points raised above imply that early childhood education intends to address children's cognitive, social, emotional, linguistic, and physical development. Moreover, it creates a smooth transition from early childhood education to primary education through literacy and numeracy. It inspires their capacity and eagerness to learn in informal and formal situations and build their social and educational skills. Ethiopian education development roadmap (MoE, 2018) states that a comprehensive curriculum has to be created to support the holistic growth of children, which may include the development of their cognitive, socio-emotional, physical, and life skills. Besides, as stated in the early childhood education policy framework, the goal of education “*is to promote early stimulation and the best start in life for all children from prenatal to seven years, and enhance the quality, accessibility and equitable distribution of services for children through more efficient partnerships and capacity building programmes*” (MoE, 2010c). Therefore, it is advisable to design a developmentally appropriate curriculum that can incorporate the objectives

mentioned above, which brings about holistic development of children and provide the knowledge, attitudes and foundational skills which are essential to meet the challenges of learning in primary school (MoE, 2020b).

3.5. Principles of Early Childhood Education Learning

Principles of learning are some strategies and techniques that can teach children to achieve the situations under which they learn best (Caldwell et al., 2019). Children learn through observing, imitating, experimenting, exploring, play, and practice. Since they are dynamic, they learn through their senses by seeing, touching, smelling, tasting, and doing with great motivation. So, learning requires them to be actively engaged in the instructional process. McLean, (2016) summarized the works of philosophers, theorists, and researchers of child development as follows:

- Children learn best through their senses. They require plenty of opportunities for sensory involvement with their environment.
- Children learn when they can explore and experiment in an environment that allows them the freedom to move, choose among natural alternatives, and pursue activities at their own pace and their developmental levels.
- Children learn by doing – by interacting with concrete objects in the environment (playful learning).
- Learning is most effective when children are interested in what they are learning and can choose and pursue play activities in their way. When children learn in a meaningful context and have discovered for themselves, their retention rate is very high.

- Children learn in an environment where they feel psychologically safe, where they can take risks and make mistakes, and where they receive encouragement and well-timed, guided support in learning.
- In informal settings, children with exceptionalities may need direct intervention in their playful learning to help them make developmental progress. Wherever possible, materials and equipment should be adapted and modified to support maximum independence. Intervention may vary and include a variety of supports provided through the Service Delivery Model for Students with Exceptionalities and through coordination of services offered with other professionals within children's circle of care outside the school system.
- Children uncover concepts (concepts that are related to curriculum objectives) when their play is open-ended and exploratory.
- Early learning experiences are most effective when they take children from simple to more complex levels of knowledge, skill, and understanding, from concrete to abstract concepts, from general to specific.
- Revisiting knowledge, skills, and concepts in various contexts different from that in which the first took place reinforces and transfers the understanding from one context to another.
- Learning is most effective when play experiences build on what children already know and take them one step further (zone of proximal development).
- Children are deemed to have learned when they can transfer learning gained in one situation or context to another position or context.

Activities should begin at the child's developmental level, and significant learning challenges should be sequenced, step by step, in any order and at a pace relevant to the child (scaffolding).

The guiding principle of early childhood education policy in Ethiopia is: to protect and reinforce beneficial Ethiopian cultural values and ensure the holistic needs of children, offering equitable access to quality early childhood education for all. An inclusive approach tries to address vulnerable and marginalized children, particularly children with special needs. Inter-sectoral and integrated coordination are created among relevant ministries and organizations working on child care, rights, health, education, and development. To be cost-effective and sustain the program, community-based approach is used. Furthermore, ECE is serving the needs of all groups of children from prenatal to seven years (Tsegaye, 2014). This literature exemplifies that the focus of early childhood education in Ethiopia is to provide equal opportunity and quality education to all children of the country to enable them benefit from the values of Ethiopian culture.

3.6. Play-based pedagogical strategies in the implementation of ECE curriculum

Play-based pedagogy is a strategy that can be used to teach children through entertaining and with fun to enhance their class attendance and retention rate. Early childhood education curriculum implementation is a dynamic process that requires varieties of pedagogical strategies that improve student learning. Different scholars define play in different ways. The definition varies according to the writer's meaning and implication within its specific contextual use. Thus,

a play is defined and theorized from multiple points of view (Sheridan, 2011). Some of the definitions of play are presented as follows:

Smidt (2011) states that play is defined as how children within a context, a culture, a family, and a community set about doing any or all of the following:

- trying to solve a problem they have set themselves;
- exploring and experiencing something that interests or concerns or scares or excites them;
- expressing and communicating their feelings related to their experiences.

Sheridan, (2011) suggests that play is the eager engagement in pleasurable physical or mental effort to obtain emotional satisfaction.

To defined an activity as play, we must observe voluntary participation, enjoyment, intrinsic motivation, pretense, and a focus on process over product (Mekonnen, 2019).

Goldstein (2012) suggests that play is any activity freely chosen, intrinsically motivated, and personally directed.

Kimberly, Ana Garcia-Nevarez, (2014)have defined play as:

Play appears to serve several centrally important functions. First, it is a means of minimizing the consequences of one's actions and of learning, therefore . . . [it is] . . . a less risky situation . . . Second, play provides an excellent opportunity to try combinations of behavior that would, under functional pressure, never be tried.

Play is the best opportunity for children to take risks without fear of failure. This definition suggests that creativity and play activities are intimately linked. That is, when children explore and experiment in their play, the possibilities for creative outcomes are substantially increased since they are not afraid of failure. For instance, a kid playing with Play-Doh can innovatively

study and try un-reservedly as there is no right or wrong way to create and mold with this material (Kimberly, Ana Garcia-Nevarez, 2014).

Tokić and Borovac, (2020) presented different scholars' definitions of play.

They stated that play

- is characterized by thinking and activity that is symbolic, meaningful, active, pleasurable, voluntary, rule-governed, and episodic
- is child-chosen, child-invented, pretended but done as if the activity was real, focused on the process and not the product, done by the players and not the adults, requires active involvement and it is fun,
- is an expressive autotelic activity, independent and divergent activity with its own source of motivation, where the process overrules the outcome,
- depends on the context and that contexts are varied, which is why the play is difficult to describe,
- represents cognitive, affective, cultural, temporal, historical, social and physical interconnections

From the above definitions of play, one can say that play is an activity that children engage voluntarily, frequently related to an instructional setting, encouraging the development of cognitive and social skills. It is an essential component of early childhood curriculum standards that cannot be separated from learning. Play impacts the social, emotional, physical, and mental development of children. Letting children play encourages them to achieve communication skills that allow expressing their needs and emotions, likewise as sharing earlier information about their surroundings while gaining new experiences. It is motivating and free of expectations

(Irvin, 2017). The above literature suggests that there is no single universally accepted and standard definition of play. Most of the descriptions indicated that play is an engagement of children mentally and physically in activities to enjoy and satisfy emotionally.

Play-based pedagogy in early childhood education is not a new notion. Friederich Froebel introduced it in Germany in the introduction of kindergarten. He incorporated play-based materials and activity in the classroom instruction, realizing that play is the natural activity of childhood. However, in the past few decades incorporating play-based pedagogy in the instructional process declined worldwide (McLean, 2016).

McLean (2016) states that play-based pedagogy refers to the facilitator's approach to identifying what children learn through an energetic, hands-on, playful environment. In play-based instruction, the facilitator makes decisions about and adjusts the daily plan, the environment, the learning materials, interactions, and activities based upon the qualities, needs, interests, and input of the children in the instructional process, as required, enhancing learning opportunities. Play-based learning is the primary strategy for the implementation of early childhood education curriculum. Play-based learning, mainly guided and free play inside a comprehensive and well-organized classroom, helps children develop literacy and numeracy. Nevertheless, play-based learning is meant to supplement, not supplant, other methodologies that support reading and writing development in young children (McLean, 2016). Play-based learning involves active, child-centered components, directed and supported by an adult to the intended learning objectives. Formerly, play-based pedagogy has been presented to impact children positively in their reading and mathematics scores. Moreover, research findings suggest that, in general, play-

based pedagogy tends to be more fruitful than teacher-centered instruction (Pyle and Danniels, 2017).

Concerning the approaches to kindergarten education in the utilization of play in the instruction, the Ethiopian curriculum framework (MoE, 2009) states the following:

Kindergarten education uses a child-centred approach where children can learn through play in an informal environment at their own pace. Free play encourages the child to engage in learning voluntarily, experimenting and making their own discoveries both independently or with other children and adults. This contributes to the formation of their identity, expression and social learning.

Play-based strategy is an engine that arouses the interest of children to participate in the teaching-learning process. It is crucial to motivate children to engage in the instructional process. Even though play is not merely a means of teaching children, it is essential because they are intrinsically motivated to play. Goldstein (2012) strengthens this idea as “*Play during early childhood is necessary if humans are to reach their full potential*”. It is so pleasant for children that facilitators need to use in the instructional practices which don't have to pressure or persuade them to participate (Bredekamp, 2017). Play is a pedagogical strategy that can be used in several places to teach in early childhood schools. The above literature suggested that play-based pedagogy is one of the means that can help children participate in the classroom activity to construct knowledge, build their body, social skills, self-awareness, and develop their communication skills. Engaging children in play-based instruction will enhance their learning opportunities and academic success.

Likewise, Ethiopia's government has emphasized the use of play-based pedagogy to implement early childhood education programs. The national policy framework for early childhood education programs states that play is used as the principal means of enhancing the learning

experiences of a child (MoE, 2010c). The early childhood education program has to be child-centered and encourage the child's holistic development. The program should provide resources and activities that are culturally relevant, developmentally appropriate, and inclusive in both indoor and outdoor settings. Its plan should be based on a play-based approach (MoE, 2014). The notion mentioned above implies that the implementation of early childhood curriculum is based on play-based pedagogy, providing appropriate usage of necessary educational materials. Play is part of being human and helps children to relate their inner worlds of feelings, ideas and lived experiences taking them to new levels of thinking, feeling, imagining and creating and is a resource for the future. Children have ownership of their play.

Opsgenie (2017) states that Froebel believes that play influences being human and being alive. In-play, the entire child actively integrates moving, feeling, thinking, and being willing to participate. Opsgenie (2017) this author notes that Froebel argues that play assists children with relating their inward thoughts, notions, and lived experiences with the broader world of things and persons to see a link between them.

Opsgenie (2017) summarise Froebel's notion of play as being extremely important since:

- Play helps children reflect on and understand themselves as well as the people and world around them.
- Play develops awareness of symbols and symbolic thought where children operate at their highest level.
- Self-chosen plays activities help develop determination, concentration, persistence, and satisfaction, essential features of work-like activities in adult life.

- Play is increasingly social and fosters friendship, fairness, understanding of rules, and care for others

3.7 The role of the teacher in the implementation of play - based pedagogy in ECE curriculum

Most early childhood education teachers are still paying less attention to the play-based pedagogical strategies because the school should meet the remarkable success of the academic and learning standards regardless of whether the child is having problems in reading proficiency and numeracy. Not using play in the instructional process, by implication, limits children's learning interaction through the investigation and plays in sharpening their skills, abilities and improving their curiosities (Ashari and Baharuddin, 2018).

However, in pre-primary school settings, play is an integral part of the instructional process and an instrument for the teaching-learning process. Play is a fundamental right of children and significant activity for children's well-being and holistic development. Research findings show that pre-primary school teachers realize and view the connection between play and learning impact significantly on their pedagogical decisions and practices like the presentation of instructional content, classroom arrangement, level of their involvement in children's play, and the provision of support to children (Dzamesi, 2020). Thus, from the idea mentioned earlier, one can understand that a teacher is the troop in implementing curriculum throughout the education level. Teachers play different roles while implementing the curriculum of education. They play the role of planning, organizing, designing, and implementing play activities in the instructional process. Moreover, teachers are responsible for their teaching and the success of children in their

academic performance, for leading the instructional process, managing the classroom activities, encouraging and handling children (Kimberly, Ana Garcia-Nevarez, 2014).

Hunter (2019) says that a teacher plays an essential role in a play-based learning environment by focusing on the social and cognitive development of the child. The emphases of social development are on the child's ability to interact with others positively, while the cognitive scale relates to the child's academic capability. He stresses that a teacher has a significant role in the successful academic performance of children. Hunter summarizes the role of a teacher in practicing effective play-based pedagogy to encompass:

- Creating a classroom to meet the students' diverse needs and interest areas;
- Using curriculum knowledge to notice and recognize the learning within the play experiences;
- Building on the prior knowledge of the students;
- Participating in purposeful conversations to broaden the students' ideas;
- Scaffolding the interactions between students to support their social and emotional competence.

Accordingly, facilitators working within a play-based pedagogical environment in their classroom have a significant and challenging role in accomplishing play-based pedagogy. Therefore, facilitators who work in pre-primary school are responsible for playing a fundamental role in the application of play-based pedagogical strategies in their instructional process.

3.8 Facilities required for implementing play-based pedagogical strategies

A well-organized pre-primary school environment should improve children's development through learning with play. It works with classroom management and supports the execution of intended learning outcome Kimberly, Ana Garcia-Nevarez, (2014). Moreover, Kimberly, Ana Garcia-Nevarez, (2014) assert that how the school's physical environment is organized and arranged influences how children feel, act, and behave. A well-designed physical environment of a school helps children grow and develop through activities and materials in defined play areas. For children, social and language interaction classroom arrangement for play activity has a significant role. A well-organized and designed classroom can influence children to focus on their play and learning activities. On the contrary, an inadequately designed and arranged classroom can cause disruptions and bad social interaction among children and the teacher. Thus, having a well-designed and properly organized classroom can help children to be motivated to engage in play. Play can allow them to participate in classroom activities with their mental, physical and verbal interaction. On the other hand, if the classroom is poorly designed and not well-prearranged, children may be disturbed and frustrated to concentrate on their play and learning activity (Kimberly, Ana Garcia-Nevarez, 2014).

School environment and instructional materials play a significant role in overcoming frustration of children and enabling them move and play easily. They make the teaching-learning process more effective and meaningful. They can also increase children's participation, motivation, and concentration on the concept taught in the instructional process. On the contrary, shortage of instructional materials could negatively affect the instruction process. School environment and instructional materials could be significantly detrimental, particularly to children in pre-schools

who need an assortment of materials to support or capture new experiences (Tarimo, 2013). Thus, it is the school's responsibility to provide adequate material to teachers to use for play-based learning strategies in indoor and outdoor activities. Making the pre-school environment conducive, safe, and attractive for children to learn through play requires careful planning of the facilities to be used. The materials needed for play-based pedagogy can vary from place to place and the methods teachers use. In the Montessori approach, play-based learning uses the learning material to capture children's interest, attract attention, and encourage independent use. When children work with the Montessori learning materials, they refine their insight and movements, mainly manual skills, without the help of others. In addition, they prepare themselves for instructional activities (Feez, 2010).

On the other hand, Froebel advocates that children should be taught via creative play, social interaction, and natural expressions. Froebel believed that young children possess unique capabilities and needs, and that adult should serve as the "gardeners" of children's potential. Froebel asserts that young children learn best in settings that provide stimulating and prepared environment where they can explore and learn from their own experiences and perspectives. He believed that play is intentional, purposeful, and not idle and that children's engagements in hands-on play activities creates meaningful learning from the instruction. Play addresses the natural needs of children to learn how things work. Froebel education believes that play is focused and valuable and that learning occurs through hands-on play activities (Spielgaben, 2013).

Wisneski, File, and Mueller, (2012) stated that play is the primary method for the development of human mind. Its first endeavor is to associate with the external world, gather new practices from things and realities, warm human interaction, and practice the potential of body and mind. However, the purpose of early childhood education is to bring about cognitive, social, emotional, language, and physical development of children through appropriate early childhood education resource materials which nurture and support the development of early literacy and numeracy in children at pre-primary school (Ebele and Chukwbikem, 2013). However, in early childhood education, some common materials are used across the world. Some of these are indoor play corner materials, play objects, and outdoor play facilities.

Kimberly, Ana Garcia-Nevarez, (2014) states that facilities are central for using play pedagogical strategies in the instructional process. The materials may vary from context to context, but they can facilitate children's learning in pre-primary school settings. Play facilities that are used in early childhood education are anything natural or artificial, real or imaginative, visual or invisible, big or small, structured or unstructured, props or loose parts. A child, a teacher, or a group can use fantasy, and recreation to encourage creativity, or to enrich their play in the play-based teaching-learning process. The play objects that are used in pre-primary school instruction are toys, scoops, ropes, boxes, funnels, tins, play cards, bottle tops, seeds, blocks, and others. On the other hand, the materials may be classified as indoor and outdoor play facilities. The indoor corner materials are a shop, construction, animals, plant, cooking, reading, music, transport, and hospital corner. The outdoor materials are open space, swings, sliding panels, sand play areas, water play areas, dolls, balls, swings, tiers, blocks, puzzles, and ropes. Elizabeth (2015) says that play materials must be appropriate to children's age, size, ability, and development level.

Materials and playing areas that are suitable of this nature give children the freedom to participate in the play activities that fulfill their inquisitive nature and natural desire to discover and be creative. The Ethiopian National Policy Framework emphasizes that the materials to be used at pre-primary education have to be “*culturally relevant, developmentally appropriate and inclusive for the indoor and outdoor activities. Their design should follow a play-based approach*”. The policy also emphasizes mobilizing, planning and allocating necessary resources to ensure quality services for all children from prenatal to seven years of age (MoE, 2010c). Moreover, the Ministry of Education states in its pre-primary school guideline that for children to use various ways of learning, there should be sufficient age-appropriate materials in the school (MoE, 2010a). The above points imply that play materials are essential to facilitate learning through play-based pedagogical strategies. Play materials can improve children's cognitive, language, mental, emotional, physical development, and social interaction skills in their day-to-day life through instructional activities. These developments enable them to understand their environment, control their feelings, body movement, and communicate with others effectively through emphasizing play-based pedagogical strategies.

3.9 Challenges of implementing play-based pedagogical strategies

Hunter (2019) noted that play-based learning setting is child-focused pedagogy that promotes the overall development of children by following their usual curious and explorative disposition. It is natural for young children to explore what attracted their attention. To build this disposition, they should feel connected to their learning facilities and confident in their capabilities as learners. Moreover, for decades, the focus of early childhood education had been exploration pedagogy which encourages children to make meaning of the objects in their environment. However,

lately, the primary classroom setting has been shifted from teacher-centered instruction to a more child-focused approach, making a great debate regarding what is considered a pre-school teaching - learning method versus the mainstream primary classroom. Pyle and Danniels (2017) say that the purpose of play-based pedagogy is evident from the name: to learn while having fun. Young children will typically investigate whatever interests them by connecting play with classroom instruction and developing confidence in their capabilities. Thus, play-based pedagogy plays a significant role in the education of early childhood in bringing about a holistic development. However, to apply play-based pedagogy in pre-primary instruction requires trained personnel, adequate resources, and sufficient budget.

Different studies show that there are numerous challenges in the implementation of play-based pedagogical strategies of early childhood curriculum. The challenges may vary from context to context, and may range from simple to complex (Moodley, 2020). One of the challenges is teachers' perception. Pyle et al., (2018) summarizes the perception of teachers regarding the challenges of literacy integration within play-based learning in pre-primary school as follows:

- Direct instruction plays a crucial role in literacy learning: teachers perceived that direct instruction plays an essential role in teaching children than play-based learning.
- Play is less structured and challenging to plan: teachers perceived it is challenging to plan play-based learning than direct instruction. Moreover, they perceive that it is less structured; it confused them and out of their control to enhance children's academic performance within their free play activities

- Teachers are uncertain about how to implement guided play: teachers stated that they have difficulty implementing guided play strategies in the instructional process in their classroom.

The challenges of integrating play-based – pedagogy in early childhood education at pre-primary school are summarized as follows: (UNICEF, 2018).

Lack of understanding of the value of play as a foundation for academic concepts

Rote memorization and recall of information remain the norm in many settings. Education officials, staff, administrators, and principals may not realize the critical role of play in building young children’s understanding of mathematical, scientific, and literacy concepts.

Parental or caregiver misconceptions about play

If asked, many people believe that play is frivolous and that play opportunity takes time away from ‘true learning.’ These misconceptions are caused by a lack of understanding of the benefits of play in children’s education, with the result that families might not demand play opportunities in pre-primary education settings.

Curriculum and early learning standards that do not address play

Many countries have curricular standards, yet they seldom include play-based learning activities and teaching methods. For example, a review of early learning and development standards conducted by UNICEF in 37 countries revealed that only one-third of the standards, including the concept of playful learning, were well integrated. However, ‘play competencies’ are unlikely to be part of the stated desired outcomes for children’s development.

Lack of teacher professional development that focuses on learning through play

Many teachers are not adequately prepared to implement play-based learning in their classrooms. They may think of ‘learning materials’ only as workbooks or charts on the wall, rather than

objects that children can explore and use in their learning. Even if teachers see the need for such hands-on materials, there are often inadequate resources and no training to help teachers find or create play materials with low cost-locally available materials. Many teachers have not seen learning through play in practice and, as a result, lack confidence in implementing it in their classrooms.

Large class sizes that limit children's freedom to play

Additional challenges exist when classes are too large. When more than 30 children are in a relatively small space, giving children active experience with materials or even having enough materials for all children is challenging. Large classes also make it difficult for teachers to support children's play through personal conversations and thought-provoking questions.

Moreover, Akinrotimi and Olowe, (2016) strengthen the challenges in implementing early childhood education as:

Shortage of Professionally Qualified Caregivers/Teachers:

Early childhood education facilitators must be trained to offer developmentally appropriate education, implement play-based pedagogy, and provide support and responsive care and educational experiences for young children. Thus, the knowledge and ability of early childhood care providers and facilitators are fundamental factors in their delivery of good quality developmental and educational experiences to early children. Lack of qualified teachers at pre-primary schools can affect the quality of education and the overall child development. Therefore, the implementation of play-based pedagogy requires trained educators to provide children with the chance of learning under professionally qualified teachers.

Resources:

The availability of adequate resources in various forms for early childhood education at the pre-primary school level can support the professional teachers to nurture and assist children's development in early childhood education and effectively perform educational plans. Besides, Akinrotimi and Olowe (2016) assert that adequate resource with quality has a significant impact on the implementation of early childhood education curriculum. Thus, resources are crucial for the effectiveness of early childhood education programs at pre-primary schools. Especially to implement play-based pedagogy at this level, the resource is the critical element.

Supervision:

Quality supervision at pre-primary school is critical to introduce and maintain the standard of education for children in early childhood education. The role of a supervisor is significant to correct errors, modify practices where essential, and stimulate as well as inspire teachers who implement the curriculum (Awino, 2014 as cited in Akinrotimi and Olowe, 2016). Supervision in pre-primary education leads to checking whether the goal of the program has been accomplished as planned. It promotes the maintenance of essential criteria, to find out the difficulties and identify constraints, to enhance and promote individuals personal and professional growth.

Teacher child ratio:

Akinrotimi and Olowe (2016) noted that the proper management of students, the teacher-child ratio has an impact. If the number of children is small, it is typically good for teachers to manage students and classroom instruction. The lower child-teacher ratio is also helpful to improve the quality of early childhood education and facilitate better developmental results for young

children. Teachers can interact better with young children. They experience minimum pressure, and they can give more supports to various children's developmental domains. Akinrotimi and Olowe, (2016) further noted that a higher teacher-child ratio or more teachers per fewer children makes young children more engaged in activities and interactions, and they also tend to perform better in cognitive assessments.

On the other hand, a lower teacher-child ratio or a smaller number of teachers with a large number of children in early childhood education will give teachers less attention and a minimum level of performance (Akinrotimi and Olowe, 2016). It adversely affects children's holistic development. This implies that a teacher-child ratio impacts children's education and their overall development. It can contribute to enhancing children's engagement in play and interaction with teaching materials. So, it can help them to be successful in their performance.

Funding:

In any educational institution, one of the crucial elements is sufficient budget to achieve success. In early childhood education, the availability of adequate budget is essential to fulfilling the required resources in adequate number, including materials that encourage teachers to use play-based pedagogy in the instruction that motivate students to engage in different activities (Akinrotimi and Olowe, 2016). As suggested, sufficient funds are essential to help sustain and provide reasonable access and quality to pre-primary education system. It is unthinkable to have quality early childhood education program to realize equal access without investing a reasonable budget. The key issues is hence to exert effort in financing, not only in extending access, but also in improving the quality of early childhood education services that can be affordable for citizens (OECD, 2017).

The findings of Tunku and Rahman (2013) show the challenges of implementing play-based pedagogy to be:

- **Time Allocation:** one hindering factor that inhibits facilitators from adapting play-based pedagogy in the instructional process.
- **Handling Materials:** the most challenging factor to use play-based pedagogy in pre-primary school instruction.
- **Student Control:** large class sizes can affect managing and controlling children's behavior in the classroom. Thus, it is another challenge for facilitators to use play-based pedagogy in the teaching-learning process.
- **Space Not Suitable:** lack of adequate space in the classroom and in the school compound is a challenging factor to use out and indoor play at pre-primary school. In addition, the facilitator's lack of qualification to the level and skill in handling children at pre-primary impacts using the space properly and creating adequate classroom conditions.
- **Support from School Administrator and Parents:** lack of proper support from school administrators and parents challenges the facilitators to use play-based pedagogy in the instructional process.

The above problems imply that allocating adequate budget is paramount to implementing play-based pedagogy in early childhood education schools. This means, inadequate budget allocation for the level adversely affects the overall success of the school. It implies that integrating play into pre-primary school helps young children learn thoroughly in the instructional process. It needs to have well-trained educators, sufficient budget, appropriate and adequate facilities, and enough instructional materials and play resources.

In Ethiopia, there are several challenges in the implementation of early childhood education. Some of these challenges are shortage of adequately trained professional teachers, absence of standard curriculum and teachers guidelines, absence of culturally relevant storybooks, insufficient access to early childhood education for most children and particularly for children who are from low socio-economic backgrounds; lack of awareness about the value and type of early childhood education; inadequate payment for teachers and high staff attrition (MoE, 2010c). The above challenges of early childhood education impact play-based pedagogy implementation in the country.

3.10 Importance of play in the teaching learning process of ECE

Children play naturally with personal interest and preference for the sake of enjoyment and satisfaction. Through engagement of play, children learn their environment and develop communication skills. It also benefits them to grow and develop physically and mentally. Play has a significant role in enhancing and motivating children for learning. Thus, play is critically important for early childhood class attendance. It plays a significant role in increasing the desire to attend classroom instruction attentively. In this regard McLean (2016) says:

Play is a vehicle through which learning occurs. It is an intrinsically motivated, voluntary activity that allows the child the opportunity to construct their own knowledge. When children are playing, they are truly engaged in their activity. They are seeking to solve problems and tasks, in a very hands-on way. Play is active, interactive, intentional, open-ended, and concerned with process over product. In play, children learn to be autonomous and confident, persistent and persevering. Children at play learn the value of taking a risk; making mistakes and applying a trial and error approach to learning. They set their own goals and establish their own end-point. Through play, children make connections, make discoveries, and make choices based on their own interests, needs, and strengths. They build, imagine, create, and experiment. They use their whole body to interact with the environment. They become agents of their own learning who seek to make sense of the real world, creating their own working theories about the environment around them.

Accordingly, play is a means through which learning can happen that allows children to learn through active participation and interaction. Knowing the term play from an educational point of view is primarily crucial to early childhood educators who facilitate the teaching-learning process of the program. Play is an essential component of healthy development for children of all ages. Play impacts all areas of child development; it allows children to learn about the self, others, and the physical environment. It inspires aspects of social, emotional, cognitive, and physical development that may not be achieved in any other means. When children engage in play activities, they can learn to communicate with peers while building on necessary schemas about the real world. Although play has been looked at by numerous as a simple time-filler for caretakers, several studies show that play is vital for every child. In the engagement of play, children construct necessary knowledge that includes several developmental areas, like literacy and numeracy, self-regulation, attention, creativity, problem-solving, and social and emotional skills (Bredekamp, 2017). The above study result implies that play is essential to a child's healthy development and academic achievement.

In the past, when children played with materials that had letters on them, they would become familiar with letters and words. Through play, children are continually developing their language skills in their school life. Moreover, learning with play contributes important roles that pertain to the real world. For instance, when children are involved in playing “house” or “dress up,” they often interact with one another, which is significant for language development while applying and adjusting their current knowledge about the factual world (Kimberly, Ana Garcia-Nevarez, 2014). When children engage in play-based learning, they can develop a relationship that helps them to be intimate with each other. It also helps them to express themselves and their emotions without any fear. Moreover, it increases children participation in the instructional process which

enhances their retention rate. Goldstein, (2012) says that without play it is unthinkable to achieve optimal learning and normal social functioning. Hence, play is significant for children to mature appropriately. Ethiopian curriculum framework for education states that early childhood education helps children learn through free and facilitated play that enhances their participation in the instructional process. Thus, it is important to the age group to mix spending time together in both independent and facilitated play (Jensen et al., 2019). The above point indicates that play is an essential strategy for implementing early childhood curriculum and to develop social, emotional, and problem-solving skills, and boost children's engagement.

3.11 The contribution of play in child development and learning

Play has significant role in child development and learning. Through play, children can learn and develop mentally, physically and improve social interaction. It is one of the best means that can help children learn their environment and build their mental and physical development. Ahmad (2016) states that play help children's cognitive development in various ways. It helps them develop imagination and memory which are fundamental for recalling the past, thinking of the present, and estimating the future. Play provides children with two significant components of cognitive development: problem-solving and decision-making abilities. In the child's creative power development, play can have an important role. The result of creativity is also related to cognitive development because creative thinking contributes to problem-solving. In engaging in play activities, children learn how to cooperate with their peers, communicate in dialects, take care of matters, and identify their human potential. Play contributes to the child's development by enhancing their understanding and finding their place in the world. In their formal operation

stage, most children can get rapid cognitive skills development. However, this may not work for all children, for some children in similar age groups might not have the level of mental capacities (Ahmad, 2016). From this, we can say that children's participation in play activity has paramount importance for their cognitive development and learning.

Garaigordobil Berrueco and Celume (2022) stated that play permits children to utilize their creativity through developing their imagination, ability, and physical, cognitive, and emotional strength. Play activity has significant benefit in the development of a healthy brain. Through play engagement at an early age, children interact in their surroundings to communicate with peers and learn from others. Play permits children to create and analyze the world they can master, overcoming their fears while practicing adult roles, sometimes in combination with other children or adult caretakers. As they master their world, play helps children develop new competencies that lead to enhanced confidence and the resiliency they need to confront upcoming challenges. Research findings illustrate that play contributes to language development, self-regulation, attention, and creativity, problem-solving, and social and emotional skills. Play activity has impact on children in the process of preparing them for formal education. Research also links play to children's literacy and arithmetic skills (Bredenkamp, 2017). From the ideas raised above, one can learn that children's engagement in play activity has a great contribution to the overall development of children.

3.12 Types of play

Play can inspire children to take part. It builds creativity, imagination, communication, and social skills such as cooperation and sharing ideas. Children can engage in different types of play based on their age level, interest, preference, and context. Piaget associates the kinds of play to

stages of development (Johnson, Christie, and Wardle, 2005 cited in Bredekamp, 2017). He associates the type of play with the stage of child development as follows:

- Functional play dominates the sensori-motor stage (birth to 2 years)
- Symbolic and constructive play (2 to 7 years)
- Games with rules (7 to 11 years) children in the concrete operational stage

Piaget has described this sequence as follows:

Functional play: - is play with toys or objects according to their intended function. It is a play that children play with and manipulate things to learn the nature of their environment. Children involve in functional play aiming at objects and then at the people who use the objects with them (Bredekamp, 2017). With functional play, children recurrently practice their mental patterns by interacting with objects, people, and language (McLean, 2016).

1) Constructive play: - is an organized form of play activity that is, in various ways, goal-oriented and thoughtful. Children are involved in it using materials to create and construct something new. This enhances complexity as they grow up. This type of play intends to make something and work out a problem (Kimberly, Ana Garcia-Nevarez, 2014). Forms of constructive play include building with materials such as sand, modeling clay, paint, and blocks. Constructive play requires fine motor skills, gross motor skills, problem-solving, flexible thinking, the ability to plan, test thoughts, and the capacity to work with others. With its rich capacity to educate children, constructive play is essential for any active learning environment. It is so influential because the learning opportunities it offers are almost beyond imagining. It needs capacity in the child's mind to build a conceptual 'blueprint' and realize these in reality. This type of play develops early exploratory and deceptive play but also implies the ability to

combine early 'pure' imitation with intentional expectation (Sheridan, 2011a). Moreover, constructive play is also helpful to children to improve problem-solving skills, understand the concepts of cause and effect, build up self-esteem to control their environment, enhance their interest to learn, develop self-regulation and skill of playing and working together (Bredekamp, 2017).

2) Symbolic play: - is the ability to use objects, actions, or ideas to represent other objects, actions, or ideas during play. It is a play with the various symbolic representational systems used to make and communicate meaning. This type of play would support children to develop technical abilities to express their ideas, feelings, and experiences through various media (Allen et al., 2011). Symbolic play can be used to reinforce, learn about, and imaginatively alter painful experiences (Bredekamp, 2017). It also applies where children use one thing to represent another thing, and use pretend actions and roles to describe familiar or imagined situations (McLean, 2016).

Timothy (2020) suggests that when children engage in symbolic play, they can strengthen the following areas:

Cognitive skills: Children who use their imaginations develop new cerebral connections and learn to think creatively. When they get older, this talent will help them with problem-solving. As they play, they act out experiences that they've had and integrate how to deal with them into their brains.

Social skills: Symbolic play teaches a child to see the "other." Since some kids may think in different ways than they do, children learn how to cooperate and negotiate.

Self-esteem: Symbolic play exercises cognitive skills, as mentioned above. Children need to come up with a plan and a way to carry it out. Goal achieved? That's a significant boost to developing self-esteem.

Language: Children need a developed memory to understand that an object can stand for something other than itself. This is the first step in language acquisition. Play is a great way to build up their vocabulary.

Motor skills: Play involves action. As children play, they develop fine and gross motor skills. When you watch while the kids are playing, you will most likely hear both sets of skills being practiced: "Who spilled out all the beads? Now I have to pick them up!" "Mingles with": The last one to the end of the yard is a rotten egg. Thus, using symbolic types of play in the teaching-learning process can benefit children in learning skills in expressing themselves and exploring their experiences, notions, and feelings.

3) Game with rules: - is the level of play that enforces rules of the game that the player must take after the laws of the game. A game with rules requires self-regulation by the children who play, so they can effectively take after the laws of the game and control their processes and individual self-image needs.

Games with rules are constantly characterized by reason and order, and as children grow up, they can start to create the strategy and arrange it in their game plan. Game with rules type of play behaviour suggests that children understand the social rules of their culture (Kimberly, Ana Garcia-Nevarez, 2014).

MoE, (2020) emphasized that in the curriculum framework in Ethiopian education, through play, children at the pre-primary level are encouraged to work together with other children to familiarize them with their immediate environment. This illustrates that play is essential for teaching children and for overall development. Play is one of the best ways to learn their environment and lead their day-to-day lives with enjoyment and knowledge. Therefore, play is an essential element for children that allow them to develop their personalities and relationships with others and recognize their place in the world they live in concerning others. From the stages mentioned above about play, early childhood education children more engage in constructive and symbolic play. These plays strongly promote the idea that the process through which children develop their understanding of their worlds is imaginary (Allen et al., 2011).

3. 13 Benefits of play

Play is an essential tool for teaching that facilitators use to enhance children's interest in classroom instruction. It provides children with a chance of solid development, as it addresses individual child's needs as a whole. It is an essential tool for the development of the child. All domains of cognitive, social, emotional, and physical growth of children are intricately interwoven. The skills children learn through play in the early years set the foundation for future learning and achievement in the kindergarten classroom and the workplace (White, 2012). Different studies show that using play-based pedagogy has numerous benefits (Tegrootenhuis, 2021 and Tran, 2017). Thus using it helps children to learn the lesson with fun and develop their mental, physical, social, emotional, and communication skills which are essential in their future life.

Play is a natural phenomenon for a child that creates joy and fun. The reason that preschool children are intrinsically motivated to play is to enjoy them. Learning through play is so fun to children and facilitates getting them involved (Bredekamp, 2017). A child who engages in play will develop creativity, imagination, motivation, and a positive attitude towards learning. Play activity has a significant benefit in helping children to develop their cognitive, social, emotional, language, and physical development (White, 2012). Play provides good opportunities to learn on their own than other instructional strategies. Play activity has multiple advantages for children to develop their overall personality. Incredibly, children's play with objects not only teaches them about the actual items they interact with, but also helps them acquire information from the exploratory play that helps them generalize about broad categories of similar items (White, 2012). Therefore, it is a vital instrument for the development of children classroom instruction. White (2012) stated that play benefits children's cognitive, social, emotional, and physical development in the short and long terms. Sheridan (2011) further illustrates these developments as stated below:

Cognitive Development: play gives children a chance to learn about things, thoughts, and notions. Children develop problem-solving strategies, and the capacity to allow an object to stand for another object. This is a precursor to multifaceted means of thinking (Sheridan, 2011a). Cognitive development areas are facilitated by pretend play activities. Play helps a child to: (a) expand vocabulary and link objects with actions, (b) develop object constancy, (c) form event schemas and scripts, (d) learn strategies for problem-solving, and creativity, (e) develop divergent thinking ability, and (f) develop flexibility in shifting between different types of thought (narrative and logical) (Jonathan, 2017).

Social Development: In-play activities, children can learn about themselves and others. They become aware of their behavioral influence and develop skills in conflict resolution, negotiation, confidence, and acceptance (Sheridan, 2011a). Singer et al., (2006) summarize the notion of different scholars as play is crucial for developing social competency and confidence in communicating with peers. This life skill is necessary for functioning both in school and work life. Therefore, play is crucial for developing social skills and confidence in communicating with peers, a life skill essential for both school and work life.

Goldstein (2012) has summarized the social benefits of play as

- Increases empathy, compassion, and sharing
- Creates options and choices
- Models relationships based on inclusion rather than exclusion
- Improves nonverbal skills
- Increases attention and attachment

Emotional Development: children's engagement in play focusing on the emotional benefits serves to develop a sense of ability and positive self-esteem. They can try different ways to deal with social situations and experiment with feelings, emotions, and social roles (Sheridan, 2011a).

3.14 The opportunities to implement the principles and guidelines of ECE

Early childhood education principles can allow facilitators to guide them to think, plan, organize, and direct children in the instructional process. The regulations have a direct impact on classroom interaction to bring change to children holistic development and academic achievement.

Bredenkamp, (2017) has summarized the principles of child development and learning and their implications for practice as follows:

Principle of Development and Learning

Principle 1: Domains of children’s development in physical, social, emotional, and cognitive—are closely related. Development in one domain influences and is influenced by development in other domains.

Implications for Practice

- The curriculum should be comprehensive, addressing the development and learning of the whole child.

Principle 2: Many aspects of children’s learning and development follow well-documented sequences, with later abilities, skills, and knowledge building on those already acquired.

Implications for Practice

- Teachers need to know the predictable, but not rigid, sequences of development and learning so they can assess children accurately and plan for children’s continued progress.

Principle 3: Development and learning proceed at varying rates from child to child and variable rates across different areas of a child’s functioning.

- Teachers need to get to know each child well, regularly observing and assessing each child’s abilities, skills, knowledge, and dispositions.

Principle 4: Development and learning result from dynamic and continuous interaction of biological maturation and experience.

Implications for Practice

- Teachers recognize that although there are individual differences and limits on children's learning based on maturation, experience plays a prominent role in children's development. Teachers know the benefits of early intervention for preventing later problems.

Principle 5: Early experiences have both cumulative and delayed effects on individual children's development. Optimal periods exist for certain types of development and learning.

Implications for Practice

- Teachers need to know research on the short- and long-term effects of early experience.

Principle 6: Development proceeds toward greater complexity, self-regulation, and symbolic or representational capacities.

Implications for Practice

- Teachers add greater complexity to learning experiences over time. Teachers engage children in conversations about thinking and problem-solving.

Principle 7: Children develop best when they have secure, consistent relationships with responsive adults and opportunities for positive relationships with peers.

Implications for Practice

- Teachers develop a warm, positive, trusting relationship with each child. Teachers protect the physical health and safety of each child.

Principle 8: Development and learning occur in and are influenced by social and cultural contexts.

Implications for Practice

- Teachers recognize that children’s competence acquired in their home culture may not be apparent in the school culture. They know that what is meaningful to children varies, depending on their culture and language.

Principle 9: Always mentally active in seeking to understand the world around them, children learn in various ways; a wide range of teaching strategies and interactions effectively support all of these kinds of learning.

Implications for Practice

- Teachers use a variety of teaching strategies, both teacher-guided and child-guided, to meet the needs of individual children. When teachers use a variety of learning contexts, such as large group, small group, and individual, they carefully consider each child's unique learning needs.

Principle 10: Play is an essential vehicle for developing self-regulation and promoting language, cognition, and social competence.

Implications for Practice

- Teachers purposefully plan time and materials for children’s educationally valuable play. Teachers observe children at play and interact constructively with them.
- Teachers have to integrate play throughout the lesson and within all aspects of the instruction.
- Teachers enhance children’s play, sometimes as observers and sometimes as participants.

Principle 11: Development and learning advance: This principle works when children are challenged to achieve at a level beyond their current mastery and have many opportunities to practice newly acquired skills.

Implications for Practice

- Teachers provide children with experiences at which they can be successful and provide them with some experiences that are at the “just achievable” level of challenge to stretch their learning and development.

Principle 12: Children’s experiences shape their motivation and approaches to learning, such as persistence, initiative, and flexibility; in turn, these dispositions and behaviors affect their learning and development.

Implications for Practice

- Teachers draw on and cultivate children’s interests to get their attention and keep them engaged in learning. Teachers encourage positive approaches to learning, such as curiosity and creativity.

These principles of development and learning proved an excellent opportunity for facilitators to implement play-based pedagogical strategies through logical sequencing of the flow of instructional activities in the teaching learning process.

Likewise, in Ethiopia, some guidelines give opportunities to implementers to use play-based pedagogical strategies in the instructional process. It provides the direction to implement the designed curriculum and teaching strategies in early childhood education at pre-primary schools. In addition, it offers opportunities to apply for the program with a schedule to develop appropriate social skills and proper behavior for children (MoE, 2010a). The Ethiopian national policy framework for early childhood care and education also provides an opportunity to implement early childhood education principles and guidelines effectively. Awopegba, (2013) stated that the African Charter on the Rights and Welfare of the Child in Article 12 on Leisure,

Recreation and Cultural Activities is an opportunity to implement play-based strategies in the instructional process.

Article 12“1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.”

CHAPTER FOUR

4. RESEARCH DESIGN AND METHODS

4.1 Introduction

In the previous chapter, the researcher reviewed international and national literature relevant to the purpose of the study, which focused on investigating the implementation of play-based pedagogical strategies in early childhood education curriculum in selected pre-primary schools. The research approach is based on presumptions philosophical and distinct procedures. The three main research approaches (qualitative research method, quantitative research method, and mixed research method) are the plans to conduct research that involves intersections among philosophical intents, research designs, and specific methods (Creswell, 2014). The researcher considered the philosophical viewpoint assumption that the study design is related to the worldview and that specific research methodologies transform approaches into actual activities. Thus, the main purpose of the study was to investigate the implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia. Moreover, this chapter focused on various aspects of the research design, such as methodology, population and sampling techniques, data collection instruments, validity and reliability, data analysis and interpretation, and ethical considerations. The research design outlines the plan for investigating the problem statement and explains why a concurrent mixed design was chosen. The chapter also includes a discussion of how the research design was applied during the study. The researcher follows a mixed research approach or method and discussed how samples were determined and taken, data collected, analyzed, and interpreted, and ethical issues followed and practiced.

4.2 Research questions guiding the study

The main research question which guided the study was:

- How can play-based pedagogical strategies be implemented in ECE curriculum in Ethiopia?

The main research question was supported by the following sub-research questions:

1. How do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
2. What are the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
3. Why do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia implemented in particular ways?
 - I. What are the available facilities in the Ethiopian pre-primary schools to effectively implement play-based pedagogical strategies in the ECE curriculum?
 - II. What factors/dynamics affect the implementation of play-based pedagogical strategies in ECE curriculum in Ethiopia?
 - III. How well are the principles and guidelines of ECE followed and implemented in the context of pre-primary schools in Ethiopia?

4.3 Research approach

A research approach is a framework that guides the research process, consisting of a set of assumptions, concepts, values, and practices. It shapes how researchers approach research questions, design studies, collect and analyze data, and communicate their findings (Creswell,

2014). This perspective or worldview about research is shared among a community of researchers and is based on a set of assumptions, concepts, values, and practices. Research paradigms determine how the world and its phenomena are perceived, understood, and explained. They refer to the theoretical viewpoints that influence the way research is conducted and executed (Ebohon et al., 2021). The elements of the interpretative paradigm such as ontology, epistemology, methodology and axiology shall be explored in the following sub-paragraphs.

1. Ontology: the concept of ontology in research refers to the researcher's perspective on the nature of reality. It involves comprehending what exists and how it can be explored. The researcher's ontological belief may encompass whether reality is objective or subjective, singular or multiple, and stable or constantly changing. These beliefs influence the researcher's approach to their research questions and the techniques they use to collect and analyze data (Cohen et al., 2018).

2. Epistemology: pertains to researcher's convictions regarding knowledge and its acquisition. It aims to comprehend how we can ascertain what we know and validate our claims of knowledge. Epistemological presumptions may encompass whether knowledge is objective or subjective, whether it can be discovered or constructed, and whether it can be generalized or is context-specific. These assumptions influence how researchers construct their findings and the deduction they drive from them (Cohen et al., 2018).

3. Methodology: the methodology pertains to the researcher's strategy in collecting and interpreting information. It aims to comprehend how research inquiries can be resolved through empirical investigation. Methodological assumptions may encompass whether quantitative or

qualitative approaches are more suitable whether data should be obtained through observation or experimentation, and whether data should be evaluated through statistical or interpretive methods. These assumptions influence how researchers plan their studies, gather their data, and analyze their findings (Cohen et al., 2018).

4. **Axiology** is the study of values and value judgments, which is a branch of philosophy. Its primary focus is on understanding the nature of values, their significance, and how they impact human behavior. Axiology seeks to answer questions about the worth of things, what makes them valuable, and how we can determine their value. Additionally, it explores the connection between values and ethics, as well as the role of values in decision-making processes. Axiology encompasses both subjective and objective values, including moral and aesthetic values, and it is often utilized to inform ethical and political theories (Cohen et al., 2018).

According to Cohen et al. (2018), the mixed-methods paradigm acknowledges the complexity of phenomena and the limitations of single method fully understand them. It emphasizes the need to combine different methods to gain a comprehensive understanding of the phenomenon and its various aspects. This paradigm is based on a pragmatic epistemology that requires a combination of methods, whether sequential, parallel, or synthesis, to thoroughly comprehend and evaluate the phenomenon in question.

Creswell (2018) identified three major approaches in educational research: quantitative, qualitative, and mixed research (also known as mixed methods research). Each paradigm has its own advantage and disadvantages, and the researcher selects a specific particular paradigm based on their research question, theoretical framework, and personal values and beliefs.

Understanding the underlying assumptions and techniques of various research paradigms, allows the researcher to make informed decisions about how to design and conduct their studies.

Cohen et al. (2018) further suggested that combining qualitative and quantitative research methods through a mixed-methods approach can offer a more comprehensive understanding of a research subject. This approach provides deeper insights into complex problems that cannot be fully understood using only one method. By integrating multiple data sources, researchers can obtain a wider view of the phenomenon from various perspectives, leading to purposeful data consolidation. Overall, this method enables a more complete understanding of phenomena by answering complex research questions meaningfully and combining different perspectives to focus on both the whole and its constituent parts (Cohen et al., 2018).

Cohen et al. (2018) summarized the characteristics of mixed research as a research paradigm as follows:

1. It is a research paradigm that combines both quantitative and qualitative research methods in a single study. This approach is used when researchers want to gain a more comprehensive understanding of a research problem by using multiple methods and perspectives. Mixed research allows researchers to triangulate data from different sources and validate findings through multiple sources of evidence.
2. It involves collecting and analyzing both quantitative and qualitative data and integrating the results into a coherent whole. This can be done in several ways, including sequential designs, concurrent designs, and transformative designs. Sequential designs involve conducting one type of research method first, followed by the other. Concurrent designs

involve collecting both types of data at the same time, while transformative designs involve using one type of data to transform or inform the other.

3. It encompasses addressing the strengths and limitations of both quantitative and qualitative research methods. Quantitative methods are often used to collect data that can be measured numerically, while qualitative methods are used to collect data that cannot be easily measured or quantified. By combining these two approaches, researchers can gain a more complete understanding of the research problem and its context.
4. It requires a careful planning and execution, as it involves multiple research methods and data sources. Researchers must also consider ethical issues related to data collection and analysis, as well as issues related to data interpretation and reporting. Despite these challenges, mixed research has become increasingly popular in educational research because of its ability to provide a more comprehensive understanding of complex research problems.

Dawadi and Giri, (2021) identified six key reasons for using mixed research methods: obtaining a thorough comprehension of the research subject; delving deeper into personal stories; gathering extensive data from numerous participants on various aspects of the phenomenon; improving the study's validity and reliability; enabling data triangulation; and addressing multiple research inquiries. By combining qualitative and quantitative methods, researchers can obtain a holistic view and generate substantive theories, overcoming epistemological differences between paradigms. Thus, mixed method research:

1. Combines qualitative and quantitative methods to provide a comprehensive understanding of a research phenomenon, allowing for diverse perspectives and detailed analysis. It

expands the study by collecting both closed-ended quantitative data and open-ended qualitative data.

2. Utilizes both qualitative and quantitative methods to obtain a holistic understanding of a research subject. Qualitative methods, like interviews and focus groups, allow for a more in-depth exploration of the phenomenon through personal narratives. Quantitative methods, on the other hand, provide a wider scope of data by collecting information from multiple participants on various aspects of the phenomenon.
3. Combines qualitative and quantitative methods to gain a comprehensive understanding of a research phenomenon, allowing for more detailed analysis and diverse perspectives. It provides a holistic view and aids in the development of substantive theories.
4. Combines qualitative and quantitative methods to gain a complete understanding of a phenomenon and its various aspects. It offers a holistic view, generates substantive theories, and overcomes epistemological differences between paradigms.
5. Is valuable to triangulate quantitative and qualitative data. Data triangulation is a crucial component of mixed-method research, as it helps to validate results and provide more comprehensive insights on a phenomenon. It involves comparing findings from different methods to achieve convergence and/or divergence, leading to stronger and more credible inferences.
6. Data triangulation is essential element of mixed-method research as it helps to validate results and provide more comprehensive insights on phenomenon.

Therefore, researchers can enhance the scope of their study by combining qualitative and quantitative research methods, which can provide a more comprehensive understanding of the

research subject. A mixed-methods approach can offer richer insights into complex problems that cannot be fully understood using only qualitative or quantitative methods. Mixed-method research integrates multiple data sources to provide a wide view of the phenomenon from different perspectives and research lenses, allowing for purposeful data consolidation (Dawadi and Giri, 2021).

Generally, mixed-method research involves not only combining different types of data but also integrating different paradigms, ontologies, epistemologies, and axiology to provide a fair, rounded picture of the phenomenon being studied. Defining a paradigm based solely on the type of data used in research is inadequate as it fails to encompass the broader philosophical and theoretical assumptions that shape the paradigm (Cohen et al., 2018).

Cohen et al. (2018) summarized Creswell and Plano Clark (2011) work on the four paradigms, which include post-positivism (quantitative research), constructivism (qualitative research), participatory/transformational (qualitative research), and pragmatism (quantitative and qualitative).

- Post-positivism (quantitative research), emphasizes causality and manipulation of variables (e.g., isolation and control of variables in a reductionist world), careful observation and measurement, and hypothesis testing in a world characterized by a singular view of reality and in which the researcher imposes the research on the phenomenon (i.e., top-down),
- Constructivism (qualitative research), seeks to understand a phenomenon from the participants' perspectives (e.g., Piagetian constructivism) or socially (e.g., Vygotskyian constructivism), in a world characterized by a multiple view of reality and in which the researcher works with the world as it is construed by its participants (i.e., bottom-up),

- Participatory/transformational (qualitative research), aims to improve participants' situations, through focusing on one's life; power, empowerment, social justice, marginalization, and oppression; voice and action.
- Pragmatism (quantitative and qualitative), focuses on framing and answering research questions or problem using eclectic designs, methods in which the researcher employs both inductive and deductive reasoning to investigate the multiple, plural views of the problem and the research question.

Mixed-methods research can provide more accurate data and a complete picture of the phenomenon by combining different methods and addressing researcher biases. Cohen et al. (2018) suggested that using a pragmatic paradigm that goes beyond the exclusivity of quantitative and qualitative methods. Moreover they emphasize that defining a paradigm based solely on the type of data used is insufficient, as it fails to consider broader philosophical and theoretical assumptions. Mixed-methods research should integrate different worldviews, beliefs, ways of knowing, and values to obtain a comprehensive understanding of the research problem (Cohen et al., 2018).

Creswell (2018) stated that merely defining a paradigm based on the type of data used in research is insufficient as it fails to encompass the broader philosophical and theoretical assumptions that shape the paradigm. Mixed-methods research involves not only combining different types of data but also integrating different worldviews, beliefs about knowledge, ways of knowing, and values to provide a comprehensive understanding of the phenomenon being studied.

According to Morgan (2014), pragmatist philosophy proposes using practical methods to address a specific research problem at a particular time. It suggested that multiples philosophies can be adopted within the same research project to achieve research objectives. Pragmatism asserts that all available means should be utilized to comprehend the implementation of play-based pedagogy in the early childhood education curriculum. This philosophy combines quantitative and qualitative methods in a single study to compressively tackle the issue at hand. As a result, the mixed methods approach makes knowledge claims on pragmatic consideration it prioritizes consequence is-centered on the problems, and it's pluralistic. Morgan, (2014) argued that the primary focus of mixed methods research is on the practical aspects of effectively merging qualitative and quantitative methods rather than philosophical debates. Therefore, this study adopted pragmatism to gain a more profound insight into research matters.

4.3 Research approach

According to Creswell (2018), research approaches are strategies and guidelines for conducting studies that cover anything from general assumptions to specific techniques for gathering, analyzing, and interpreting data. Hence, a research approach is a systematic process used by researchers to gather and analyze information about a specific topic or problem. It involves a series of steps that are designed to ensure that the research is conducted in a rigorous and objective manner. The research approach can vary depending on the nature of the research question, the available resources, and the desired outcomes.

Moreover Creswell (2018) specified that there are three research approaches: qualitative, quantitative, and mixed method. In qualitative research, data is collected through the use of words, such as in open-ended questions and interviews. The data collected in qualitative research is collected by observing a setting. The data is analyzed from specific to general themes, and there is room for researchers to make interpretations of the meaning of data. The final written report has a flexible structure. Quantitative research is an approach to collecting data through closed-ended questions or experimentation. Statistical measurements can be used to analyze and understand the study's data. The final written research report contains an introduction, literature and theory, methodology, results, and discussion. The third research approach is an approach to study known as mixed methods. Mixed research involves gathering both quantitative and qualitative data, integrating the two types of data, and employing unique designs that may include philosophical presumptions and theoretical frameworks. The fundamental premise of this type of research is that combining qualitative and quantitative data reveals new information that cannot be revealed by either type of data alone.

The purpose of this study is to investigate implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia. In order to achieve this purpose, mixed methods have been used.

According to Creswell (2018), a mixed method is a research methodology that collects data in both quantitative and qualitative forms, integrates the two forms of data, and uses innovative designs that could incorporate theoretical frameworks and philosophical assumptions. A mixed method study design's basic premise is that by combining qualitative and quantitative data, it can

produce additional knowledge that neither type of data alone could. The use of mixed-methods research methodology combines quantitative and qualitative method to offer multiple findings, add new viewpoints, and build a larger picture. While the qualitative methodology offers a human perspective and deeper insights, the quantitative method provides clear facts and data. This methodology offers precise data while simultaneously being exploratory, can lead to interesting findings. In addition, mixed-methods results can provide a comprehensive view of a phenomenon and further information about the diverse components of the phenomenon, which can help to generate important theories (Dawadi and Giri, 2021).

To answer the question "how play-based pedagogical strategies can be implemented in the ECE curriculum?" using a mixed research method, the following procedure has been used:

1. Identifying the research question: The research question was already identified as "How can play-based pedagogical strategies be implemented in the ECE curriculum?"
2. Conducting a literature review: A comprehensive literature review was conducted to identify existing studies and research on play-based pedagogical strategies in the ECE curriculum. This review identified the gaps in the literature and highlight areas that require further investigation.
3. Developing a research design: The research design involved both quantitative and qualitative methods to provide a comprehensive understanding of the research question. The quantitative aspect involved collecting numerical data through surveys or questionnaires to assess the effectiveness of play-based pedagogical strategies in the ECE curriculum. The qualitative aspect involved collecting non-numerical data through interviews and

observations to gain a deeper understanding of how these strategies are implemented and perceived by educators and students.

4. **Collecting data:** Data were collected from multiple sources, including educators, students, parents, and other stakeholders involved in the ECE curriculum. Surveys, questionnaires, interviews, and observations were used to collect data.
5. **Analyzing data:** Both quantitative and qualitative data were analyzed using appropriate statistical tools and techniques. The quantitative data was analyzed using descriptive and inferential statistics to identify patterns and relationships between variables. The qualitative data was analyzed using thematic analysis to identify common themes and patterns in the data.
6. **Interpreting results:** The results of the analysis were interpreted to draw conclusions about the effectiveness of play-based pedagogical strategies in the ECE curriculum. Recommendations for implementation were made based on the findings.

Generally, a research approach is a methodical procedure that researchers use to compile and evaluate data regarding a certain subject or issue. It entails a set of actions intended to guarantee that the research is carried out in a rigorous and impartial way. The most popular research methodologies are mixed-methods, qualitative, and quantitative.

4.5 Research design and method

A research design is the plan for and the foundation for approaching, operationalizing, and investigating the research problem. It is also helpful in setting out the approach, theory, and methodologies to be employed, the types of data required, how the data will be collected, from

whom, and how it will be analyzed, interpreted, and reported, the warrants to be offered, to defend the conclusions drawn and the degree of trust that can be placed in the validity and reliability of each element of the research and the sequence of the research (Cohen et al., 2018).

According to this research design, the main purpose of this study was to investigate implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopian pre-primary schools. While addressing the study purpose and basic research questions, the researcher used a mixed method with a convergent or concurrent triangulation design. The fundamental assumption of this form of inquiry is that the combination of qualitative and quantitative approaches will provide a comprehensive understanding of a research problem than either approach alone (Creswell, 2014). This method helps the researcher either to converge or merge qualitative and quantitative data to provide a more comprehensive analysis of the research problem than a single approach (Creswell, 2018). Thus, the study used a convergent parallel/concurrent design with mixed research method. This method is essential to obtain adequate information from a diverse group of people participated in the study.

Both quantitative and qualitative data were collected from facilitators and PTA members through open and close-ended questions. To triangulate the quantitative data, the researcher collected data from supervisors, principals and curriculum and ECE experts through semi – structured interview at the same time (Cohen et al., 2018). The researcher made observation using closed and open-ended checklists regarding the school facilities such as physical structure, the availability of instructional equipment, playing resources, and classroom facilities that can facilitate play-based learning strategies (Cohen et al. 2018).

4.6 Study area

This study was conducted in Sidama Region, which is one of the ten regions of the Federal Democratic Government of Ethiopia. The Sidama Region is a regional state in southern part of Ethiopia that was formed on June 18, 2020, from the former Southern Nations, Nationalities, and Peoples' Region (SNNPR). The region shares borders with Oromia Regional State to the south, north, and east, and with the Southern Nations, Nationalities, and Peoples Region to the west (CSA, 2012).

According to the Ethiopia Central Statistics Agency (CSA) projection for 2022, the total population of the region is estimated to be 4,565,655. With an area of 6538 km², Sidama has a population density of 452/km² and an average household size of 4.99 persons. The population is predominantly rural, with only 5.51 percent of inhabitants living in urban areas and 0.18 percent being pastoralists (MoPD, 2021). In Sidama Region a considerable area of land produces coffee, which is one of the major cash crops. Enset is the most essential root crop grown in the study area (FDRE Central Statistical Agency, 2021). From the root and stem of enset is prepared *Kocho* which is a staple food throughout the region. The products the *enset* is used as the cultural food in the region: *Bursame* and *Chukame* are made of *kocho*, cow's milk butter, meat, and cabbage. The study area included nine *woredas* and two city administrations. The names of the study sample *woredas* and city administrations are indicated in the following table: In Sidama National Regional State pre-primary school gross enrollment rate in 2020/21 academic year for children aged four to six was 245,057 (MoE, 2021).

4.7 Target Population and Sample Size

The sample size of each target population was determined based on the assumption that the ideal sample size is large enough to be selected in terms of both time and complexity and small enough to be manageable and specific for analysis (Best, Kahn, and Jha, 2017). Besides, judgments were made about four key factors in sampling. These are the sample size, representativeness, and parameters of the sample, access to the sample and the sampling strategy to be used (Bordens and Abbott, 2018). The sample size of large target population like school facilitators was determined using Cochran, (1977) Formula, $n = \frac{N}{1 + N(e^2)}$. Where: e = the level of precision with +/- 5%, n = sample, N = total population, at 95% confidence level, and $p = 0.05$ for categorical level for an alpha level. Accordingly, the samples chosen from large target population such as facilitators were estimated by using this formula.

For clear information about the demographic features of the study area, Sidama National Regional State is the 10th recently established regional state in Ethiopia. Earlier, the regional state was part of the Southern Nations Nationalities and Peoples Regional State (SNNPRS) until 2020. It was established by the Federal government as a 10th regional state. The region is comprised of 30 *Woredas* (local administrative units) and 7 city administrations.

Table 4. 4 Description of the study area (Sidama Region) and target population

No	Location/ <i>Woreda</i>	City/town	Governmental pre-primary school	Private pre-primary school	Total
1	Hawassa city administration	Hawassa	3	3	6
2	Wondogenet	Wondo Genet	2	2	4
3	Shebedino	Leku	2	2	4
4	Dale	Yirgalem	3	3	6
5	Boricha	Yirba	3	3	6
6	Hula	Hagere Selam	2	2	4
7	AletaWondo city administration	AletaWondo	3	3	6
8	Bensa	Bensa Daye	2	2	4
9	Hawassa Zuria	Dorebafano	2	2	4
10	Dara	Kebado	2	2	4
11	Hawela	Hawela	2	2	4
Total			24	24	48

Out of 37 *woredas* and four city administrations, the nine *woredas* and two city administrations in the Sidama Region were selected using purposive sampling techniques based on access of ECE program in pre-primary schools. From these *woredas*, 48 primary schools, 24 public and 24

private pre- primary schools were selected using simple random sampling technique. The sample size of each target population was determined by assuming that the ideal sample size is large enough to be selected economically in terms of both time and complexity and small enough to be manageable and specific for analysis. Accordingly, the researcher thought that the sample size should consider that the needed size has to ensure the amount of acceptable error and the expected magnitude of the population proportions (Bordens and Abbott, 2018).

Table 4. 5 Samples and sampling techniques

S/N	Categories		Population	Sample	Sampling technique
1	Supervisors	Educational experts	11	4	Purposive sampling technique
2	Principals		48	10	Purposive/ judgmental
3	Curriculum and ECE experts		11	4	purposive
3	School Facilitators /teachers		4250	365	Stratified followed by simple random sampling
4	PTA (parent teacher association)		240	48	Simple random sampling
Sum			4560	431	

The researcher used both probability and non-probability sampling techniques while conducting this study. Accordingly, a total of 431 respondents were selected from 4560 target population.

Meanwhile, 4 supervisors were selected using purposive sampling techniques because of their supervision experiences, 10 principals, 2 curriculum experts and 2 early childhood education experts were selected using purposive sampling technique, 365 school facilitators were selected from 4250 facilitators using stratified sampling followed by simple random sampling technique after determination of the sample size using Cochran formula. 48 PTA members were selected using simple random sampling techniques from selected pre- primary schools of 2020/2021 academic year believing that this sampling technique provides an equal and independent chance for each respondent to be selected as a sample for the study.

4.8 Data collection instruments

The instruments the researcher used to gather data were questionnaires, interviews, classroom observation, and document analysis. Creswell and David (2018) stated that employing multiple data collection instruments helps the researcher to combine and strengthen the inadequacies and triangulation of data.

4.8.1 Questionnaire

The questionnaires were the main data-gathering instruments, while interviews, classroom observation, and document analysis were used to enrich the data. Researchers usually preferred questionnaires because it is easier to handle and simple for respondents to answer within a short period (Israel, 2018). Closed- ended questions were prepared for teachers (facilitators) and PTA members in Amharic (Ethiopian national language). The information that was collected in the questionnaire was used to evaluate the existing practices of implementation of play-based pedagogical strategies, teacher's awareness of the value of play in the instructional process. In addition, data was collected on the teaching strategies that teachers used and the challenges they

encountered in the implementation of play-based pedagogy. Self-developed questionnaire was used for data collection and it was pre-test in schools other than the sampled schools in Sidama regional state.

4.8.2 Interview guide

A semi-structured interview guide is a type of qualitative research method that combines elements of both structured and unstructured interviews. The main goal of a semi-structured interview is to gather rich and detailed information about the interviewee's experiences, perspectives, and opinions. Thus, a semi-structured interview gives both the interviewer and the study participants a chance to talk about how they look at their surroundings and explain how they perceive things from their own perspectives. Thus, semi-structured interview guide questions were developed to collect information from the study participants. The interview was allowed the respondents to talk openly about a topic, largely without the use of specific questions. It also gives the researchers the opportunity to observe the respondents' views, emotions, opinions, feelings, experiences, and reactions (Creswell, 2018).

The semi-structured interview guide questions were prepared for supervisors, principals and curriculum and ECE experts. Semi-structured interviews were used because it is helpful in providing freedom to discuss the issues and it tends to generate argued responses. It is flexible and allows the respondents to disclose their opinions openly on the issues raised by the researcher (Denscombe, 2014). The data that were collected through interviews is to evaluate the existing practice, the available facilities and the existing opportunities to implement play-based pedagogical strategies in Ethiopian primary schools. The information obtained from this instrument was used to supplement the data obtained from a questionnaire and document

analysis. Moreover, for confirmation of the instructional alignment between teachers' use of play-based pedagogical strategies in the classroom, observation can be made and different documents were analyzed. In the observation, ten classrooms were observed in Hawassa City Administration, both government and private schools. These schools were selected because there is better facility to implement early childhood education than it is in others. Besides, the Ethiopian Educational and Training Policy, early childhood education curriculum and teacher's lesson plans were analyzed. The information that were collected from documents, curriculum materials and lesson plans were used to evaluate the prevailing direction, the existing plan and teachers' preparation to use play - based pedagogical strategies in the implementation of ECE curriculum in pre-primary school respectively.

4.9 Validity and reliability

To assure the quality of data of the study, it is crucial to measure the validity and reliability of data collection tools before gathering information from the actual study respondents.

4.9.1 Validity

To ensure the validity of instruments, after the development of the instruments for data collection, validity was maintained by using expert review. The reviews given by the experts were discussed and the agreed up on comments were incorporated. To secure the validity of the data, different sources were used. Initially the instruments were prepared by the researcher and developed under close guidance of the supervisor, who was involved in providing his inputs for validity of the instruments. The data from these sources were cross-checked according to the research questions and objectives. Moreover, data from different data gathering tools were compared. In summary, triangulations were made in terms of data sources and data collection

instruments. The English version questionnaires were checked and corrected by English subject specialist teachers from one of the selected schools.

Pilot Study

Doing a pilot test of the instrument before starting data collecting for the main study helps to identify errors, limitations, or other weaknesses in the research questions and provides a chance for amending. As to Bryman and Bell, (2011), the goal of conducting a pilot study, is not just to ensure that survey questions work well but also to ensure that the research instruments as a whole work properly. The primary goal of the pilot study was to gather information to get ideas for appropriate study's design and procedure. In order to finalize the instruments pilot test is the means. In relation to this, it is crucial to establish internal consistencies such as validity and reliability of the items in the questionnaires. The focus of the pilot test aimed to address points like checking the suitability of instruments through adaptation or standardization in the development of play-based pedagogy implementation measures and to verify the reliability of the data collection instruments. Qualitative results reliability was retained by evading vague questions and completing a pilot survey to validate the instruments prior to the main data collection. Concerning this, Creswell, (2014) states that in order to maximize the validity of data collection instrument, extended field work, reflexivity, methodical triangulation, and use of numerous sources of data are essential. Accordingly the survey questions were developed and refined based on literature review and play-based pedagogy conceptual framework, objectives and research questions.

Validity of the study instruments

A pilot test was conducted to pre-test data collection tools prior to the actual study. Instrument validation helps to confirm the instrument as it is acceptable to measure what it is expected to measure and performs what it is designed to perform. The intention of pilot test was to expose deficiencies in the research design of the study and address each of them before the actual study. The pilot test was conducted in four schools which were not included in the final study. These schools were carefully selected to ensure that they were comparable to the schools where the study was conducted. The method used to select the survey participants and questionnaires was similar to the method used to conduct the actual study. The researcher sent questionnaires to teachers through data collectors and used an observation schedule to gather information about the availability of play resources in each pre-primary school.

Three instructors of the College of Education evaluated the validity of data gathering tools in order to check validity of the questions, appropriateness of the questions to the respondents, their relatedness to basic research questions, as it can measure the objective of the research, and its content representativeness of the study. The questionnaire that was prepared for teachers, PTA members was evaluated by four scholars using two different languages that are English and Amharic prior to the pilot study. Accordingly, out of the 115 close-ended questions and 7 open-ended questions a total of 122 items were used in questionnaires to collect data. In addition, two English language instructors evaluated the questions that were translated into Amharic.

4.9.2 Reliability of the study Instruments

Creswell and David (2018) state that reliability is refers to the consistency or repeatability of an instrument, the extent to which the results are similar over different forms of the same instrument or occasions of data collection. After developing the instruments for data collection, reliability is checked using item reliability statistical procedure. Thus, before conducting the actual study pre-test of questionnaire was implemented to determine the internal consistency and reliability of the questionnaire. Cohen et al. (2018) explain that if the calculated value of Cranach's alpha (α) become greater than 0.90, it indicates very high, if the range lies between 0.80-0.90, it shows high reliability, and 0.70-0.79 indicate reliable and 0.60-0.69 indicate marginal value on the reliability of them item.

The degree to which study results are comprehensive, dependable, and confirmable is referred to as reliability (Lapan et al., 2012). Credibility, transferability, dependability, and confirmability are occasionally used interchangeably with reliability. The term "credibility" describes how much a study can be relied upon or taken seriously. As to Elo et al., (2014), trustworthiness is guaranteed when the right research methods are used and triangulated. The degree to which the results can be extended and used to different contexts is what is meant by transferability. It is established by giving the participants feedback and then verifying or evaluating if the input is consistent with the earlier findings. The consistency, reproducibility, and verifiability of the data collection methods are all examples of dependability (Kivunja and Kuyini 2017). In-depth methodological descriptions must be given in order to establish dependability. In order to ensure that the findings actually follow from the data as anticipated, the researcher should also employ procedures and expertise that can be independently verified. The degree to which other people

confirm or concur with the research findings is referred to as confirmability. The researcher carried out the pilot test of the instruments at four schools. The questionnaires were administered to the teachers in the schools selected for pilot test. The result was analyzed using Cronbach's Alpha Coefficient to measure dependability of the items. The minimum alpha coefficient value greater than or equal to 0.70 is dependable. Thus, in the pilot it was obtained 0.773 and above was chosen to be used in the actual study. It can be thus concluded that the research instruments were reliable. The results of reliability test are displayed in Table 4:3 below:

Table 4. 6 Reliability Test results for Teachers' and PTA Questionnaire

No	Variable	Cronach's Alpha	No. of items	Comments
1	Teacher's awareness on the values of play in the implementation of ECE curriculum	.806	21	Reliable
2	Teaching strategies to implement play-based pedagogy	.824	18	Reliable
3	Facilities used in pre-primary school implement play-based pedagogy	.824	16	Reliable
4	Varieties of activities for play-based learning strategies	.846	11	Reliable
5	Physical environment of pre-primary school	.929	22	Reliable
6	Challenges of implementing play-based pedagogical strategies in pre-primary school	.847	10	Reliable
7	Principles in primary school	.773	10	Reliable
8	Guideline in primary school	.821	7	Reliable
	Total		115	

From Table 4.5, Cronach's alpha for variable 1-8, was 0.806, 0.824, 0.824, 0.846, 0.929, 0.847, 0.773 and 0.821 respectively, which is above the threshold of 0.7. A correlation coefficient (r) of approximately 0.75 is considered good and high enough for the reliability of the instruments (Bonett and Wright, 2017).

4.9.3 Trustworthiness

The study used trustworthiness to maintain the quality of the research findings. According to Sibisi (2019) a study's trustworthiness is ensured when research findings provide the necessary answers, understandings, and enhancements on the particular phenomenon. If a research is haphazardly conducted, it can mislead the readers. Trustworthiness helps to find out that the results of the study are credible, transferable, conformable and dependable and used to ensure the quality of the research (Sibisi, 2019).

Credibility: is the internal validity of research; it establishes confidence or shows the truthfulness of the study result. Thus, to ensure the credibility of the study the researcher used observation and triangulation strategies (Ismail, 2018).

Transferability: is an external validity that confirms the research can be generalized to another context even though it is performed by another researcher (Sibisi, 2019). To ensure transferability of the study and provide adequate information to readers, the researcher focused on the development of a questionnaire. Moreover, he provided a detailed description of the research process (Ismail, 2018).

Confirmability: refers to objectivity, concerns about if the data represent the information provided by research respondents or not. Hence, to confirm the confirmability of the study the

researcher used the respondents' responses and opinions. Moreover, the research avoided personal bias or perspective (Polit and Beck, 2017).

Dependability: refers to the reliability of data over time and conditions (Polit and Beck, 2017).

To confirm the dependability of the study, the researcher kept the record in all phases of the study to follow proper procedures. Besides, it was given to external reviewers to examine the research process and the data analysis to ensure that the results are consistent and could be repeated (Korstjens and Moser, 2018).

4. 10 Data collection procedures

Data collection is the process of collecting and measuring information on relevant variables in an established, systematic way that makes it possible to answer specified research questions, test hypotheses, and assess results (Muhammad and Kabir, 2018). The data collection procedure for mixed research methods involves identifying research questions, choosing appropriate data collection methods, developing data collection instruments, pilot testing the tools, recruiting respondents, and collecting quantitative and qualitative data (Creswell, 2018). Thus, as the study is a mixed research method, it involved the use of both quantitative and qualitative research methods. The data collection procedure for the mixed-research method is a crucial step in the research process, as it determines the quality and reliability of the data collected. The following is a procedure the study followed: before starting collecting data, ethical clearance letter was collected from the University Of South Africa (UNISA). After obtaining the letter, it was submitted to the Sidama Regional Education Bureau to get permission to visit the sample pre-primary schools in the region to collect data for the research. Copies of the regional education bureau letter were given to the principals of the sampled schools. Then, before distributing the

questionnaires to respondents, they were pilot-tested in some of the non-sampled pre-primary schools for their clarity and validity. Then, corrections were made as a result of the comments of the respondents and experts. Then, the edited questionnaires were distributed to the sample teachers in their respective schools to be filled out. Then, the required qualitative data were gathered step by step through semi-structured interview questions, observation checklists, and documents analysis.

In each sampled school, the principals were communicated by the regional education bureau through letter. Then, the principals were informed about the overall purpose and objective of the study. Then questionnaires were given to them to be distributed to the study respondents. It was helpful for the researcher to get support from all the study respondents to collect data and conduct the research, and it facilitated gathering the necessary information. Then, study respondents were selected randomly from each school. After selecting respondents, they were briefed on the content of the questions and asked to provide the required information by filling out the questionnaire. Briefing the respondents ensured the consistency and accuracy of the information. After the questionnaire is distributed, interview was held with the principals. This approach might ensure a high percentage of questionnaire return rates because the availability of the researcher in the study area to interview the principals gave teachers adequate time to fill out the questionnaire and return it. Thus, quantitative and qualitative data were collected simultaneously. Hence, quantitative data was collected via questionnaire from the respondent's teachers. Likewise, qualitative data was collected concurrently with interview guidelines from principals, ECE coordinators, and curriculum experts. Similarly, observation was conducted using checklists, and document review was made to obtain the required information.

4.11 Analysis and interpretation of data

Both qualitative and quantitative methods were used to analyze the data. Creswell (2013) states that concurrent mixed-method helps to achieve what is termed as triangulation where a comparison between different data bases could be made for better effect. Mixing of the two types of data (qualitative and quantitative) is made at the interpretation or discussion to merge the data. This means one type of data was transformed to another type, and the results of the two data bases are compared side-by-side in a discussion forum. Consequently, the quantitative data that was collected through questionnaires were tallied, tabulated and analyzed in tables by using appropriate descriptive and inferential statistical techniques such as mean, standard deviation, linear correlation, and independent sample t-test. Moreover, percentages and tables were employed to compute different variables. These statistical techniques were used to analyze implementation of play-based pedagogical strategies in ECE curriculum in government and private primary schools by using SPSS Version.28. The data that was obtained through interview, classroom observation, open-ended questions of the questionnaire, and document analyses were organized and narrated by using descriptive statements. All the information that was gained through qualitative tools were transcribed in to English and analyzed after coding and entering it in to ALTA8 software which is designed to analyze qualitative data.

4.12 Ethical considerations and practices

The researcher wrote a letter of request to obtain ethical clearance from the university (UNISA). After receiving a formal letter from UNISA, the letter was submitted to the local government authorities and to the school principals prior to the study. In addition, respondents were informed verbally and in a written form in the introduction part of the questionnaire and interview guide about the purpose of the study along with their right to refuse. Furthermore, the study

participants were assured of the confidentiality of the information they provide by explaining to them that there is no need of writing their names and other identifiers of their status. The information was not exposed and kept confidential that no one had the opportunity to see the response except the researcher. The information they provided and the data obtained from the document and others were not used for any other purpose rather than for the research purpose.

Chapter summary

This chapter dealt with the research methodology that the study employed. The study adapted a convergent parallel/concurrent mixed design and mixed method (quantitative and qualitative methods), which has the practical advantage of giving a more comprehensive understanding of research topics. The researcher used survey to collect data from a sample of individuals using questionnaires or interviews. The purpose of the survey was to gather information about attitudes, beliefs, opinions, behaviors, and experiences related to the implementation of play-based pedagogy. It allowed the researcher to collect large amounts of data quickly and efficiently, and to generalize findings to larger populations. The study used a mixed-methods research approach that particularly employed pragmatist paradigm and philosophical assumptions to understand the implementation of play-based pedagogy in early childhood education curriculum. The target population and sample size of the study were presented in table 4.2. The data collection instruments were questionnaires, interview, observation, and document analysis. The data-gathering procedure and the analysis and interpretation of the data were exhaustively presented in the chapter. Finally, ethical considerations and practices were explained.

CHAPTER FIVE

5. PRESENTATION, DATA ANALYSIS, INTERPRETATION AND DISCUSSION, OF FINDINGS

5.1. Introduction

Chapter five presents presentation, analysis and interpretations of data in relation to implementation of play-based pedagogical teaching strategy of ECE in pre-primary school. Educators suggested that data analysis is a method of transforming, remodeling, and revising data to arrive at a specific conclusion for a given circumstance or problem (Johnson, 2011). Thus, the main goal of this chapter is to present, analyze and interpret both quantitative and qualitative data collected through questionnaires, interviews, observation checklists and document analysis.

5.2. Response rate and views of key informants

In the present study, out of the four hundred thirty one (431) questionnaires sent out to respondents (teachers and parent-teacher association), three hundred and eighty eight (388) were properly filled out and returned to the researcher on time. Therefore, 90% of the questionnaires were returned. Quantitative analysis was carried out using the responses of these respondents. The questionnaire was administered with the help of three research assistants. The qualitative data collection specifically interview with 14 key informants (principals, supervisors and ECE coordinators) was conducted side-by-side. The data was analyzed and interpreted in themes concurrently.

5.3. Presentation of data

The data in the present study was presented in narrative descriptions with descriptive statistics. The findings are stated based on the specific objectives of the study. The main objective of the study was to investigate the status of implementation of play-based pedagogical strategies in ECE at pre-primary schools. In line with the present study, Chanwaiwit (2019) studied using effective feedback to improve professionalism as an English student teacher modified a 5-point Likert scale agreement as classified questionnaire with close-ended questions ranging from "Strongly Agree" at one end to "Strongly Disagree" at the other. The researcher modified and applied this model throughout the study as stated in table below (Table 5. 1).

Table 5. 1 The range of answer options of the Likert scale

Range	Agreement	Classification
4.21 – 5.00	Strongly agree	
3.41 – 4.20	Agree	High performance
2.61 – 3.40	Undecided	Medium performance
1.81 – 2.60	Disagree	
1.00 – 1.80	Strongly disagree	Low performance

The respondent teachers and PTA members were asked to complete the 5-point Likert scale questionnaire on the implementation of play-based pedagogy in early childhood curriculum. The respondents were asked to rate their degree of agreement/disagreement with the questionnaire items as Strongly Agree (4.21-5.00), Agree (3.41-4.20), Undecided (2.61-3.40), Disagree (1.81-2.60) and Strongly Disagree (1.00-1.80) which were further categorized into three groups: High performance (Agree and Strongly Agree), medium performance (Undecided), and low performance (Disagree and Strongly Disagree).

The data were analyzed for –and –against the following specific objectives of the study. These are:

- ❖ Scrutinize the awareness of teachers on the values of play in the implementation of the ECE curriculum.
- ❖ Identify the strategies teachers are using while implementing play-based pedagogical practices in ECE curriculum.
- ❖ Assess the existing facilities in school that help implementation of play-based pedagogical strategies.
- ❖ Find out challenges that affect implementation of play-based pedagogical strategies in ECE curriculum.
- ❖ Evaluate the implementation of ECE principles and guidelines in Ethiopian primary schools.

5.4 Background information of respondents

This section presents the background information on participants of the study (teachers, principals, ECE coordinators, curriculum experts, and PTA members).

Table 5. 2 Gender, age and qualification of respondents

No	Variables	Category of item	Respondents								Total	
			Teachers		PTAs		Principals		Curriculum and ECE experts		Total	Total
			n	%	n	%	n	%	n	%		
1	Gender	Male	64	17	9	2	2	20	1	25	76	19
		Female	279	72	36	9	8	80	3	75	326	81
		Total	343	89	45	12	10	100	4	100	402	100
2	Age	18-25	164	42	18	5	-	-	-	-	182	45
		26-30	132	34	19	5	3	30	1	25	155	39
		31-35	39	10	7	2	7	70	3	75	56	14
		>40	8	2.1	1	0.3	-	-	-	-	9	2.24
		Total	343	88	45	12	10	100	4	100	402	100
3	Educational Qualification	Certificate	70	18	10	2.6	-	-	-	-	80	19.9
		Diploma	187	48.2	21	5.4					208	51.7
		BA/BSc	82	21.1	13	3.4	10	100	4	100	109	27.1
		Without training	4	1.0	1	0.3	-	-	-	-	5	1.24
		Total	343	88.4	45	11.6	10	100	4	100	402	100

Table 5.2, item 1 indicated that while most of the respondents, 279 (72%) were female teachers, 64 (17%) were male teachers. The high number of female teachers could be taken positively since they are better suited to caring for and teaching the early childhood children patiently children are. Regarding PTA members, 36 (9.3%) were female, and 9 (2.3%) were male. There was dominance of one gender.

Concerning the age of respondents, Table 5.2, item 2 indicated that 164 (42.3%) of the respondent teachers were under the age category of 18-25, 132 (34%) under the age category of 26-30, 39 (10.1 %) under the age category 31-40, and the remaining 8 (2.1%) under the age category of above 40 years. The result of the study shows that the age of the majority of teacher respondents in private and public pre-primary schools was between 18-25 years. This result implies that most of the respondent teachers were young and productive, and that experienced teachers are not involved actively in ECE given their experience and qualification. However, the age of teachers is appropriate to manage and to teach children through play-based pedagogical practices.

Table 5.2, item 3 shows that most of the teachers, 187 (48 %), were diploma holders, 82 (21%) were first degree holders, 70 (18%) were certificate holders, while 4 (1%) of the teachers were those who had no training to teach pre-primary school children. The result implies that most teachers are diploma holders who met the Ethiopian education standard of the pre-primary school. However, the degree holders appear to be over qualified for the level. On the other hand, the certificate holders and the untrained one are under qualified (MoE, 2017). The subjects provided at pre-primary schools require trained teachers to teach through play-based pedagogy. This finding is in line with the findings of Dzamesi (2020) who stated that early childhood education teachers must significantly realize and view the connection between play and learning in their pre-primary pedagogical decisions. Practices like presentation of instructional content, classroom arrangement, and the level of their involvement in children's play and the provision of support in children learning. Thus, scholars participating in pre-primary school activities require training and knowledge about children's development and education.

Table 5. 3 Work experience and job status of respondents

No	Item	Category of item	Respondents								Total	
			Teachers		Parent teacher association (PTA) members		Principals		Curriculum and ECE experts		n	%
1	Teaching experience in years	1-5	214	55.2	25	6.4	-	-	-	-	239	59.5
		6-10	109	28.1	14	3.6	-	-	-	-	123	30.5
		>10	20	5.2	6	1.5	10	50	4	100	40	10
		Total	343	88.4	45	11.6	10		4	100	402	100
2	Job-status	Permanent	316	92	45	11.6	10	100	4	100	375	93.3
		Part-time	27	8	-	-	-	-	-	-	27	6.7
		Total	343	88.4	45	11.6	10	100	4	100	402	100

Table 5.3, item 1 shows that the number of teachers with teaching experience of 1-5 years were 214 (55.2%), 6-10 years were 109 (28.1%), and above 10 years were 20 (5.2%). The results show that most of the teachers have relevant experience in practicing play-based pedagogy at the level they are teaching. Concerning respondent teachers' job status, item 2 of the same table revealed that most of them 375 (93.3%) are permanent staff. The remaining 27 (8%) teacher respondents were part-time staff in their respective schools.

Table 5. 4 Models of teaching pre-primary teachers use in the classrooms

Models of teaching	Teachers		PTA members	
	Frequency	Percent	Frequency	Percent
Montessori	48	12.4%	6	1.5%
Froebel	6	1.5%	1	0.3%
Traditional	250	64.4%	30	7.7%
Eclectic (Montessori and Froebel)	39	10.1%	8	2.1%
Total	343	188.6%	45	11.6%

Table 5.4 shows that all models of teaching in pre-primary schools were implemented to some extents. The most commonly used model was traditional 250 (64%) followed by Montessori model 48 (12%) of teaching. A few teachers used a combination of Montessori and Froebel models 39 (10%) in their teaching. Most pre-primary teachers who participated in the present study needed to familiarize themselves with the Montessori and Froebel teaching models as modern models of teaching early childhood education. According to Feez (2010), the Montessori approach uses the learning material to capture children's interest, attract attention, and encourage independent use. When children work with the Montessori learning materials, they refine their insight and movements, mainly manual skills, without the help of others. In addition, Spielgaben (2013) stated that as Froebel young children learn best in settings that provide a stimulating and prepared environment where they can explore and learn from their own experiences and perspectives. Thus, the pre-primary school teachers participated in the study need to catch up with the intentions of these modern teaching models.

5.4.1 Awareness of teachers on the values of play-based pedagogical practices

Teachers' awareness on the values of play-based pedagogical practices in classrooms is essential before their involvement in the actual implementation of the practice. The study examined teachers' awareness of the values of play on children learning. Respondents were asked to show their degree of agreement or disagreement on the questions which measure their awareness of the value of play in pre-primary education. A list of questions was offered to allow them to think about their preferences, and most of them indicated their choice. To measure teachers'

awareness of the values of play-based pedagogy, descriptive statistics such as frequency, percentage and inferential statistics, i.e., two-tailed t-test were used. The findings of the study are presented in the following tables:

5.4.1.1 Teachers awareness of the values of play-based pedagogy

Table 5. 5 Teachers' awareness of the values of play

No	Item	Level of Awareness	Public		Private		Total		Mean	SD
			N	%	n	%	N	%		
1	Teachers' awareness on the values of play-based pedagogy	Aware	86	22.2	115	29.6	201	51.8	2.60	.72
		Not aware	89	22.9	98	25.3	187	48.2		
		Total	175	45.10	213	54.90	388	100		

Table 5.5 shows that 86 (22.2%) public and 115 (29.6%) private pre-primary school teachers responded that they knew the values of play-based pedagogy. In comparison, nearly half of the teachers, 187(48.2%), responded that they were not aware about the values of play-based pedagogy. In open-ended questions, teachers who responded to challenges in implementing play-based pedagogy mentioned that they need to learn the values of play-based pedagogy because they lack training in that for teaching at pre-primary schools. Interviewee with the ECE coordinators revealed that teachers who are trained for pre-primary school have good awareness (ECI, May 2, 2022); however, those who are not trained to this level need to be made aware of the value of play-based pedagogy. The mean value of item 1 (M = 2.6) is below the average mean (AM = 3.0) by pre-primary school teachers. This revealed that they lacked awareness on the values of play-based pedagogy in the implementation of play in the ECE curriculum.

In addition, to the question “*what do you say about the awareness of teachers on the values of play in the implementation of ECE curriculum?*” one of the principals stated:

The awareness of the values of play-based pedagogy varies from teacher to teacher. Teachers who are trained in Montessori have an excellent awareness of the values of play-based pedagogy but those teachers who do not have training in the area need awareness. As a principal, I do not have training in pre-primary school teaching, but we hire trained teachers. However, this does not mean that there is a lack of awareness. We observed as there needs to be more in implementing play-based pedagogy practically (PI. March 15, 2022).

The other principal interviewee also responded similarly:

In our school, most teachers have not been trained in play-based pedagogy. As a result, they may find it challenging to apply play-based pedagogy in the teaching-learning process. Somehow their awareness on the values of play is not that much good. Nevertheless, some teachers try to teach children by singing and telling stories by looking at other teachers (*PII*. March 18, 2022).

This result reveals that teachers' awareness on the value of play-based pedagogy in implementing early childhood curriculum could be more encouraging. It was due to lack of teachers' exposure to play-based pedagogy during their training and a lack of on-the-job training. This finding shares similarities with the finding of Bredekamp (2017) who stated that Play is a means through which learning can happen that allows children to learn through active participation and interaction. Thus, being aware of the values of play from an educational point of view is crucial to early childhood educators who will facilitate the teaching-learning process of the program.

In addition to teachers' awareness of play-based pedagogy, the other school principal respondent said, “most teachers need to gain practical skills to apply play-based pedagogy in their classrooms. However, some try to apply a few games in their instruction. This might be the

teachers who apply games may have been trained in play-based pedagogy, but the others need to be trained” (PIII, March 21, 2022).

The above quantitative and qualitative results showed congruence with the findings of Bredekamp (2017) who stated that knowing the values of play-based pedagogy is essential to make children’s learning effective and ensure active participation and interaction. Thus, knowing the term play from an educational point of view is crucial to early childhood educators who will facilitate the teaching-learning process of the program. Play is an essential component of healthy development for children of all ages. It inspires aspects of social, emotional, cognitive, and physical development that may not be achieved by any other means. As a result, it is essential for teachers to know the values of play and implement them to bring about the child's healthy development and academic achievement.

5.4.1.2 Teachers Perception about the values of Play-based pedagogy

Table 5. 6 Teachers’ and PTA members’ perception of the values of play

No	Variable	Participants	n	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
1	Children learn best through play in the instructional process	Teacher/Facilitator	343	2.56	1.34	.101	.75	-1.02	386	.307	-.29
		PTA	45	2.78	1.35			-1.02	56	.311	-.29
2	Play-based learning is a warranty for primary school education	Teacher/Facilitator	343	2.77	1.42	.029	.87	.47	386	.640	.106
		PTA	45	2.67	1.48			.45	55	.651	.106
3	Integrating play activities in curriculum implementation is difficult	Teacher/Facilitator	343	2.76	1.49	.041	.84	.95	386	.343	.22
		PTA	45	2.53	1.55			.92	55	.361	.22
4	Including play-based activities in the instructional process is not easy	Teacher/Facilitator	343	2.98	1.59	1.759	.19	1.76	386	.08	.44
		PTA	45	2.53	1.55			1.80	57	.08	.44

5	Play-activities waste valuable time	Teacher/Facilitator	343	2.73	1.57	.023	.88	.70	386	.49	.17
		PTA	45	2.56	1.59			.69	56	.50	.17

NB: mean value 3.41- 5.00 strongly agree and agree (high performance), 2.61-3.40 undecided (medium performance) and 1.00 -2.60 disagree and strongly disagree (low performance)

Table 5.6 shows the results of two-tailed t-test on respondents' perception on the values of play-based pedagogy, with a sample size of 343 teachers and 45 PTA members (total sample size (n = 388). The mean and standard deviation (SD) are provided for each item, along with the t-value, degrees of freedom (df), significance (p-value) for a two-tailed test and mean difference.

As shown in Table 5.6, the mean values of the responses given to all items by both the teachers/facilitators and PTA members were in the range of 2.61–3.40 indicating that both groups could not agree or disagree with the item statements indicating low performance of play based pedagogical practices in ECE. In addition, there was no statistically significant difference ($p > 0.05$) between the mean values of all the responses given by these two groups for the five items listed in Table 5.6. This indicated that teachers / facilitators and PTA members have low perception about the importance of play-based pedagogy for pre-primary school children, and the associated challenges.

In addition, in the interview the question “*What do you say about the awareness of teachers on the values of play in the implementation of ECE curriculum?*” one of the principals stated:

In implementing a preschool curriculum, all teachers may not have the same understanding of the values of Play. Trained teachers are aware of the values of play. However, the non-trained teachers are not aware of the values of play. Personally I do not have training in pre-primary school teaching, but we hire trained teachers. However, this does not mean that there is a lack of awareness.

We observed as there is a gap in implementing play-based pedagogy practically (PII, March 18, 2022).

Moreover, Bredekamp (2017) stated that play is a means through which learning can happen that allows children to learn through active participation and interaction. Thus, being aware of play's values from an educational point of view is crucial to early childhood educators who will facilitate the teaching-learning process of the program. However, most of the study participants lack awareness on the values of play based pedagogy. This finding was supported by Tegrootenhuis, (2021) as play is one essential form of learning for children. However, there was a shift away from focusing on play in early childhood education by emphasizing on rigorous academics. Numerous researchers believe that the decline in play is a result of lack of access to education that is no child left behind education in which the achievement of children is left to school. The other likely cause of decline of play might be related to giving high emphasis to schooling and adult-directed learning activities.

Table 5. 7 Respondents’ perception of the implementation of play-based pedagogy (n=388)

Variables	n	Mean	SD	Std. Error Mean	t	Df	Sig. (2-tailed)
Play based pedagogy is a child-centered approach	388	2.76	1.43	.074	-3.31	387	.001

Table 5.7 displays one sample t-test value on the awareness of teachers in which play-based pedagogy is a child-centered approach. The study result showed that the mean of the sample (2.76) was less than the ideal mean value (3.0) concerning the awareness of respondents on play-

based pedagogy as a child-centered approach in the implementation of play-based pedagogy. The result in the table further indicates that most teachers lack awareness and perceive negatively that play-based pedagogy is a child-centered approach that is significant at 0.05 levels. Besides, some of the respondents agreed with the idea that play-based pedagogy is a child-centered approach. They believe that play is a natural phenomenon that children engage with to learn attentively. As the researcher's observations witnessed, most public and some private sample schools did not use play as a teaching strategy.

In addition, in the interview question "*How do you evaluate the implementation of play-based pedagogy in your school?*" one of the supervisors stated, "as a supervisor, I observed that most pre-primary school teachers teach with a teacher-centered method. However, some schools teach in a play-based pedagogy. Most teachers do not understand the teaching method well because they do not have the training to teach through play-based pedagogy (Sup I, May 21, 2022).

5.4.1.3 Teachers awareness of the practice of play-based pedagogy

Table 5. 8 Respondents’ awareness of the practice of play-based pedagogy

(n=388)

No	Variable	Mean	SD	SEM	t-value	T	Df	Sign 2(tailed)	MD
1	I have enough awareness and practices on play-based pedagogy	2.17	1.08	.055	3	-15.98	387	.000	-.87
2	I have knowledge in planning and organizing play-based activities	2.17	1.12	.056	3	-15.51	387	.000	-.88
3	I am qualified in implementing play – based pedagogy	2.40	1.22	.064	3	-9.71	387	.000	-.60
4	I have taken on job trainings to implement play-based pedagogy	2.04	1.02	.05	3	-18.57	387	.000	-.96
5	As ECE facilitator, I usually plan an intentional and varied learning opportunities to foster play-based pedagogy	2.01	.92	.05	3	-21.35	387	.000	-.99

Table 5.8 shows that two-tailed t-test compared the average mean values of the practice of implementing play-based pedagogy in public and private preschools. The value of items 1-5 ranges from 2.01 to 2.4, indicating that respondents believed that the practice of play-based pedagogy in public and private schools was at low level performance. The average value for each variable are relatively low suggesting that respondents generally have low levels of awareness, knowledge, qualifications and in-service training related to use of play-based pedagogy. The standard deviations are relatively high, indicating a large spread of answer around the mean. The t-values for all variables are highly significant ($p < 0.001$), indicating that the differences between the sample means and the population means are statistically significant. The mean

differences (MD) are all negative, indicating that the sample means for each variable are lower than the population means. In general, these results suggest that respondents to this study have low levels of awareness, knowledge, qualifications and professional training related to play-based pedagogy, as well as inadequate levels of diverse learning opportunities to promote play-based pedagogy as an ECE facilitator. From the result, it can be said that there is a statistically significant difference in the average scores of teachers/facilitators and PTA members regarding their awareness and practices of play-based pedagogy. This suggests that both groups have similar awareness regarding play-based pedagogy.

In addition, to the question *“What are the major activities planned and implemented in your office to enhance the implementation of play-based pedagogical strategies in pre-primary school?”*, one of the principals stated “we insist that teachers plan and submit annual and daily lesson plans. We regularly review that performance and try to fill the gap if they miss it. But we do not have a specific plan for the play-based teaching method because we do not have the training and preparation to do that. We accomplish our task by preparing annual, semester and monthly goals (P III, March 21, 2022).

Furthermore, to the question *“How do you evaluate the support given to teachers at your school from principals, ECE Coordinators?”*, one of the principals stated “I have some knowledge because I have taken some training on play-based pedagogy, so I am coordinating, supporting, and guiding the Pre-primary school program with this knowledge” (P IV, March 24, 2022).

Another ECE coordinator stated:

I didn't take any training in the area. I do not know about play-based pedagogy. So, I could not support or coordinate pre-primary school teachers properly. But, we try to hire trained teachers. However, this does not mean that there is a lack of awareness. We observed as there is a gap in implementing

play-based pedagogy practically because lack of teacher's awareness: (PV, March 25, 2022). On the other hand, as a regional preschool expert, I have been trained in the basics of early childhood teaching, and currently I am studying for my master's degree in pre-primary education. Thus, now I am studying it. So, I have enough knowledge in the coordination of play-based pedagogy (EC I, May 2, 2022).

The other principal stated “Although we employ teachers with training, I am not qualified to lead pre-primary education. That being said, this does not imply a lack of awareness. We saw that there is a gap in the practical use of play-based pedagogy due to teachers' lack of awareness.” (PVI, March 28, 2022).

The other private school principal stated “the teachers who are assigned to teach pre-primary school children have taken training in a play-based pedagogy. So, they are implementing accordingly” (PVII, March 29, 2022).

In general, based on the research results it can be stated that the study participants lack sufficient awareness, qualification, practice, and training to plan, organize and implement play-based pedagogy in the study area. They lack valuable skills for early childhood educator. Facilitators were unable to plan intentional and varied learning opportunities aimed at promoting play-based pedagogy in their classrooms. It is also worth mentioning that they do not receive any in-service training to improve the implementation of play-based pedagogy. These experiences demonstrate lack of commitment to providing quality education to young children in the study area. Therefore, the finding suggests that individual knowledge, qualifications and practical experience in planning and implementing play-based activities have an impact on their ability to promote play-based pedagogy in early childhood education environment.

Table 5. 9 School leaders’ organizational support for the in-service training

Variable	Groups	n	F	Sig	Mean	SD	SEM	Test value	T	DF	Sig (-2 tailed)	Mean difference
The school leaders do not organize training for teachers on implementing play based learning strategies	Teacher	343	1.04	0.40	3.24	1.43	.077	3	.57	386	.57	.13
	PTA	45			3.11	1.47	.218					

Table 5.9 shows that the analysis of the variables is related to the respondents' perception of the organization of training of teachers to implement play-based learning strategies by school principals (N = 343) and PTA members (45). Based on the analysis, the average response to the statement “The school principals did not organize training for teachers on the implementation play-based learning strategies” is MT = 3.24, SD = 1.43 and MPTA = 3.11, SD = 1.47, which indicated that on average both groups of respondents somewhat agreed with statement. However, the standard deviation of the responses suggests that there is some variability in responses within each group. The standard error of the mean (SEM) is 0.077 for teachers and 0.218 for PTA members, indicating the accuracy of mean estimation within each group. The t-value for teachers is 0.131 and for PTA members is 0.57. This is a measure of the difference between the mean and the ideal mean with respect to the standard error. In both cases the t-values are not statistically significant. The degrees of freedom for the t distribution are 386 for teachers and 56 for PTA members. The p-values associated with the t-values are 0.57 for teachers and PTA members, indicating that the mean differences are not statistically significant. In general, the analysis suggests that both teachers and PTA members do not perceive a significant lack of organization

of training by principals to implement play-based learning strategies, as shown by the non-significant T-values and mean differences. Furthermore, the result shows that there is no significant difference in variance between the two groups.

In addition, most principals stated, as a challenge, that the majority of pre-primary school teachers did not receive training in play-based pedagogy from principals, supervisors and ECE coordinators. For public schools teachers, the Regional Education Bureau provided only a two-days training, however, the teachers have not been adequately prepared for the implementation of play-based pedagogy in their respective schools. There was attempt by a few principals to provide awareness training based on their previous knowledge even though they are not trained in play-based pedagogy. Overall, there is a lack of consistent and comprehensive training in play-based pedagogy for teachers in the schools of the study area (PI, PII, PIV, PVI and PVII, March 15- 29, 2022).

On the other hand, the regional education bureau pre-primary education expert stated “we provide training on play-based pedagogy only to public school teachers. However, in private schools the activity was provided on their own” (ECI, May 2, 2022). Another coordinator of City Education Department stated “we have massive schools. Thus, we provide training only for public schools at the beginning of the year. However, we offer mainly monitoring and support services for private schools. But they can handle the training on their own” (EC II, May 9, 2022).

5.4.1.5 Teachers awareness of the importance of play-based pedagogy

Table 5. 10 Respondents’ awareness of the values of play-based pedagogy

(n=388)

No	Variable	Mean	SD	SEM	t-value	T	df	Sign 2(tailed)	MD
1	Using play-based pedagogy is helpful to address children natural motivation of play	2.66	1.40	.07	3	-4.85	387	.000	- .34
2	Play-based learning is important for children to learn freely	2.85	1.50	.08	3	-2.01	387	.045	- .15
3	Play-based learning is a critical element of pre-primary school and influences children's social, emotional, language, physical, and cognitive development	2.60	1.44	.07	3	-5.53	387	.000	- .40
4	Play based pedagogy is valuable to plan extended period of time for children to engage in learning activity	2.81	1.49	.08	3	-2.50	387	.013	- .19
5	Play-based pedagogy is appropriate and meets learning standards	2.79	1.37	.07	3	-2.97	387	.003	- .21

Table 5.10 Item 1 shows a one sample t-test value for the awareness of respondents (teachers and PTA members) where the use of play-based pedagogy is helpful in addressing children’s natural motivation to play: Mean = 2.66, SD = 1.39, SEM = 0.071, T-value = -4.85, df = 387, p-value = 0.000 statistical significance. The average score of -4.85 is above the ideal mean (3.00) and indicates that teachers have a positive awareness that play-based pedagogy is helpful in addressing children's natural motivation to play. In the same table, item 2 seems to indicate that teachers have low awareness of how important play-based learning is for children’s free learning (mean = 2.85, SD = 1.49, SEM = 0.076, T-value = -2.01, df = 387, p-value < 0.045). Similarly for item 2, the mean result for the statement “play-based learning is important for children to learn freely” is (M = 2.85, SD= 1.50 and SEM= 0.08). The t-value is -2.01 with degrees of

freedom of 387. The p-value associated with this t-value is less than 0.001 ($p < 0.045$), indicating that the result is statistically significant. The mean difference (MD) for this variable is -0.15, indicating that there is negative difference in perception about the importance of play-based learning for children to learn freely.

In the same table, item 3 indicated that respondents in the study area have a positive awareness and belief about the values of learning through play as a critical element in pre-primary schools and its influence on children's social, emotional, linguistic, physical, and cognitive development (mean = 2.60, SD= 1.43, SEM = 0.073, T-value= -5.53, df = 387, p-value< 0.000). The average score of the study -5.53 shows that respondents have a positive value because play-based learning is a critical element in pre-primary schools and has a significant impact on children's social, emotional, language, physical and cognitive development. The t-value of -5.53 indicates that the mean is 5.53 standard errors below the ideal mean (3.00). The p-value of 0.000 suggests that this result is statistically highly significant at a significance level of 0.05. Therefore, based on this analysis, it can be concluded that teachers in the study area have a strong understanding and belief in the importance of play-based learning as a critical component of pre-primary education. They recognize that learning through play significantly influences various aspects of child development including social, emotional, language, physical and cognitive areas. This indicates a positive attitude towards the integration of play-based pedagogy into early childhood education in pre-primary school.

As shown in the same table, the average score for the statement “play based pedagogy is valuable to plan extended period of time for children to engage in learning activity” indicates that the mean for this variable is 2.81, with a standard deviation of 1.49 and a standard error of

the mean (SEM) of 0.075. The t-value is -2.50, which is highly significant ($p < 0.05$), and the degrees of freedom (df) is 387. The negative mean difference (MD) of -.19 indicates that the sample mean is lower than the population mean for this variable. Overall, these results suggest that respondents have a low level of awareness and understanding of the value of planning extended periods of time for children to engage in learning activities within a play-based pedagogy. This indicates a need for further education and training on the importance learning through play for children.

The results of item 5 in the same table, which reads "play-based pedagogy is appropriate and meets learning standards" indicate that the mean for this variable is 2.79, with a standard deviation of 1.38 and a standard error of the mean (SEM) of .07. The t-value is -2.970, which is highly significant ($p < 0.05$), and the degrees of freedom (df) is 387. The negative mean difference (MD) of -0.21 indicates that the sample mean is lower than the population mean for this variable. Similar to the previous variable, the results suggest that respondents have a low level of awareness and understanding of the suitability of play-based pedagogy to meet learning standards. This also suggests a need for further education and training on the effectiveness of play-based learning for children. As shown in Table 5.10 from the results of one sample t-test results for teachers' awareness of the values of play-based pedagogy, the mean for each variable are relatively low, indicating that respondents generally have low awareness and understanding of the importance of learning through play for children. The t-values for all variables are highly significant ($p < 0.05$), indicating that the differences between the sample means and the population means are statistically significant. The mean differences (MD) are all negative, indicating that the sample means for each variable are lower than the population means. In general, these results suggest that respondents to this study have low awareness and

understanding of the values of play-based pedagogy, and may benefit from further education and training on the values of play-based pedagogy.

In addition, to the question “What do you say about the awareness of teachers on the values of play in the implementation of ECE curriculum?” one of the principals stated that teachers’ perception of the value of play in implementing the pre-school curriculum varies. Some teachers who were trained have the awareness of its values. However, the non-trained teachers do not know its values (PIX, May 21, 2022). From the observations the researcher witnessed that most pre-primary schools of the study area did not practice play-based pedagogy in the instructional process (Ob1.).

5.4.1.6 Teachers awareness of the opportunities of play-based pedagogy practice

Table 5. 11 Respondents’ awareness of the opportunities of play-based pedagogical practice (n=388)

No	Variable	Mean	SD	SEM	t-value	T	df	Sign 2(tailed)	MD
1	Play-based learning provides opportunities for children to use their creativity	2.73	1.47	.08	3	-3.55	387	.000	-.27
2	Play-based learning allows children to gain confidence in their decision-making abilities	2.77	1.46	.07	3	-3.14	387	.002	-.23
3	I am aware that playing gives children the opportunity to build their own knowledge	2.83	1.48	.08	3	-2.22	387	.027	-.17

Table 5.11 shows that the mean for the variable “Play-based learning provides opportunities for children to use their creativity” is 2.73, with a standard deviation of 1.47 and a standard error of

the mean of 0.08. The t-value is -3.558, which is highly significant ($p < 0.05$), and the degrees of freedom is 387. The negative mean difference of -0.27 indicates that the sample mean is lower than the population mean for this variable. This suggests that respondents have low awareness and understanding of how play-based learning can give children the opportunity to use their creativity. There is a need for further education and training on this aspect of play-based pedagogy. In general, the results indicate a lack of awareness and understanding of the benefits and effectiveness of play-based pedagogy for children's learning and development, highlighting the need for further education and training in this area.

The mean for the variable "play-based learning allows children to gain confidence in their decision-making abilities" is 2.77, with a standard deviation of 1.46 and a standard error of the mean 0.074. The t-value is -3.15, which is highly significant ($p < 0.05$), and the degrees of freedom is 387. The negative mean difference of -0.23 indicates that the sample mean is lower than the population mean for this variable. This suggests that respondents also have low awareness and understanding of how playful learning can help children gain confidence in their decision-making abilities. As with the previous variable, there is a need for further education and training on this aspect of play-based pedagogy. In general, the results indicate a lack of awareness and understanding of the benefits and effectiveness of play-based pedagogy for children's learning and development, highlighting the need for further education and training in this area.

The mean for the variable "I am aware that playing gives children the opportunity to build their own knowledge" is 2.83, with a standard deviation of 1.48 and a standard error of the mean of .075. The t-value is -2.22, which is significant ($p < 0.05$), and the degrees of freedom is 387. The

negative mean difference of -0.17 indicates that the sample mean is lower than the population mean for this variable. This suggests that respondents also have a low level of awareness and understanding of how children can be given the opportunity to build their own knowledge through play. As with the previous variables, there is also a need for further education for this aspect of play-based pedagogy. In general, the results indicate a lack of awareness and understanding of the benefits and effectiveness of play-based pedagogy for children's learning and development, highlighting the need for further education and training in this area. These results suggest that respondents have low awareness and understanding of the opportunities that play-based learning offers for children's creativity, confidence in decision-making and knowledge construction. This indicates a need for further education and training on the benefits and effectiveness of play-based pedagogy for children's learning and development.

In addition, in the interview question "*What are the existing opportunities to implement play based pedagogy in pre-primary schools?*" one of the principals stated that, in his opinion, there is no good school for access to play-based learning materials arts in most public schools. Their classrooms were so small that they could not accommodate their students. The rooms are hot because they have no ceilings. On average there are more than 90 students per class. The yard was so narrow that there is no playground. They don't have enough water and toilets. The children use the older toilets. In general, there is no fixed way to implement a play-based pedagogy (PIV March 24, 2022). Furthermore, in the interview the ECE coordinators replied to the same question as most public schools have limited space. Therefore, they have problem in implementing play-based pedagogy. That is why they are working on creating their campus for future preschool. We believe it is an excellent opportunity to have enough staff and trained teachers. (ECI, May 2, 2022)

5.4.2 Strategies teachers use while implement play-based pedagogy in ECE

The teaching-learning process needs cooperation from the teacher and student sides. The teacher has to create conducive learning environment, and children have to play the role of learners. Moreover, the school must provide the required resource for instruction. Children have to be given favorable situation that meets their educational needs. The objective of the curriculum is to bring overall development through play-based pedagogy. Thus, a teacher has to use various teaching strategies that help children learn through fun which helps them bring mental, emotional, physical, social, and language development. This section presents the analysis of data results of strategies teachers use to implement practice play-based pedagogy in the implementation of the ECE curriculum. At this stage, the researcher tried to present, analyze and interpret the data collected from the respondents through questionnaire, interview, and observation.

Table 5. 12 Teachers' use of strategies to implement play-based pedagogy

		Frequency	Percent
Teachers use strategies to implement play-based pedagogy	Use	133	34.3%
	Not use	255	65.7%
	Total	388	100%

As can be observed in Table 5.12, approximately one-third of teacher respondents, 133 (34.3%), were using strategies to help them implement play-based pedagogy in the instructional process. It is unthinkable to realize play-based pedagogy in classroom instruction without using strategies. Teaching strategies are essential to implement play-based pedagogy in pre-primary school. However, the majority of teachers, 255 (65.7%) study participants did not use teaching strategies in the teaching-learning process. The study result reveals that most teachers teaching in pre-primary schools should have used teaching strategies vital to practice play-based pedagogy in their respective classrooms. Most public school respondent teachers confirmed in the open-ended question that there is

no adequate teaching material and supplies in their schools to implement different play-based strategies.

In addition, to the question “*Are there strategies that teachers use to implement play-based pedagogy at your school?*”, one of the supervisors stated that teachers working in urban schools use varieties of strategies, but teachers working in rural schools use teacher-centric teaching method as a teaching strategy (Sup I, May 21, 2022). The other supervisor expressed that most teachers use different strategies to implement play-based pedagogy in pre-primary schools. Some of the strategies they use include songs, Montessori materials, music, flashcards, drama, puzzles, storytelling and so on. However, there is variation between urban and rural teachers. In most urban pre-primary schools, teachers employ diversified teaching strategies; however, rural school teachers mainly use direct teaching approach. In addition, in urban schools teachers include indoor and outdoor play activities as part of teaching strategies (Sup II, May 23, 2022). From observation the researcher confirmed that some public pre-primary school teachers were using storytelling, flash card and music as teaching strategies. However, most of them used predominantly telling and showing teaching strategies. On the other hand, some private pre-primary school teachers used specific strategies to implement play-based pedagogy. Most schools in the study area focus more on teachers-centered approach than using any strategies to implement play-based pedagogy. This finding is similar to a previous study by Tarimo (2013) that found most teachers needed to use play as a teaching strategy to enhance children's engagement in the instructional process. Moreover, his findings affirmed that they used more teacher-directed teaching, which inhibits children from exposure to different skills that help them to build their cognitive, social, emotional, language, and physical development. However, play is vital to children for their whole round development. As Goldstein (2012 p. 2) stated, “*Play*

during early childhood is necessary if humans are to reach their full potential." Moreover, as Extension, (2024) argued that play is an essential component of early childhood education, acting as a foundation for holistic development. The benefits of play in encouraging creativity, social skills, and cognitive growth are apparent, despite the problems and misconceptions surrounding its implementation.

Table 5. 13 Teachers' use of play-based teaching strategies

(N = 388)

No	Variable	Mean	SD	SEM	t-value	T	Df	Sign 2(tailed)	MD
1	individual game method	2.03	1.09	.056	-17.41	3	387	.000	-.97
2	play independently	1.96	1.04	.053	-19.73	3	387	.000	-1.04
3	dramatic method	2.14	1.13	.058	-14.97	3	387	.000	-.86
4	role play	2.06	1.07	.054	-17.26	3	387	.000	-.94
5	demonstration method	2.17	1.27	.064	-12.86	3	387	.000	-.83
6	field visit as a means of teaching method	2.14	1.18	.060	-14.35	3	387	.000	-.86
7	game with rules	2.92	1.54	.078	-1.09	3	387	.276	-.09
8	collaborative method	2.94	1.54	.078	-.82	3	387	.411	-.06

Table 5.13 shows that one-sample t-test compared the average mean values of the strategies teachers use in the implementation of play-based pedagogy. The value of items 1-8 ranges from 1.96 to 2.94, indicating that respondents believed that the practice of all the above mentioned teaching methods in public and private schools was at low level. The average value for each variable is relatively low suggesting that respondents generally have low level of practice in using the mentioned teaching methods in the implementation of play-based pedagogy. The standard deviations are relatively high, indicating a large spread of answer around the mean. The t-values for 1-6 variables are highly significant ($p < 0.001$), indicating that the differences between the sample means and the population means are statistically significant. However, the p-values of "game with rules" and "collaborative method" were greater than 0.05. This suggests that the methods may not have a significant impact compared to the mean. The mean differences

(MD) are all negative, indicating that the sample means for each variable are lower than the population means. In general, these results suggest that most methods of teaching have a significant impact on the implementation of play-based pedagogy except the two methods that is “game with rule” and “collaborative method” which do not show statistically significant difference compared to the mean. Thus, the practice of using different strategies is not encouraging in the use of diverse teaching method in the implementation of play-based pedagogy. From the observation the researcher witnessed that in most pre-primary schools of the study area teachers were not using these strategies as a method of teaching in their respective classrooms. The finding of the study reveals that the practice of play-based pedagogy in both public and private schools deviate from the guideline in using strategies while implementing play-based pedagogy. This finding differs from Everlyn's (2017) findings that most teachers plan to use storytelling to enhance learners' language skills. Document analysis showed that to promote children’s development, preschool teachers need to use play-based pedagogy that provides daily opportunities to play with a variety of teaching materials (MoE 2010a). From this study, it could be inferred that respondents use play-based strategies inefficiently which hinders the improvement of essential skills of pre-primary school children. As Grace, Kabura and Waithaka, (2020) confirm, teachers’ use of play-based strategies in the teaching learning process is an essential tool for preschool children to help them to develop their creativity, language skills, emotional development, social-communication skills and literacy skills.

Table 5. 14 Children’s engagement in play-based pedagogy

No	Variables	N	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	Encouraging children to create something new using objects, such as making a puppet from a sock (constructive play)	388	2.56	1.46	.074	3	-5.97	387	.000	-.44
2	Encouraging children to use one thing to represent or stand for another (symbolic play)	388	2.32	1.29	.066	3	-10.36	387	.000	-.68

As Table 5.14 shows, the average score for the statement “Encouraging children to create something new using objects, such as making a puppet from a sock (constructive play)” for the given outcome is ($M = 2.56$, $SD = 1.46$ and $SEM = 0.074$). The t -value is -5.97 , with 387 degree of freedom and the significance level is 0.000 for a two-tailed test. This result indicates that there is a statistically significant difference in the mean scores for this statement, suggesting that participants differ in their levels to encourage in constructive play. The mean difference (MD) is -0.44 , indicating that participants score are, on average, almost half a point below the scale mean of 3. This suggests that there may be a lack of encouragement for children to engage in constructive play activities. It can be concluded that the statistical analysis indicates that there is a significant difference in the mean scores for the statement about promoting constructive play. The average score is below the midpoint of the scale, indicating that children are not encouraged to engage in constructive play activities. This finding highlights the importance of promoting and supporting constructive play in early childhood development.

In the same table, we can see that there is a significant difference in the mean scores for the statement “Encouraging children to use one thing to represent or stand for another (symbolic play)”. An average score of 2.32 is well below the midpoint of the scale (3), indicating a lack of encouragement for symbolic play activities. This indicates that the need to encourage and support symbolic play in early childhood development. A t -value of -10.36 and a p -value of 0.000 further support the significance of this result. A mean difference (MD) of -0.68 also indicates the direction of the difference, with values being lower than expected. Overall, this analysis highlights the importance of addressing and promoting symbolic play in early childhood education and development.

The statistical analysis from Table 5.14 shows that there is a significant difference in the average scores for the statement “encouraging children to engage in symbolic play”. The mean of 2.32 is well below the midpoint of the scale, indicating a lack of encouragement for symbolic play activities. This suggests the need to encourage and support symbolic play in early childhood development. The t -value of -10.36 and p -value of 0.000 further supports the significance of this result and indicate that the difference in average is not due to chance. The mean difference (MD) of -0.680 also indicates the direction of the difference, with values being lower than expected.

More generally, this analysis highlights the importance of addressing and promoting symbolic play in early childhood education and development. This suggests that there is a need for interventions and strategies to promote and support symbolic play activities in early childhood settings.

Table 5. 15 Teachers’ use of teacher-centered method of teaching strategy

Item	Participant	N	Mean	Std. Deviation	Std. Error Mean
Telling, explaining and informing method	Teacher/Facilitator	343	4.20	0.98989	0.05345
	PTA	45	4.31	0.99595	0.14847
Whole-group discussion method	Teacher/Facilitator	343	3.40	1.50484	0.08125
	PTA	45	3.60	1.48324	0.22111

Note mean value 3.41– 5.00 strongly agree and agree (Positive), 2.61 – 3.40 undecided (Neutral) and 1.00 – 2.60 disagree and strongly disagree (Negative)

The data in Table 5.15 show that the average responses from both teachers and PTA members were above the expected ideal mean regarding the use of narrative, explanation and information methods in implementation in early childhood (MT = 4 .20 and MPTA = 2.16). This shows that there was strong agreement and agreement (positive) in using the narrative, explanation and information method as a teaching strategy in the study area. In the same table, the mean score of respondents is above the ideal mean in terms of discussion method for the entire group (MT = 3.40 and MPTA = 3.60). This shows that the group discussion method is widely used and ranges from “strongly agree” to “agree (positive)” as a teaching strategy in the study area. From this, it can be concluded that both teachers and facilitators and PTA members preferred the telling, explaining, and informing and whole-group discussion methods when implementing the ECE curriculum.

In addition, in the interview for the question “*Are their strategies that teachers use to implement play-based pedagogy at your school?*” the responses of some of the principals, supervisors and experts are summarized as follows:

In urban schools teachers employ diverse strategies to implement play-based pedagogy in their classrooms. Some of these are songs, riddles, and fairy tales into their lessons. They also use cloth balls and other materials to engage students in hands-on activities. In addition, teachers

utilize Montessori equipment, flashcards, and language and math corners to create a playful learning environment. In some schools play-based pedagogy is implemented through music, drama, storytelling, songs, comedy, puzzles, and choreography. Some teachers also incorporate outdoor and indoor play activities as part of their teaching strategies to enhance the play-based learning experience. Whereas teachers in rural areas were often rely on a more teacher-centered teaching method that involves telling, explaining, and informing. However, in the observation it was found out that except a few private school teachers most of them use teacher-centered approach in teaching pre-primary school children.

Moreover, to the question “How do you evaluate the implementation of play-based pedagogical strategies in your school?” one of the principals stated that *in the past, teachers used to teach in a play-based way. More recently, however, it has not been possible to teach in kindergarten because the place where we teach preschool students, including the classroom, is flooded with water.* The result implies that in most preschools, the majority of teachers prefer to teach children with a teacher-dominant teaching approach than play-based pedagogy.

Again, one of the school principals in the interview stated that in their school, the application of play-based pedagogy is not satisfactory. However, previously it had been implemented very well. The teachers were trying their best. It used to be well-maintained. Currently, they do not have enough space to implement play-based pedagogy after the school has been flooded. As a result, it is not possible to teach with a play-based pedagogy (P IV, March 24, 2022).

5.4. 3 Existing facilities in school

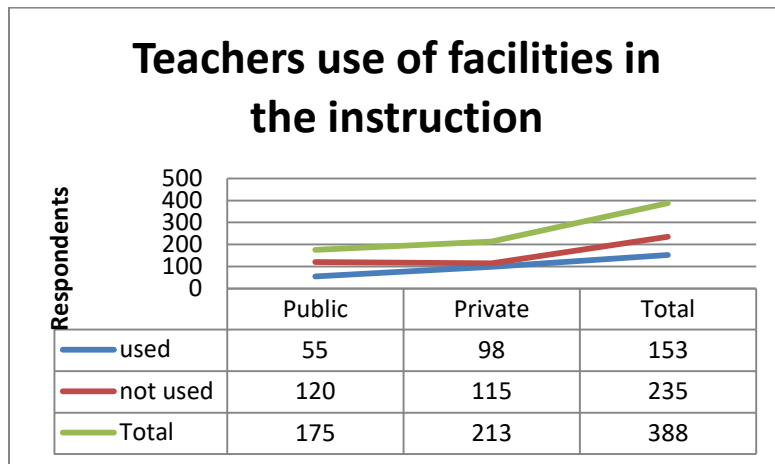


Figure 5.1 Distribution of teachers' use of facilities to implement play-based pedagogy in public and private schools

Figure 5.1 show that 153 of the respondent teachers used their respective classrooms to implement play-based pedagogy. Even though teaching facilities are vital to implementing play as a teaching strategy in pre-primary schools, more than half, 235 of the study participants did not use teaching facilities in their teaching. The study result reveals that most teachers teaching in pre-primary schools did not use the required teaching facilities to implement play-based pedagogy in their respective classrooms. Most public school respondent teachers confirmed in the open-ended question that there is no adequate teaching material and supplies in their respective schools.

For the question *“What are the available resources that can help facilitators to implement play based pedagogy in your specific school?”* one of the interviewed principals replied *“In our school, we assist teachers in implementing play-based pedagogy by providing limited resources because we do not have adequate budget”* (PI March 15, 2022). Furthermore, the other principal interviewee stated that they do not have materials to supply them outside the stationery because they teach in action and song (PII March 18, 2022).

The ECE coordinator interviewee also stated:

As a Department of Education office, we are responsible for providing all the resources needed for public schools. Even though it is not adequate for public schools, we buy almost all the materials. So, we are doing what we can, but not enough. In the future, we plan to involve the community to

support schools through donations or to purchase the required educational materials (EC I, May 2, 2022).

The other ECE coordinator interviewee further stated “*I do not think much is being done at a country level. As far as I know, I do not say that there is a provider and supplier of instructional materials for preschool at the national level.*” (EC II, May 2, 2022)

On the other hand, the other principal interviewee said that they provide instructional materials that the teachers need for their class like; a puppet, dolls, drawings, storybooks, fitting accessories, ropes, and balls (PIII March 21, 2022). The other principal interviewee further discussed that they have a complete set of materials in each classroom, so teachers have no problem implementing play-based pedagogy. Even if there is a finished material, they will buy it immediately (PIV March 24, 2022).

From observation of the schools the researcher confirmed that almost in all public schools and in some private schools there were inadequate resources to implement play-based pedagogy in the study area. However, in some schools facilities are pretty crucial in implementing play-based pedagogy (Ob1, Ob2 and Ob3, March - May 2022).

Based on the data collected through quantitative and qualitative it can be understood that in some private schools relatively, there is a provision of play resources, but in public schools not. This study's finding is similar to the study of Kimberly et al., (2014) found the importance of resources as it is central for classroom instruction to use play-based pedagogical strategies. The materials may vary from context to context, but they can facilitate children learning in pre-primary school settings. Play facilities used in early childhood education are anything natural or artificial, absolute or imaginative, visual or invisible, big or small, structured or unstructured, props or loose parts. Thus, absences of teaching facilities in the study area influenced teachers to use a teacher-directed teaching strategy. It will affect children's participation in the instructional

process. The non-use of facilities in the instruction adversely affects the implementation of play-based pedagogy in pre-primary schools. Teachers' responses to the open-ended question strengthen this notion by stating that *at their school, there is not enough supply of teaching materials. Thus, the lack of adequate resources makes it challenging to implement play-based pedagogy.*

Table 5. 16 Two-tailed t-test on teachers' use of facilities in the pre-primary schools

No	Variables	N	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	flash card for different lessons	388	2.99	1.58	.08	3	-.04	387	.974	-.003
2	age-appropriate and mentally stimulating video and audio aids	388	2.67	1.56	.079	3	-4.23	387	.000	-.33
3	wall maps and charts	388	3.97	1.32	.07	3	14.40	387	.000	.97
4	real objects which is related to instructional content	388	2.81	1.36	.07	3	-2.83	387	.005	-.2.08

Table 5.16 item 1 indicated that the 388 participants the mean score for the use of flash cards for different lessons was 2.99, with a standard deviation of 1.58 and a standard error of the mean of 0.08. The t-value was -3, with 387 degrees of freedom. The significance level (Sig.) was 0.974, which indicates that the mean difference was not statistically significant. The mean difference (MD) was -0.003, indicating that there was a very small decrease in the use of flash cards for different lessons.

Similarly for item 2, the average score for using age-appropriate and mentally stimulating video and audio aids was 2.67, with a standard deviation of 1.56 and a standard error of the mean of 0.08. The t-value was -4.23 with 387 degrees of freedom. The significance level (Sig.) was 0.000, indicating that the mean difference was statistically significant. The mean difference (MD) was -0.33, indicating that there was a moderate decrease in the use of age-appropriate and mentally stimulating video and audio aids.

Table 5.16 item 3 shows the analysis of the variables for the use of wall maps and diagrams to which 388 participants responded. The average score for using these tools was 3.97, with a standard deviation of 1.32 and a standard error of the mean of 0.07. The t-value was 14.40 with 387 degrees of freedom. The significance level (Sig.) was 0.000, indicating that the mean difference was statistically significant. The mean difference (MD) was 0.97, indicating that there was a moderate increase in the use of wall maps and charts.

In the same table, the analysis of item 4 on the variables for the use of real objects in the context of teaching content shows that there were 388 respondents. The average score for using these tools was 2.80, with a standard deviation of 1.36 and a standard error of the mean of 0.07. The t-value was -2.83 with 387 degrees of freedom. The significance level (Sig.) was 0.005, indicating that the mean difference was statistically significant. The mean difference (MD) was -0.20, indicating that there was a moderate decrease in the use of real objects related to instructional content.

From observation the researcher witnessed that most public and some private schools do not use flash card, video, real objects and maps on classroom. However, some private schools use flash card; and video and audio aids. Classroom walls were also well decorated with various teaching aids (Ob4, Ob5, and Ob6, *March - May 2022*).

Furthermore, the document analysis showed that there is no alignment between the Ethiopian National Policy Framework, which emphasizes that the material to use in pre-primary education must be resources and activities that are inclusive, developmentally appropriate, and culturally relevant both indoors and outdoors. Accordingly, from the ten observed schools only three primary schools have facilities (*March - May 2022*).

As it was seen from the quantitative and qualitative data, the average mean of the use of flashcards, age-appropriate and mentally stimulating video and audio aids, and real objects related to instructional content for different lessons in the pre-primary schools is below the ideal mean (3). This shows that participants felt that these tools are not used as teaching aids in the

teaching-learning process. However, most respondents believed that the use of wall maps and diagrams was common in their respective schools. Besides, real objects in the studied schools were inadequate.

Table 5. 17 Two-tailed t-test on teachers' use of reference books

No	Variables	N	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	Student textbooks	388	4.12	1.27	.07	3	17.38	387	.000	1.12
2	teachers' reference material (guide)	388	4.06	1.26	.06	3	16.62	387	.000	1.06

Table 5.17 item 1 shows that the variable analyzed are the frequency of use of student textbooks and teacher reference materials (guides) by both teachers/facilitators and PTA members. The mean for frequency of student textbook used for both groups was 4.12, indicating high agreement on the frequent use of student textbooks. The standard deviation (SD) was 1.27, suggesting that there was some variability in responses within groups. The standard error of the mean (SEM) was 0.07, indicating the precision of the mean estimate. The t-value was 17.38 which rates above the ideal mean score 3, indicating that there was a significant difference between the means of the two groups in terms of the frequency of using student textbooks. The t-value was also associated with a high level of confidence, as indicated by the degrees of freedom (df) and the significance level (Sig.) of 0.000. The mean difference (MD) between the two groups in the frequency of student textbook use was 1.12, further supporting the notion that both groups had strong agreement on the frequent use of student textbooks.

Likewise, the mean for the frequency of use of the reference material (guide) by teachers for both groups was 4.06, which also indicates a high level of agreement regarding the frequent use of this resource. The standard deviation (SD) was 1.26, suggesting some variability in responses within groups. The standard error of the mean (SEM) was 0.06, indicating the precision of the mean estimate. The t-value was 3, again indicating a significant difference between the two groups' means in terms of teachers' frequency of reference material use. The t-value was associated with a high level of confidence, as indicated by the degrees of freedom (df) and the significance level (Sig.) of .000. The mean difference (MD) between the two groups in teachers' frequency of use of reference material was 1.06, further supporting the notion that both groups

had strong agreement on the frequency of use of this resource. In general, the analysis shows that both teachers/facilitators and PTA members largely agreed with the frequent use of student textbooks and teacher reference materials, with significant differences between the two groups' means.

From observation the researcher, witnessed that most public school teachers were using a single textbook for teaching children whereas private preschools teachers were not using textbooks prepared by Ministry of Education rather they were using their own books that are distributed for each student. Regarding teaches guide, none of them were using them.

In addition, to the question “*how do you evaluate the use of textbook and teacher’s guide in your school?*” one of the principals stated “in our school we do not have teacher’s guide and textbook for students but we have only textbook that teacher use to students. However, it was good if there are textbooks and teacher’s guides for preschool education to use uniformly throughout the country in private and public schools” (PII, March 18, 2022).

The other principal interviewee stated “the curriculum offered at private and public preschools in the region is different. Private schools use student textbook which is prepared by their own and public schools teach with the contents provided by the regional education bureau. However, private and public schools do not use teacher’s guides at all in the teaching and learning process.” (PIII, March 21, 2022).

Table 5. 18 Two-tailed t-test on teachers' frequency of use of indoor facilities

No	Variable frequent use of	N	Mean	SD	SEM	t- value	T	df	Sig. (2- tailed)	MD
1	shop corner (balance, money note, empty pens, child cloths etc.)	388	2.52	1.36	.07	3	-6.94	387	.000	-.48
2	construction corner (sand, shovel, hammer, building materials, etc.)	388	2.22	1.21	.067	3	-12.74	387	.000	-.78
3	medical corner (syringe, stethoscope, bandage, medication bottles, etc.)	388	2.29	1.26	.067	3	-11.12	387	.000	-.71
4	mathematics corner (small stones, tape measures, counting materials etc.)	388	2.91	1.51	.08	3	-1.14	387	.253	-.09

In the studied variable “shop corner”, which includes items such as balance, money note, empty pens, child cloths, etc., the analysis result in Table 5.18 item 1 shows that ($M = 2.52$, $SD = 1.36$ and $SEM = 0.07$). The t-test value is -6.94 with 387 degrees of freedom and the significance level is 0.000 for a two-tailed test. This result indicates that there is a significant difference in the average score for the use of shop corners in the instructional content, indicating that study participants have different levels of familiarity with the use of shop corners in implementing play-based pedagogy. The mean difference (MD) is -0.48 , indicating that participants' scores are, on average, less than half a point below the ideal mean of 3. This suggests that there may be lack of resources, skills, or commitment to implementing play-based pedagogy among teachers.

In the same table item 2 shows that on the frequent use of “construction corner”, which includes items such as sand, shovel, hammer, building materials, etc., the reported result shows the following: ($M = 2.22$, $SD = 1.21$ and $SEM = 0, 06$). The t-test value for the construction corner is -12.74 with a degree of freedom of 387 and the significance level is 0.000 for a two-tailed test. This result indicates that there is a significant difference in the average score for the use of construction corners in instructional content, suggesting that study participants vary in their level of familiarity with the use of construction corners in implementing play-based pedagogy. In general, the results of the study on the frequent use of real objects in connection with teaching

content provide information about the degree of use of these aids in the construction sector were limited.

In Table 5.18 item 3 of the frequent use of “medical corner”, which includes items such as syringes, stethoscope, bandage, medicine bottles, etc., the analysis result shows the following: ($M = 2.29$, $SD = 1.27$ and $SEM = .064$). The t-test value for this variable is -11.12 with a degree of freedom of 387 and a significance level of 0.000 for a two-tailed test. This result indicates that there is a significant difference in the average score for the use of medical corners in instructional content, suggesting that study participants vary in their level of familiarity with the use of medical corners in implementing play-based pedagogy. In general, the mean value shows that the medical corner was not used frequently when implementing play-based pedagogy in the study area.

Regarding the variable use of “math corner”, which includes items such as small stones, tape measures, counting materials, etc., the analysis result in Table 5.18 item 4 shows that ($M = 2.91$, $SD = 1.50882$ and $SEM = 0.077$). The t-test value is -1.14 with 387 degrees of freedom and the significance level is 0.25 for a two-tailed test. This result indicates that there is a significant difference in the average score for the use of mathematics corners in the teaching-learning process, which suggests that study participants have different levels of familiarity with the use of mathematics corners in implementing play-based pedagogy. This indicates that teachers may lack resources, skills, or commitment to implementing play-based pedagogy using mathematics corners. From the observations the researcher noticed that in most pre-primary schools in the study area there is no mathematics corner in the classrooms. However, in some private schools there are mathematics corners at one side of the classroom.

From the observations the researcher noticed that all public and most private schools were not using corners in their respective classrooms. The finding of the study reveals that the practices of public and private pre-primary schools lag from the guideline in using corners and proper resources. Children to use various ways of learning, there should be sufficient age-appropriate materials in the school (MoE 2010a). Nevertheless, the result of the study confirms that most schools are not working according to the guidelines of the Ministry's.

Table 5. 19 Two-tailed t-test on teachers' use of family corner

Variable	Groups	N	Mean	SD	SEM	Test value	T	df	Sig (-2 tailed)	Mean difference
Frequent use of family corner (coffee pot, spoon, dishes, dolls, etc.)	Teacher	343	2.61	1.49	.081	3	-.148	386	.882	-.035
	PTA	45	2.64	1.46	.218	3	-.151	56	.881	-.035

Hartley test for equal variance: $F = 1.042$, $Sig. = 0.4508$

Table 5.19 shows that the independent sample t-test was used to compare the average values of teachers' frequent use of the family corner in class between the teacher group (N=343) and the PTA group (N=45). Based on the analysis (MT = 2.61, SD = 1.49 and SD = 1.46, $t(386) = 0.24$, $p > 0.005$). The test result shows that teachers/facilitators rated their use of the family corner in implementing play-based pedagogy is below the ideal mean (3.00). In contrast, data analysis shows that there is a significant difference between the mean scores of PTA members regarding the use of the family corner in implementing play-based learning (M = 2.64, MPTA = 2.64, SD = 1.46), $t(45) = -.151$, $p > .005$. The study result shows that there is no significant difference between the two groups in the teachers' frequent use of the family corner in the teaching-learning process. The mean difference between the two groups was -0.035, further supporting the confirmation that there is no significant difference in teachers' frequent use of the family corner between the teacher and PTA groups. From the observation the researcher, noticed that in all pre-primary schools in the study area there is no family corner in classrooms. In the interviewee, one of the principals mentioned that there is no corner at all in their classrooms (Observation March-May, 2022).

Based on the quantitative and qualitative data, one can conclude that the use of family corner in the studied schools is not encouraging. Pre-primary school principals do not provide the facility to teachers to use in their classroom instructional activities. As a result, to implement play-based pedagogy, teachers do not have access to family corner and they are not properly using it to develop children's cognitive, social, psychological, emotional, and language in their learning.

Table 5. 20 Two-tailed t-test on teachers' use of language corner

Variable	Groups	n	Mean	SD	SEM	Test value	T	DF	Sig (-2 tailed)	Mean difference
Frequent use of language corner (picture, children books, newspaper, magazine, colorful posters)	Teacher	343	2.90	1.50	.08	3	.24	386	.811	.06
	PTA	45	2.84	1.38	.21	3	.26	58	.799	.06

Hartley test for equal variance: $F = 1.185$, $Sig. = 0.2481$

Table 5.20 shows that the two-tailed t-test compared the average values of teachers' frequent use of the language corner in class between the teacher group ($n = 343$) and the PTA group ($n = 45$). Based on the analysis ($MT = 2.90$, $SD = 1.50$, $t(386) = 0.24$, $p > 0.005$). The test result shows that teachers/facilitators rated their use of language corner in implementing play-based pedagogy to be below the ideal mean (3.00). In contrast, data analysis shows that there is no significant difference between the mean scores of PTA members regarding the use of language corner in implementing play-based learning ($MPTA = 2.844$, $SD = 1.38$), $t(45) = 0.26$, $p > .005$. The study result shows that there is no significant difference between the two groups in the teachers' frequent use of language corner in the teaching-learning process. The mean difference between the two groups was 0.057, further supporting the confirmation that there is no significant difference in teachers' frequent use of the language corner between the teacher and PTA groups.

In addition, to the question “*Are their strategies that teachers use to implement play-based pedagogy at your school?*” one of the principals stated that most teachers use different strategies to implement play-based pedagogy in pre-primary schools. Some of the strategies they use include songs, Montessori materials, music, flashcards, drama, puzzles, storytelling and so on. However, there is variation between urban and rural teachers. In most urban pre-primary schools teachers employ a variety of teaching strategies. However, rural school teachers mainly used a teacher-center teaching approach. In addition, in urban schools teachers include indoor and outdoor play activities as part of teaching strategies (PIX, May 21, 2022). From the observations the researcher witnessed that even though it was not adequate; some private school teachers used pictorial representation of language corner in their classroom. However, it was not supported either with video or audio materials (Observation, March-May, 2022).

Table 5. 21 Two –tailed t-test on teachers’ use of music corner

Variable	Groups	N	Mean	SD	SEM	Test value	T	DF	Sig (-2 tailed)	Mean difference
Frequent use of music corner (different traditional musical instrument)	Teacher	343	2.67	1.50	.081	3	.181	386	.86	.04
	PTA	45	2.62	1.39	.207	3	.192	58	.85	.04

Hartley test for equal variance: F = 1.163, Sig. = 0.2739

Table 5.21 shows that the two-tailed t-test indicated that there is no significant difference in the frequent use of the music corner in instruction between teachers and members of the PTA. This suggests that both groups believed that music corner is utilized in the instructional practices. The t-value of 0.86 with a p-value of 0.181 indicates that the difference in mean scores between the two groups is not statistically significant at the 0.005 level. In addition, the mean difference of 0.04 further supports the conclusion that there is no significant difference in the teachers' frequent use of the music corner between the opinion Teacher and PTA groups. The F-test for equal variance also indicates that there is no significant difference in variance between the two groups. In general, the analysis suggests that both teachers and members of the PTA on the use of music corner have similar opinion. From the observation the researcher noticed that in all pre-primary schools in the study area there is no music corner in the classrooms.

Table 5. 22 Teacher use of science corner

Variable	Respondents category	N	Mean	SD	SEM
Frequent use of science corner (science kits)	Teacher	343	2.62	1.47	.08
	PTA	45	2.96	1.43	.21

Note mean value 3.41– 5.00 strongly agree and agree (Positive), 2.61 – 3.40 undecided (Neutral) and 1.00 – 2.60 disagree and strongly disagree (Negative)

Table 5.22 shows that the average responses from both teachers/facilitators and PTA members were below the ideal mean (3.00) in terms of frequent use of the science corner (science kits) such as when implementing play-based pedagogy (MT = 2.62 and MPTA = were 2.96).This

shows that the science corner was relatively underused in the study area, based on the participants' indecisive answers. The analysis suggests that both teachers and PTA members are undecided about whether to use the science corner (science kits) in their classroom practice in a similar way.

Table 5. 23 Two-tailed t-test on teachers' use of science corner (n=388)

Variable	F	Sig.	T	DF	Sig (-2 tailed)	Mean difference	95% Confidence Interval of the Difference	
							Lower	Upper
Frequent use of science corner (science kits)	1.06	0.43	-1.45	386	.15	-.338	-.79	.12
			-1.48	57	.14	-.338	-.79	.12

Note mean value 3.41– 5.00 strongly agree and agree (Positive), 2.61 – 3.40 undecided (Neutral) and 1.00 – 2.60 disagree and strongly disagree (Negative)

In table 5.23 the analysis of science corner (science kit) use item related to the study participant perception $F = 1/06$, which indicates that there is no significant difference in variance between teachers/facilitators and PTA members. The t-value for teacher/facilitator is -1.45 and for PTA members is -148, suggests that both groups, on average, somewhat disagree with the statement about the frequent use of science corner in the teaching- learning process. The degrees of freedom for the t-distribution are 386 for teachers and 56 for PTA members. The p-values > 0.005 indicates that the mean differences are not statistically significant. In general, the analysis shows that there is no significant difference in the variance between the two groups in terms of frequent use of science corners. Moreover, the T-scores and mean differences indicate that both groups tend to disagree with the statement about frequent use of science corners, although these differences are not statistically significant.

Table 5. 24 Two –tailed t-test on teachers' use of painting corner

Variable	Groups	N	Mean	SD	SEM	Test valu	T	DF	Sig (-2 tailed)	Mean differenc
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Frequent use of painting corner (paint, brush, color, cloth, wood, clay)	Teacher	343	2.68	1.52	.24	3	-.23	386	.822	-.05
	PTA	45	2.73	1.42	.23	3	-.24	58	.813	-.05

Hartley test for equal variance: $F = 1.151$, $Sig. = 0.2882$

Table 5.24 shows that the two-tailed t-test was used to compare the average values of teachers' frequent use of the painting corner, including items such as brushes, paint, cloth, paint, color, wood and clay, in class between teacher groups ($n = 343$) and the PTA group ($n = 45$). Based on the analysis ($MT = 2.68$, $SD = 1.52$, $t(386) = 0.225$, and $p > 0.005$). The test result shows that teachers/facilitators rated the use of the painting corner when implementing play-based pedagogy measures below the ideal mean value (3.00). In contrast, the data analysis shows that there is a significant difference between the mean scores of the PTA members regarding the use of the painting corner in implementing play-based learning ($MPTA = 2.73$, $SD = 1.42$), $t(45) = -.24$, $p > .005$). The study results shows that there is no significant difference between the two groups in the teachers' frequent use of the painting corner in the teaching-learning process. The mean difference between the two groups was -0.054 , further supporting the confirmation that there is no significant difference in teachers' frequent use of the painting corner between the teacher and PTA groups. This suggests that there are no differences in opinion between respondents' answers. From the observation the researcher witnessed that most schools do not have painting corner, including items such as brushes, paint, cloth, paint, color, wood and clay. Therefore, children do not have chance that helps them to exercise paintings to develop their artistic skills in their learning (Ob4, Ob5, and Ob6, *March - May 2022*).

The quantitative and qualitative data indicated that pre-primary school teachers' use of painting corner in the instruction process is very poor and they do not practice play-based pedagogy in their classroom through it.

Table 5. 25 Summary of two-tailed t-test on teachers' use of facilities

Variable	Groups	n	Mean	SD	SEM	T-value	T	df	sig (2-tailed)	Mean defere
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Teachers use of facilities in the instruction	Teacher /Facilitator	343	1.60	.49	.03	3	-.241	386	.810	-.02
	PTA	45	1.62	.49	.07	3	-.241	56	.811	-.02

In stable 5.25 the independent sample t-test shows the average values of teachers' use of facilities in the teaching process related to pediatric pedagogy between (MT = 1.60, SD = .49 and MPTA = 1.62, SD = 0.49) compares each. The t-value was -0.241 with corresponding degrees of freedom of 386. The p-value was 0.810, which is not statistically significant at the 0.05 level. This result indicated that the calculated mean was lower than the expected mean (3.00). The study result therefore shows that there is no significant difference in the use of facilities by teachers in class between the two groups. The mean difference between the two groups was -0.02, which further supports the results that there is no significant difference in teachers' response and that of the PTA group to the use of facilities in the teaching learning process.

In addition to the use of facilities in the instructional process, the fifth school principal interviewee expressed that they do not have the material to supply them outside of the stationery because they teach in action and song. Moreover, there is no independent budget for the pre-primary school to fulfill the required facilities in the school (PV, March 25, 2022).

The other interviewee principal said “as far as I know, most schools do not have corners. So, it is better to fulfill the necessary corners in every school classroom. Then the children can have materials that help them develop cognitive, social, psychological, emotional, and language in their learning” (PVI, March 28, 2022).

Furthermore, another interviewee confirmed “as a department of education office, we are responsible for providing all the resources needed for public schools. So, we are doing what we can, but not enough due to lack of adequate budget. In the future, we plan to involve the community in providing the required inputs” (EC II May 2, 2022). From the observation the researcher, noticed that all observed public and most private preschools do not use corners in their classrooms. The result of the study shows that the practices of public and private preschools are not consistent with the policy in terms of using corners and appropriate resources (Observation, March 2022) However, they are resources that are expected to be available in the actual classrooms in the study area.

MoE (2010a) states that there should be sufficient age-appropriate materials in school so that children can use different learning methods. Nevertheless, the result of the study confirms that most schools do not operate according to the ministry's guidelines. Therefore, based on the results from quantitative and qualitative data, it can be inferred that most preschools lack resources to implement play-based pedagogy. This is because most public schools lack the budget to purchase the necessary facilities required to implement play-based pedagogy. In addition, in most private schools the space for using the outdoor facilities is limited.

In connection to this, one of the principals mentioned that the existing play-based pedagogy has focused on entertainment, not cognitive, social, psychological, emotional, or language development (PV1, March 28, 2022). The Ethiopian National Policy Framework emphasizes that the material used in early childhood education must be "culturally relevant, developmentally appropriate and inclusive indoor and outdoor materials and activities to that effect. Its design should follow a play-based approach". Akinrotimi and Olowe, (2016) asserted that adequate resources with quality significantly impact the successful implementation of early childhood education curriculum. Thus, resources are crucial for the effectiveness of early childhood education programs at pre-primary schools. Especially to implement play-based pedagogy at this level, resource is the critical element.

In addition, in the interviewee, to the question *“What are the available resources that can help facilitators to implement play-based pedagogy in your specific school?”* one of the principals stated that the challenges for their school are lack of resources to support the teaching-learning process through audio and video" (PVII, May 24, 2002). On the other hand, one of the private school principals stated that *“their school teachers are effective because they have the resources they need in their classrooms. They teach with video aids, and the rooms are spacious and allow them to play freely.”*(PVIII, May 28, 2002)

The above quantitative and qualitative result shows that in some private schools, teachers use age-appropriate and mentally stimulating video and audio aids in their respective classrooms. On the other hand, most public school teachers don't use it. Although some teachers reported using

video aids in their classrooms, it was confirmed that few private schools and non-governmental early childhood education teachers use them. Accordingly, the lack of play-based pedagogy in early childhood education and the shortage of teaching facilities badly affect children's instructional engagement. They depend on the teacher's presentation and one-way learning, with children only receiving the lesson. This situation undoubtedly hinders children from developing cognitive, emotional, social interaction, physical and language.

Table 5. 26 Physical environments of pre-primary schools

No	Variable	Groups	n	F	Sig	Mean	SD	SEM	Test value	t	DF	Sig (-2 tailed)	Mean difference
1	The school buildings are to the standards of the regional state	Public	175	76.86	.001	2.06	1.11	.08	3	-7.06	386	.001	-.96
		Private	213			3.02	1.50	.10					
2	The classrooms of the school fit the standards	Public	175	58.427	.001	2.21	1.10	.08	3	-7.85	386	.001	-1.06
		Private	213			3.27	1.47	.10					
3	The chairs and tables of the school fit the standards	Public	175	8.514	.004	2.42	1.25	.09	3	-7.34	386	.001	-.99
		Private	213			3.4085	1.3847	.106					
4	Playing toys and dolls of the school are according to the standards	Public	175	55.80	.001	1.99	1.04	.08	3	-6.61	386	.001	-.84
		Private	213			2.84	1.40	.10					

Table 5.26 shows that the two –tailed t-test was used to compare whether the average values of the school buildings are to the standards of the regional state. The statistics indicates that there is a significant difference between public and private group. Based on the analysis the mean for public group is $M = 2.06$, with $SD = 1.11$, while the mean values of private group is 3.02 , with

SD = 1.47. Both groups have a test value 3.00 resulting in t-scores of public group is -7.06 and private group is -7.26. The degree of freedom is 386 and 382 for the public and private groups respectively. The p-value is < 0.001 for both groups indicating that the mean difference is 0.96 between the two groups which is statistically significant. This indicates that there is significant difference in the perception of respondents that the school buildings are to the standards of the region.

In the same table, regarding whether the classrooms of the schools fit the standards, the independent t-test values indicate that there is a significant difference between the two groups. Based on the analysis, the mean for public group is 2.22, with SD = 1.10 and SEM = 0.08. The test value is 3.0, resulting a t-values of -7.85 with DF = 386. The p-value is < 0.001 indicating a statistical significance mean difference of -1.06 compare to the test score. Likewise for the private group the mean value is 3.27, with SD = 1.47, and SEM = 0.10. The test value is 3.0, resulting a t-values of -8.07 with DF = 383. The p-value is < 0.001 indicating a statistical significance mean difference of -1.06 compare to the test value. This result suggests that public and private group of respondents' exhibit statistically significant difference from the test value shows that there is a significance difference between public and private group of study participants opinion that the classrooms of the study area schools fit the standard.

Table 5.26 item 3, shows that the independent sample t-test was used to compare the average values for student's chairs and tables fit the standards. Based on the statistics result it is evident that there is a significant difference between public and private school respondents. For the public school respondents is 2.42 with SD = 1.25, and SEM = 0.10. The test value is 3.0, resulting a t-values of -7.34 with DF = 386. The p-value is < 0.001 indicating a statistical significance mean difference of 0.99 compare to the test value. Similarly for the private school respondents the mean value is 3.41, with SD = 1.38296, and SEM = 0.09476. The test value is 3.0, resulting a t-values of -7.42 with DF = 383. The p-value is < 0.001 indicating a statistically significant mean difference of -0.99 compare to the test value. This result shows that private and public group of respondents' exhibit statistical differences from the test value, suggesting that there is significant difference between study participant's response on the fitness of student's chairs and tables to the standards.

Similarly for item 4, the average score for “Are the playing toys and dolls of the school are according to the standards?” the statistics provided shows that there is a significant difference between the responses of the public and private group. The mean value of public group respondents is 1.99 with SD = 1.04 and SEM = 0.08. The test value is 3.0, resulting a t-values of -6.61 with DF = 386. The p-value is < 0.001 showing a statistical significant mean difference of 0.84140 compared to the test value. Similarly, for the private group the mean value is 2.84, with SD = 1.40, and SEM = 0.10. The test value is 3.0, resulting a t-values of -6.804 with DF = 382. The p-value is < 0.001 indicating a statistically significant mean difference of 0.84 compared to the test value. The public and private group respondents response exhibits there is statistically significant difference from the test value, suggesting that there is significant difference in playing toys and dolls of the school according to the standards between the two groups.

From the observation the researcher noticed that in most public schools and some private schools buildings and classrooms do not meet the standard of the region. Besides, the school buildings and classroom seem not appropriate for pre-primary school. There is also scarcity of chairs and tables in public schools. As a result some children seat on the floor. However, some private school buildings and classrooms meet the standard and there were adequate chairs and tables. In both schools playing toys and dolls were not found (Ob7, Ob8, Ob9, and Ob10 March - May 2022).

In addition, to the question “*What are the major challenges that you observed in your pre-primary school about the implementation of play-based pedagogical strategies?*” some public school principal interviewees mentioned:

Like our school, the school compound is also so narrow. There need to be more toilets and drinking water. Furthermore, there is no play material like toys, swings, or sliding slides. One of the biggest challenges we face in our school is space constraints. Concerning the students we have, the space needs to be adequate. Besides, the place is not planned for preschool, but we use it as a school campus because of the need for more options. The school compound is not that good for the teaching-learning process. Honestly speaking, the school building and the classrooms do not meet the regional standards. The school environment is not conducive to students. Because the courtyard is very narrow, the rooms are cramped and heated, the yard is distracted, and there are no indoor or outdoor play materials (PIX, May 12, 2022).

The other interviewee principal stated that one of the biggest challenges we face in our school is space limitation. There has to be enough space for the students we have. Even though, the site is part of a primary school, but the space is not adequate for a school campus due its small size. The school places are not good for the teaching-learning process. There is no enough outdoor play area. The school's structure and classrooms don't adhere to regional requirements. The school is not as such favorable to learning. Because the rooms are narrow and there are no resources neither for indoor nor outdoor activities (PVIII May 9, 2022).

On the other hand, for the same question some of the private school principal interviewees discussed that the school campuses are large enough and suitable for students. There are good playground and materials to suit all students. There are also televisions, indoor and outdoor play equipment and materials for reading and writing lessons. The classrooms, chairs and tables are comfortable and clean (PVI, March 28, 2022). Besides, one of the supervisors affirmed that most private schools I supervised have a large campus that accommodates all play material, which is suitable for children, but most public and some private schools have narrow campus. (Sup I, May 21, 2022)

On the contrary, the other interviewed supervisor mentioned that it is difficult to say there is a comfortable environment for the preschool to implement play-based pedagogy. The only thing they have is a classroom. However, it is hot and not suitable for teaching children. It was also confirmed by regional education bureau expert and city administration expert as most public, and some private school classrooms need to meet the standard, and more is needed for teaching. However, some principals of private schools mentioned that all classrooms have to meet the requirements set by the government. The existing school buildings are also per the regional government's requirements. Form the observation it was confirmed that in all private schools, children have access to a place to sit; however, in some public schools, many children do not have seats. The class size varies between private and public schools. On average, 40 children per class are found in private schools, whereas in public schools, it is more than 90. It has been

found that large class size harms children's participation and interactive learning (Observation, March – May 2022). Therefore, it is very challenging to implement play-based pedagogy in the instruction process. Thus, children attending a large class do not benefit from the instruction, which may affect their academic performance.

In addition, to the question “*What are your overall suggestions to improve play based pedagogical approaches in ECE in pre-primary schools?*” public school interviewee principals mentioned that our school building needs to meet the regional government's standards for pre-primary schools. The classrooms do not have a ceiling or adequate windows. The roof is low and not constructed as per the requirements of the region's standard. Besides, the school compound is very narrow. There is no separate toilet for kids. We are working on choosing one of two problems. Moreover, the school's space or building could not be suitable for preschool children. (PVII, March 29, 2022)

Furthermore, in the open-ended question, respondents confirmed that although the school environment is safe, the size is narrow; the compound is not clean and comfortable making the implementation of a play-based teaching method difficult. “Most of the classrooms we teach at our school do not meet the required standards set by the regional government and are not suitable for kindergarten. There is no enough toilet and drinking water; there are no play materials like toys, swings, or sliding slides. For that matter, the place is not planned for school, but we use it as a school campus because of lack of options.”

In addition, to the interview question “*What are the available resources that can help facilitators to implement play based pedagogy in your specific school?*” one of the principals explained that our school has a large compound and is very convenient for students. There are enough paces and suitable situations for children. It also has a good playground and materials that accommodate all students we have (P VIII, May 9, 2022).

The other private school principal expressed that in their school, many comfortable conditions facilitate students learning as in every classroom. They have a television, indoor and outdoor play materials, and literacy and numeracy teaching materials. The classrooms, chairs, and tables are comfortable and clean. All of the classrooms they have at their school meet the standard set

by the government. The existing school buildings are as per the requirements of the regional government criteria (P IX, May 12, 2022).

Another supervisor interviewee stated that most private schools have a large campus that accommodates all play material, which is suitable for children, But most public and some private schools have narrow campuses which are not convenient for children (Sup I, May 21, 2022).

On the contrary, another supervisor interviewee stated that it is difficult to say there is a comfortable environment for the pre-school coordinator to implement play-based pedagogy. The only thing the schools have is a classroom. However, it is narrow and not suitable for teaching children. Moreover, in some public schools there is no complete teaching material in each classroom, and some children do not have seats and tables. (Sup II, May 23, 2022).

The other principal stated that although they do not say their classrooms meet the standard, they believe it is sufficient for teaching (P IV March 24, 2022). The regional education bureau expert also mentioned that it is hard to say that the existing private and public school classrooms meet the standards set by the regional government (EC I, May 2, 2022).

From the observation the research, witnessed that in all private schools, children have access to a place to sit. However, in some public schools, large numbers of children do not have access. The class size varies between private and public schools. In public school, on average 40 children are found in a class, whereas in public schools it is more than 90. It has been found that large class size harms children's participation and interactive learning. Moreover, it is very challenging to implement play-based pedagogy in the instruction process. Thus, children attending a large class size do not benefit from the instruction that may affect their academic performance (Ob6, Ob7and Ob8 March - May, 2022).

Therefore, based on the quantitative and qualitative data, one can come up with the existing realities that most of the school buildings and classrooms were below the standard. Moreover, students chair and tables in public not only scarce but they are no to the standard and playing toying toys and dolls were not available which indicates that the implementation of pre-primary school curriculum was hampered by several factors.

Table 5. 27 Availability of indoor and outdoor materials

No	Variable	n	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	There is indoor materials to organize and implement activities in order to maintain holistic development of children	388	2.47	1.37	.077	3	-7.60	387	.000	-.53
2	There are enough outdoor materials to organize and implement activities in order to maintain holistic development of children	388	2.61	1.45	.08	3	-5.31	387	.000	-.39
3	There are adequate and appropriate play equipment (balance, swinging, slid, ladder etc.) in the school	388	2.78	1.51	.08	3	-2.92	387	.004	-.22

Table 5.27 shows that the study result on the use of indoor materials for organizing and implementing activities in order to maintain the holistic development of children. The mean value for this variable is with a standard deviation of 1.37. The standard error of the mean is 0.077. To assesses the significance of the variable; a t-test was conducted. The t-value obtained was 3, with degrees of freedom of 387. The p-value associated with this t-value is less than 0.001 ($p < .001$), indicating that the result is statistically significant. The mean difference (MD) for this variable is -0.53, suggesting that there is a negative difference in the perception of the availability of indoor materials for organizing and implementing activities to maintain holistic development of children. In general, the analysis suggests that there are not enough outdoor materials to organize and implement activities for maintaining the holistic development of children, as indicated by the significantly negative t-value and the mean difference.

Table 5.27 for the given result, the mean result for the statement “there are enough outdoor materials to organize and conduct activities to maintain holistic development of children. There are enough outdoor materials to organize and carry out activities to maintain holistic development. To maintain holistic development of children the mean value is ($M= 2.61$, $SD= 1.45$ and $SEM= 1.45$). The t-value is -5.31 with degrees of freedom of 387. The p-value associated with this t-value is less than 0.001 ($p < 0.001$), indicating that the result is statistically significant. The mean difference (MD) for this variable is -0.39, indicating that there is a

negative difference in the perception of the availability of sufficient outdoor materials for organizing and conducting play-based activities to maintain holistic development of children.

In the same table the analysis result of variable "there are adequate and appropriate play equipment (balance, swinging, slide, ladder, etc.) in the school" shows that the mean value ($M = 2.78$, $SD = 1.51094$ and $SEM = 0.08$) shows that, the mean value is below the expected mean value (3.00). The t-value obtained was -2.92, with degrees of freedom of 387. The p-value associated with this t-value is 0.004 ($p = .004$), indicating that the mean result is statistically significant. The mean difference (MD) for this variable is -0.22, suggesting that there is a negative difference in the perception of the availability of adequate and appropriate play equipment in the school. Overall, the analysis suggests that there are not adequate and appropriate play equipment in the school for organizing and implementing activities for maintaining the holistic development of children, as indicated by the significantly negative t-value and the mean difference.

In addition, to the question "*How do you evaluate the teacher student ratio to run the indoor and outdoor activities in your respective school?*", one of the supervisors explained that in most private schools, the student-teacher ratio is good, not more than 1:30, but the public school student-teacher ratio is, on average, 1:90, so it is hard to run indoor and outdoor games. (Sup I, May 21, 2022). Moreover, from the observation the researcher witnessed that in the public school, the student-teacher ratio is found that far beyond the standard (1:30), is 1:106, 1:100, 1:90, 1:85, etc. However, in most private schools, the student-teacher ratio was found out below and up to the standard. In a few private schools, the student-teacher ratio exceeds the limit in a small number (1:32 and 1:35). Moreover, it was found out that most public and some private preschools lack the resources needed to implement play-based pedagogy. The funny thing the researcher observed during the observation time is that one of the public pre-primary school coordinators does not have an office. She is coordinating in an open space with no facility. However, she is a first-degree holder (Observation, March - May, 2022).

In addition while responding to the question "*What are the major activities planned and implemented in your office to enhance the implementation of play-based pedagogical strategies in pre-primary school?*" one of private school principal in the interviewee mentioned that our

school teachers are effective because they have the resources they need in their classrooms. They teach with video aids, and the rooms are spacious and allow them to play freely (PII, March 18, 2022).

From the observation the researcher, witnessed that all public and school principals do have a plan to implement play-based pedagogy in their respective schools because, they do not have exposure about play-based pedagogy strategy. However, most private school principals have insists teacher to plan activities. Moreover it also observed that almost all public and some private pre-primary schools do not have adequate indoor and outdoor materials to facilitate children's holistic development (Observation, March - May, 2022)..

Therefore, this result reveals that in most public pre-primary schools, there is no adequate outdoor and indoor resource to implement play-based pedagogy. However, in private schools relatively, there is enough material to organize outdoor and indoor activities. These findings were similar to those in a previous study by Tarimo, (2013), who found out that school environment and instructional materials play a significant role in children overcoming frustration and moving and playing efficiently. They make the teaching-learning process more effective and meaningful. It can increase children's participation, motivation, and concentration on the concept taught in the instructional process. Shortage of instructional materials could negatively affect the instruction process. School environment and instructional materials could be significantly detrimental, particularly to children in pre-schools who need an assortment of materials to support or capture new experiences.

Regarding the adequacy of material in their school, one principal from the public schools said, *"In our school, we assist teachers in implementing play-based pedagogy by providing limited resources because we do not have an adequate budget."* These findings were different from the ideas of Ebele and Chukwbikem, (2013) that argued the purpose of early childhood education is to bring cognitive, social, emotional, language and physical development through using appropriate early childhood education materials which nurture and support the development of early literacy and numeracy in children at pre-primary school. Moreover, Akinrotimi and Olowe, (2016) emphasized that adequate resource quality significantly impacts the successful implementation of early childhood education curriculum. Thus, resources are crucial for the

effectiveness of early childhood education programs at pre-primary schools. Especially to implement play-based pedagogy at this level, the resource is the critical element. However, the findings of this study reveal that the provision of resources in the study area is inadequate.

On the other hand, the private school interviewees' principal mentioned, our school teachers are effective because they have the resources they need in their classrooms. They teach with video aids, and the rooms are spacious and allow them to play freely (PV March 25, 2022). In the observation, it was confirmed that almost all public pre-primary schools do not have adequate indoor and outdoor resources that facilitate the holistic development of children (Observation March – May 2022).

Table 5. 28 Two-tailed t-test on availability of chairs and tables

No	Variable	n	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	There are adequate tables and chairs in the classroom	388	3.03	1.52	.08	3	.33	387	.738	.026
2	The chairs and tables are appropriate and comfortable to the size and age of the children	388	3.16	1.49	.076	3	2.04	387	.042	.155

Table 5.28 item 1 shows the analysis result of the variable “there are enough tables and chairs in the classroom.” Indicates that (n = 388) respondents were included in the analysis. The mean value for the variable is 3.03, which is above the ideal mean (3.00). The standard deviation is 1.52. The standard error of the mean is 0.08. The t-test value is 0.334 with a degree of freedom of 387. The p-value associated with this t-value is 0.738 (p = 0.738), indicating that the mean result is not statistically significant. The mean difference (MD) for this variable is 0.03, which indicates that there is a difference in the perception of the availability of sufficient tables and chairs in the classroom for the implementation of play-based pedagogy in preschools in the study area. In general, the study's analysis revealed that there are disagreements among respondents about whether there are enough tables and chairs in the classroom. The t-test value suggests that

there is a significant difference in the response of the study participants; however, the p-value indicates that the difference may not be statistically significant.

Table 5.28, item 2 indicated that the data provided about “the chairs and tables are appropriate and comfortable for the height and age of the children” were evaluated by 388 respondents. The mean for the variable was ($M = 3.16$, with $SD = 1.49$ and $SEM = 0.08$). The t-test value is 2.040, the degree of freedom is 387 and the p-value is greater than 0.005. This indicates that there is no statistically significant difference in the perception of the appropriateness and comfort of the chairs and tables between respondents’ children of different sizes and different ages. In general, based on the results of the study, it can be said that there were differences in respondents’ perceptions of the appropriateness and comfort of chairs and tables for children depending on their height and age. Observation revealed that tables and chairs are inadequate in some public schools due to large class size as a result some children sitting on the floor (Observation March – May 2022).

5.4.4 Challenges to implementation of play-based pedagogy

Play is helpful for early childhood children’s education that can benefit them in the development of emotional, social, cognitive, physical, and language. Thus, it is most common in early childhood classes to use play in the instructional process. Research shows that play-based learning settings are child-focused pedagogy that promotes the overall development of children by following their usual curious and explorative disposition. It is natural for young children to explore what attracts their attention and interests them. To build this disposition, they should feel connected to their learning facilities and confident in their capabilities as a learner (Hunter, 2019).

A Play-based pedagogy indeed shifts the teaching approach from teacher-centered instruction to a more child-focused one. Thus, the purpose of play-based pedagogy is to learn while having fun. Young children will typically investigate whatever interests them by connecting play with classroom instruction and developing confidence in their capabilities. Thus, play-based pedagogy plays a significant role in the education of early childhood children to bring their holistic

development (Pyle and Danniels, 2017). However, many challenges affect the implementation of play-based pedagogy in pre-primary, which varies from context to context and ranges from simple to complex (Moodley, 2020). Some of the challenges in this study were resource-related challenges such as budget shortage, the inadequacy of playing materials, and unsuitable space. School leaders related challenges such as lack of organizational training and inadequate support from the educational experts (principals and supervisors)—time-related challenges such as insufficient time allocation. Professional challenges include a lack of trained school leaders and teachers' required knowledge in leading and implementing play-based pedagogy. Thus, this section focuses on the challenges of play-based pedagogical strategies in implementing the ECE curriculum. Concerning the challenges, pre-primary schools face in implementing play-based pedagogy in the ECE curriculum administered to the study participants via questionnaire and interview. Thus, their views on the challenges of play-based pedagogy were stated as follows.

Table 5. 29 Two –tailed t-test on budget-related challenges

Variable	Groups	N	F	Sig	Mean	SD	SEM	Test value	t	DF	Sig (-2 tailed)	Mean difference
There is shortage of budget to fulfill play based learning materials	Teacher	343	1.14	0.26	3.76	1.31	.21	3	-.32	386	.749	-.07
	PTA	45			3.82	1.40	.22	3	-.30	54	.762	-.07

NB: mean value 3.41– 5.00 strongly agree and agree (Positive), 2.61 – 3.40 undecided (Neutral) and 1.00 – 2.60 disagree and strongly disagree (Negative)

Table 5.29 summarized that “there is a lack of budget to provide play-based learning materials” was evaluated by (N=343) and the PTA group (N=45). Based on the analysis (MT = 3.76, SD = 1.31, t (386) = 0.210, p > 0.005). The test result shows that teachers/facilitators rated the use of the missing budget to implement play-based learning materials above the expected mean (3.00). In contrast, data analysis shows that there is no significant difference between PTA members' mean scores on the variables (MPTA = 3.82, SD = 1.40, t (45) = -.22, p > 0.005). The study result shows that there is no significant difference between the two groups in terms of budget constraints for fulfilling play-based learning materials. The average difference between the two groups was -0.07, further supporting the confirmation that there is no significant difference in budget constraints for the provision of materials between the teacher and PTA groups. This

suggests that there is no disagreement between respondents' answers. In general, the study analysis shows that both teachers and PTA members perceive a significant lack of budgets for the provision of play-based learning materials in school for the organization and implementation of activities to maintain the holistic development of children, as evidenced by the non-compliance - significant t-values and mean differences.

In addition, when answering the question “*Are there major challenges in implementing play pedagogical strategies in your preschool?*” In the open-ended question, respondents stated that “*there is no budget to purchase the necessary materials.*”

Moreover, one of the principals confirmed at their school, we support teachers in implementing play-based pedagogy by providing limited resources because we do not have sufficient budget (PII, March 18, 2022). The other supervisor interviewee further stated that I do not think there is enough material in terms of supply because it is still not gaining attention. I do not think much is being done at a country level (Sup I, May 21, 2022).

The other regional education office expert interviewee further stated that as far as I know, there are no providers and suppliers of instructional materials for preschool at the national level. There is a shortage of resources at early childhood schools as currently, most schools have no adequate availability of resources. No material is offered to ECE teachers at government schools. However, some private schools have a relatively better resource supply (EC I, May 2, 2022).

The other public school principal interviewee said that there needs to be more supply of teaching materials. Thus, more adequate resources are needed to implement play-based pedagogy. There need to be more materials at the school. Students need more play materials, which prevent them from learning through play. The other private interviewee principal stated that like our school, the material supply is excellent and convenient, so it is appropriate to teach through play. From the observations it was confirmed that most public schools and some private preschools lack sufficient materials due to lack of budget allocations (Observation March – May, 2022). However, the document analysis identified the need to provide sufficient space for indoor and outdoor play and learning activities (MoE, 2010a).

However, the adequacy of materials and a conducive school environment improve the effectiveness and significance of the teaching-learning process. They can help enhance children's

engagement, motivation, and focus on the idea being taught during the instructional process. On the contrary, a lack of facilities may have a negative impact on the learning process. Teaching materials could be extremely affecting learning, especially for children in pre-schools who require a variety of materials to assist or capture new experiences (Tarimo, 2013). Thus, the availability of facilities is essential to implement play-based pedagogy. The importance of resources as it is central for classroom instruction to use play-based pedagogical strategies. The materials may vary from context to context, but they can facilitate children learning in pre-primary school settings. Play facilities used in early childhood education are anything natural or artificial, absolute or imaginative, visual or invisible, big or small, structured or unstructured, props or loose parts. Thus, teaching facilities insist that teachers use a teacher-directed teaching strategy. It will affect children's participation in the instructional process (Kimberly, Ana Garcia-Nevarez, 2014).

Table 5. 30 Two-tailed t-test result on school leaders' training

No	Variable	Participant	N	Mean	SD	SEM
1	The school leaders are not well trained to lead play based pedagogy	Teacher	343	3.29	1.47	.08
		PTA	45	3.16	1.38	.21

Table 5.30 shows that that the mean of the study participants from both teachers and PTA members was above the ideal mean (3.00) because school principals are not well trained to lead play-based pedagogy (MT = 3.29 and MPTA = 3.16). This shows that the average scores of the respondents summarize that play-based pedagogy is less practiced in the study area because school principals are not trained to guide teachers in implementing play-based pedagogy.

Table 5. 31 Two-tailed t-test on leaders training on play-based pedagogy

Sources of variances	Variance		t-test for Equality of Means					
	F	Sig.	t	D.F.	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference

						ce		Low er	Upper
The school leaders are not well trained to lead play based pedagogy	1. 34	.2 5	.6 0	3 8 6	.55	.14	.23	-.32	.60

(n = 388)

Table 5.31 shows that there is no significant difference between the means of teachers/facilitators and PTA members, indicating the provision of training for principals to lead play-based pedagogy in the study schools. The t-value is 0.60 and the degree of freedom (df) is 386. The p-value associated with the p-value is 0.55, indicating that there is no statistically significant difference between the two groups. In general, based on the result of the t-test and analysis of variance, there is no evidence that there is a significant difference between the two groups compared in terms of their training in leading play-based pedagogy.

Table 5. 32 Two-tailed t-Test on leaders’ organization of training on play-based pedagogy

Variable	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
The school leaders do not organize training for teachers on implementing play based learning strategies	3.23	1.44	.07	3	3.11	387	.002	.23

(N = 388)

Table 5.32 shows that the average score for the statement “the principals do not organize training for teachers to implement play -based learning strategies” for the given outcome is (M = 3.23, SD = 1.44 and SEM = 0.07). The t-value is 3.11, with 387 degrees of freedom and a significance level of 0.002 for a two-tailed test, indicating that there is a statistically significant difference between the groups. The mean difference (MD) is 0.23 together with the significant level this supports the condition. This suggests that school leaders may not be able to organize training for teachers to implement play-based pedagogy in the study schools. In general, the analysis shows that there is a significant difference between respondents in their perception of leaders in organizing training for teachers to implement play-based pedagogy in the schools of the study area.

In addition, while responding to the open-ended question “*What do you say regarding the support given to teachers in your school from the sides of principals, ECE Coordinators and Woreda supervisors?*” Most public school teachers expressed that no on-the-job training was provided to teachers by supervisors, pre-school coordinators, or principals at our school. The reason is that most of them are not trained in the basics of early childhood education and are not qualified to provide the training. On the other hand some private school teachers/facilitators explained that as a private school, training is provided by our principal. Thus, the training we received was a significant input in the process of learning and teaching at pre-primary school.

In addition, while responding to the open-ended question “*What do you say regarding the support given to teachers in your school from the sides of principals, ECE Coordinators and Woreda supervisors?*” Most public school teachers indicated that majority school leaders need to gain training to support ECE facilitators. So they need to gain the knowledge and skills to support facilitators in implementing play-based pedagogy. Leaders need to gain awareness of play-based pedagogy to practice it. There is a problem with the school administration's need to create solid relationships with teachers and limited discussion with student parents.

On the other hand, respondents who were working in private schools believe that the partly some leaders have the required knowledge, as they stated that in the case of our school, we are running the teaching-learning process with well-educated and knowledgeable professionals. Nevertheless, as I have seen in various places where I have been working in the region, the leaders need more leadership skills and knowledge; they need more patience and support from early childhood education teachers.

In addition, most of the interviewed study participants believed in the participation of parents, summarized as the engagement of parents in the teaching-learning process needs to be deeper. Most of the school activities were left to teachers. As a result, the community perceives preschool education as kindergarten. The community does not participate in school affairs because they need to gain awareness of early childhood education.

Table 5. 33 Two-tailed t-test on educational experts support

(n=388)

Variable	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
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There is no adequate support from the educational experts (principals, supervisors) to implement play based pedagogy	3.26	1.41	.071	3	3.57	387	.000	.255
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The Table 5.33 shows that the average score for the statement “There is no adequate support from educational experts (principals, supervisors) for the implementation of play-based pedagogy” for the given result (M = 3.26, SD = 1.41 and SEM = 0,071). The t-value is 3.57, with 387 degrees of freedom and a significance level of 0.000 for a two-tailed test, indicating that there is a statistically significant difference in perception regarding the lack of support from educational experts in implementing play-based pedagogy. The mean difference (MD) is 0.255, along with the significant level supporting this statement. In general, the analysis shows that there are significant differences between respondents in their perceptions of support from educational experts in implementing play-based pedagogy, with participants reporting a lack of adequate support.

Table 5. 34 Two-tailed t-test on time allocation related for play-based learning

Variable	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
The allocation of time is not enough to practice play based learning (n=388)	3.25	1.42	.07	3	3.50	387	.001	.25

Table 5.34 shows that the average score for the statement “the time allocation is not enough to practice playful learning” for the given result (M = 3.25, SD = 1.42 and SEM = 0.07). The t-value is 3.50, with 387 degrees of freedom and a significance level of 0.001 for a two-tailed test, indicating that there is a statistically significant difference in perception regarding time allocation for play-based learning. The mean difference (MD) is 0.25 along with the significant level supporting this statement. In general, the analysis shows that there are significant differences between respondents in their perceptions of the adequacy of time allocated to play-based learning, with participants indicating that the time allocated was not sufficient.

Table 5. 35 Two-tailed t-test on teachers’ knowledge of using learning materials

Variable	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
I have shortage of knowledge to use learning materials (N = 388)	2.77	1.43	.073	3	-3.12	387	.002	-.23

Table 5.35 shows that, the analysis of the given data suggests as there is a statistically significant difference in perception regarding teachers' lack of knowledge about the use of learning materials in implementing play-based learning. The average score for the statement “I have a lack of knowledge about using learning materials” is 2.77, with a standard deviation (SD) of 1.43 and a standard error of the mean (SEM) of 0.07. The t-value of -3.12, calculated with 387 degrees of freedom and a significance level of 0.002 for a two-tailed test, supports the conclusion that there is a statistically significant difference in perception regarding teachers' lack of knowledge in using learning materials. The mean difference (MD) of -0.23 and the significance level further support this finding. In general, the result suggests that there is a significant difference between respondents in their perception of the lack of knowledge when using learning materials. Both the teachers/facilitators of the study participants and the PTA members often stated that they felt a lack of knowledge in this area.

Table 5. 36 Two-tailed t-test on resource related challenges

No	Variable	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	There is no adequate playing material to implement play based learning	3.59	1.42	.07	3	8.17	387	.000	.59
2	The existing space is not suitable to implement play based learning (N = 388)	3.10	1.49	.08	3	1.25	387	.196	.20

Table 5.36 shows that, the analysis of the given data suggests that there is no statistically significant difference between respondents perception regarding inadequate playing materials to implement play-based pedagogy. The average mean for the statement “There is no adequate playing material to implement play based learning” is 3.59, with a standard deviation (SD) of 1.42 and a standard error of the mean (SEM) of 0.07. The t-value of 8.17, calculated with 387

degrees of freedom and a significance level of 0.000 for a two-tailed test, supports the conclusion that there is a statistically significant difference in perception regarding teachers' shortage of play materials. The mean difference (MD) of 0.59 and the significance level further support this finding. In general, the result suggests that there is a significant difference between respondents in their perception of the lack of knowledge when using learning materials. Both the teachers/facilitators of the study participants and the PTA members often stated that there is shortage of play material. In the observation it the researcher witnessed that in majority of public and some private schools there in no adequate resource for the implementation of play-based pedagogy.

Regarding the existing space is not suitable to implement play based learning Table 5.39 shows that, the analysis of the given data suggests that there is statistical difference between respondents perception. The average mean value of the item 2, is 3.10, with a standard deviation (SD) of 1.49 and a standard error of the mean (SEM) of 0.08. The t-value of 0.25, calculated with 387 degrees of freedom and a significance level of 0.20 for a two-tailed test, supports that the existing space in most schools is not suitable to implement play-based pedagogy.

In addition, to the open-ended question *“Are there any major challenges in the implementation of play-based pedagogical strategies in your pre-school rather than mentioned above on item?”* One of the public school teachers expressed:

At our school, several challenges affect the implementation of play-based pedagogy. To mention some of the challenges, the room is uncomfortable and not to the standard. There is no budget to buy the necessary materials, assistant teachers and caregivers are not assigned. The need for trained teachers is another challenge. Thus, most of our school teachers frequently use teacher-led instruction to save children from harmful practices. If teachers allow children to play freely in crowded spaces, they may quarrel with each other while running, they fall, snatch from each other, and face injury and other challenges.

In addition, through observation, the researcher found that there are several challenges in most public and some private schools such as overcrowding of school campuses, classrooms and lack of resources. The school environments are not attractive. In addition, some children sit on the floor due to lack of chairs and tables.

There is also no ceiling (the roof has no protection; it is directly exposed to sunlight); therefore it is warm. Moreover, during the observation time, it was found out that some public schools were overcrowded, and the classrooms were suffocated (Observation, March, 2022).

The data analysis is determined to establish the relative importance of various challenges of play-based pedagogical strategies in the implementation of the ECE curriculum. Data analysis consists of calculating the Relative Importance Index (RII) and Ranking challenges in each category based on the Relative Importance Index (RII).

$$All = \frac{1n_1+2n_2+3n_3+4n_4+5n_5}{A*N}$$

Where:

All = Relative Importance index

n_1, n_2, n_3, n_4, n_5 = Number of respondents answer each categories.

1, 2, 3, 4, 5= Weight given for each category (ranging from 1 to 5)

A= Highest Weight (i.e.5 in this case)

N=Total number of respondents

The importance indices were calculated for all challenges of play-based pedagogical strategies in implementing the ECE curriculum and were ranked accordingly. In order to find out the challenges, it is essential to rank them. The great RII value indicates the most critical challenges of play-based pedagogical strategies in implementing the ECE curriculum.

In this respect, the respondents were asked to rank the challenges of play-based pedagogical strategies in the implementation of the ECE curriculum using five points scale (1= strongly disagree, 2= disagree, 3= neutral, 4= agree, and 5= strongly agree). Their responses were organized into tables. Furthermore, the frequency counts, RII value, and rank were computed to analyze and interpret the findings.

Table 5. 37 Importance and Ranking of challenges of play-based pedagogical strategies

Variables	1	2	3	4	5	RII	Rank
There is a shortage of budget to fulfill play-based learning materials	40	50	5	160	133	0.752577	1
The school leaders are not well trained to lead	63	88	12	128	97	0.65567	3

play-based pedagogy

There is no adequate playing material to implement play-based learning	48	70	6	133	131	0.718041	2
The school leaders do not organize training for teachers on implementing play-based learning strategies	62	94	11	136	85	0.645361	6
There is no adequate support from the educational experts (principals, supervisors) to implement play-based pedagogy	58	89	20	138	53	0.651031	4
I have a shortage of knowledge about using learning materials	97	108	21	110	52	0.554639	8
The allocation of time is not enough to practice play-based learning	60	92	9	144	83	0.650515	5
The existing space is not suitable for implementing play-based learning	82	87	10	129	80	0.619588	7

Table 5.37 shows how respondents identified the importance of and ranking of challenges of play-based pedagogical strategies in the implementation of ECE curriculum;

- There is a shortage of budget to fulfill play-based learning materials, RII= 0.752577 ranked first, indicates the first challenges of play-based pedagogical strategies in the implementation of the ECE curriculum.
- There needs to be adequate playing material to implement play-based learning; RII= 0.718041 ranked second.
- The school leaders needed to be trained to lead play-based pedagogy; RII= 0.65567 ranked third.
- There needs to be adequate support from the educational experts (principals, supervisors) to implement play-based pedagogy; RII= 0.651031 ranked fourth.
- There needs to be more than the allocation of time to practice play-based learning; RII= 0.650515 ranked fifth.
- The school leaders need to organize teacher training on implementing play-based learning strategies, RII= 0.645361 ranked sixth.
- The existing space is not suitable for implementing play-based learning; RII= 0.619588 ranked seventh.
- I need more knowledge to use learning materials; RII= 0.554639 ranked eighth.

Significant challenges that teachers, principals, supervisors, and regional pre-primary education coordinators identified in the open-ended and interview question

Concerning learning environment

The public school principals' response concerning challenges in the learning environment:

- Some said the school environment is safe but small to accommodate the students. It has an impact on our practice.
- Others said the lack of a clean and comfortable learning environment made implementing play-based teaching difficult.
- A few of them said that school compounds are so narrow that there is not enough toilet and drinking water, Also there is no type of play materials like toys, swings, or sliding slides so that we could not be able to apply outdoor play properly.
- One of the principals stated that space constraints are one of the biggest challenges in our school. Concerning the students we have, the space needs to be adequate. Due to the lack of a compound for pre-primary children, we use primary school compounds. Moreover, the school compound is not suitable for the teaching-learning process. Honestly, the school building and the classrooms do not meet the regional standards.
- Some public schools need more water supply and toilets.

The regional education bureau coordinator strengthen the above idea as it is difficult to say there is a comfortable environment for implementing play-based pedagogy in most public and some private schools. The only thing public schools have is a classroom. However, it is hot and not suitable for teaching children (EC I, May 2, 2022).

Challenges concerning leadership

- Most public school respondents believed that most school leaders need more training to support ECE facilitators. So they need to gain the knowledge and skills how to support facilitators in implementing play-based pedagogy. Leaders need to gain awareness of play-based pedagogy to practice it.
- One of the respondents said that in various places where I have worked in the region, the leaders need more leadership skills and knowledge; they need more patience and support from early childhood education teachers.

About community engagement

- Most respondents believed that the participation of the community in pre-primary schools is low. Most of the school activities are left to teachers.
- One of the respondents said that the community needs to understand the importance of early childhood education. As a result, the community perceives preschool education as kindergarten.
- The other respondent replied that there is nothing that the local community does to monitor their children's education. Thus, they do not participate in school affairs because they need to gain awareness of early childhood education.

With the availability of resources

- The public schools' respondents' response shows a need for more resources; one respondent said that "as a government schools teacher, no material is offered to ECE teachers at our school. Although there was some supply, I did not find it that satisfying."
- The other respondent said there needs to be more material in terms of supply because it still needs to gain attention. Much has to be done at a country level. There is no provider or supplier of instructional materials for preschool at the national level.
- Currently, most schools need adequate availability of resources. "No material is offered to ECE teachers at government schools. Students need more play materials, which prevent them from learning through play."
- One of the respondents stated that one of the challenges for our school is the need for more resources to support the teaching-learning process through audio and video.

Moreover, respondents stated their existing challenges as follows:

- Facing challenges due to the large class size (more than 100 students per class) even though there is no chair and table for some students in our classroom. They are obliged to sit on the floor. Some teachers need more awareness of implementing play-based pedagogy.

- Finding trained teachers who can teach in preschool is challenging. So, the government should look into the problem of providing qualified teachers and opening a training institution.
- Lack of adequate institutions that can train pre-primary school teachers.
- As a public school, the need for an independent preschool principal has hurt the sector. Because the assigned principals are trained to lead the primary school, they need help to guide and assist preschool education teachers.
- There is no assistant teacher at the government preschool, and due to a large number of students (up to 100 children in a classroom), it takes work to teach through play-based pedagogy. It is also challenging to manage outdoor and indoor games with this large class size.
- The main challenge of implementing play-based pedagogy is the market's need for trained teachers. Every institution is responsible for training pre-primary school teachers in the region.
- Teaching methods vary from rural to urban. The supply of books in urban areas is good, but it could be better in rural areas. Finding a trained teacher for rural schools is complex, and play materials are also scarce.
- Teachers lack the awareness to implement play-based pedagogy
- Like our school, there needs to be training provided by the coordinators, supervisors, or principals because we need adequate play-based pedagogy training.
- As a private school, we do not get training from government bodies.
- Even though the regional education bureau and city administration education department replied that they provide training for public school teachers at the beginning of the year, principals, supervisors, and teachers affirmed that no training was provided to them by anyone.

Generally, in the open-ended questions the respondents listed the following challenges that affect the implementation of play-based pedagogy in pre-primary schools:

- Large class size

- Space constraints and inconveniences
- Teachers' lack of training and capacity
- Insufficient number of teachers
- Natural Disasters
- Lack of material supply (inconsistent with student numbers)
- Lack of trained teachers in the market for early childhood education
- Inadequate training for teachers
- Principals' lack of knowledge about pre-primary education.
- Lack of professionally trained and independent principals for preschool.
- Lack of adequate classrooms
- Lack of understanding of the method of teaching parents based on the play.
- Involvement of the Invisible Person in the Training for Teachers (Region) Improper implementation of teachers' training
- Lack of teacher motivation and lack of capacity
- Public school preschool stay is only one year
- Teacher-student ratio

5.4.5 Implementation of ECE principles and guidelines in Ethiopian primary schools

Introduction

This section presents the analysis of opportunities to implement ECE principles and guideline. . Data-gathering tools were developed based on the national curriculum to assess the opportunities to implement ECE principles and guidelines in pre-primary schools. Study participants were teachers, principals, supervisors, curriculum experts, and PTA members. Data was gathered through questionnaires and interviews. Moreover, school observations were conducted using a checklist. The analysis of opportunities to implement principles and guideline was conducted item by item in which the respondents provided answers for the questionnaire distributed and interview questions. Therefore, this section attempts to answer the last research question.

Table 5. 38 Two-tailed t-test on teachers' awareness of pre-primary school principle and guideline

Variable	Participant s	N	Mean	SD	F	Sig.	t	df	Sig. (2- taile d)	Mean Differ ence
Opportunity to read of pre-primary school principle and guideline	Teacher/Fa cilitator	343	2.54	1.36	2.33	.128	-.50	386	.621	-.11
	PTA	45	2.64	1.51			-.46	54	.650	-.11

NB: mean value 3.41– 5.00 strongly agree and agree (Positive), 2.61 – 3.40 undecided (Neutral) and 1.00 – 2.60 disagree and strongly disagree (Negative).

Table 5.38 shows that results of an independent-sample t-test on respondents practice on their opportunity to read the principles and guidelines of pre-primary school, with a sample size of 343 teacher and 45 PTA members (N =388). The mean, and standard deviation (SD), were

provided for each item, along with the t-value, degrees of freedom (df), significance (p-value) for a two-tailed test and mean difference.

Regarding the practice of respondents, in Table 5.38 item number 1, the mean values of teacher/facilitators ($M = 2.54$ with $SD = 1.36$) was less than expected mean value (3) and lie on “undecided” interval level while that of PTA members ($M = 2.64$, with $SD = 1.51$) was less than expected mean value (3) and lie in the “undecided” interval level. In addition, independent samples T-test values of teachers and PTA members ($t = -0.50$, and -0.456 with $p < 0.128$) respectively indicating that there was no statistically significant difference between the two groups in terms of their mean scores on the item "I have an opportunity to read principles and guidelines of pre-primary school." In this item, most of teachers and PTA members did not get opportunity to read primary school principle and guideline. The mean difference between the two groups is -0.11 . The analysis indicates that there are no significant difference between the two groups mean based on the p-value and t-test values provided in their practice about reading guidelines and principles of the school.

In addition, to the open-ended question “*What are the existing opportunities to implement play based pedagogy in pre-primary schools?*” One of the public school teachers expressed “the big yards and large classrooms helped us to provide the outdoor play and teach children through play. Donations of materials received from NGOs were good opportunities for our school for the implementation of play-based pedagogy” (P III, March 21, 2022). On the contrary, one of the public school principals stated “in our school nothing could be considered as an opportunity to implement play-based pedagogy” (P IV, March 24, 2022).

The regional education expert stated “as a region, we take this as an excellent opportunity to design pre-primary curriculum. We provide training for teachers, coordinators, and supervisors, and in order to assign them in pre-primary school as facilitator, coordinator and supervisor.” (ECI, May 2, 2022). Hawassa city administration ECE coordinator stated that as an urban education department, we can take advantage of the fact that there are enough personnel. We can also use it to increase the community's awareness of early childhood education (EC I May 2, 2022).

Table 5. 39 Independent sample t-test on curriculum comprehensiveness

Variable	Participan ts	N	Mean	SD	F	Sig.	t	df	Sig. (2- taile d)	Mea n Diffe renc e
The curriculum is comprehensive, addressing the development and learning of the whole children	Teacher/Facilitator	343	2.69	1.50	.470	.493	-1.39	386	.165	-.33
	PTA	45	3.02	1.59			-1.34	54	.187	-.33\

Table 5.39 shows the result of an independent sample t-test on the question “The curriculum is comprehensive and takes into account the development and learning of all children” with the sample of teachers 343 and PTA members 45 (N = 388). The mean values of the teachers/facilitators (M = 2.6880 with SD = 1.50401) are below the expected mean (3.00) and are at the interval level “undecided”, while this is the case for the PTA members (M = 3.02, with SD = 1.59) the case was larger than the expected mean (3) and lies in the “undecided” interval level. In addition, independent samples t-test scores were obtained from teachers and PTA members (t = -1.39 and -1.34 with p < 0.493, respectively), indicating that there was no statistically significant difference between the two groups in their mean scores for the variable duration. On this point, neither teachers nor PTA members believed that the curriculum was comprehensive to address the development of all children. The mean difference between the two groups is -0.33, indicating that on average the PTA group performs slightly better than the teacher/facilitator group on this item. In general, the study findings revealed there is no difference in the participants' perceptions of the comprehensiveness of the curriculum in addressing whole children's development and learning. The analysis shows that there are no statistically significant differences between the two groups based on the p-value and t-values.

In addition, to the interview question “*What do you suggest on developmentally appropriate curriculum practices in ECE in your pre-primary school?*”, one of the principals stated that the curriculum development to pre-primary schools, be it at the national or regional levels, do not

match children's age and education level both in terms of content and approach. It is beyond the capacity of the children (P VI, March 28, 2022).

Table 5. 40 Two-tailed t-test on teachers’ use of variety of teaching strategies

Variable	Participants	N	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Variety of teaching strategies both teacher-guided and child centered	Teacher/Facilitator	343	2.77	1.49	.095	.758	-0.867	386	.386	-.21
	PTA	45	2.98	1.52			-0.856	56	.396	-.21

Table 5.40 shows the result of an independent sample t-test to state that the use of variety of teaching strategies occurs in the in the sample of teachers 343 and PTA members 45 (N=388). The mean values of the teachers/facilitators (M = 2.77 with SD = 1.49) are below the expected mean (3.00) and are at the interval level “undecided”, while this is the case for the PTA members (M = 2.98, with SD = 1.52) the case was less than the expected mean (3) and lies in the “undecided” interval level. In addition, independent sample t-test results of teachers and PTA members were obtained (t = -0.867 and -0.856 with p < 0.095, respectively), indicating that there was no statistically significant difference between the two groups in their mean scores. On this point, neither teachers nor PTA members believed that teachers are used varieties of teaching strategies in the teaching learning process. The mean difference between the two groups is -0.21, indicating that on average the PTA groups perform slightly better than the teacher/facilitator group on this item.

In general, the study results revealed that there is no difference in participants' perceptions regarding the use of varieties of teaching strategies to meet the needs of individual children in pre-primary schools of the study area. The analysis showed that there are no statistically significant difference between the teacher and PTA member groups based on the p-value and t-values. Moreover, one of the interview supervisors stated “*Teachers working in urban schools use a varieties of strategies, but teachers working in rural schools use a teacher-centric teaching method as a teaching strategy*” (Sup I, May 21, 2022).

Table 5. 41 Two-tailed t-test on teacher-children interaction in play-based learning

Variable	Participants	N	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Observe and interact while children learn through play	Teacher/Facilitator	343	2.79	1.60	.042	.838	-1.18	386	.239	-.30
	PTA	45	3.09	1.62			-1.17	56	.249	-.30

Table 5.41 shows in the sample of 343 teachers and PTA members 45, the variables analyzed are “observing teachers while children learn through play and interacting with them to guide them to play according to instructions” (N = 388). The mean values of the teachers/supervisors (M = 2.79 with SD = 1.60) are below the expected mean (3.00) and are at the interval level “undecided”, while this is the case for the PTA members (M = 3.09, with SD = 1.62), the case was higher than the expected mean (3) and is in the “undecided” interval level. In addition, the t-test results of the independent sample of teachers and PTA members were obtained (t = -1.18 and -1.17 respectively with p < 0.838), indicating that there was no statistically significant difference between the two groups in their average scores duration. On this point, neither teachers nor PTA members believed that teachers observe and interact with children while they are learning with play. The mean difference between the two groups is -0.30, indicating that there is no significant difference between the groups. In general, the result of the study shows that there are no statistically significant differences between the teacher/facilitator and PTA groups in their answers to the question about observation and interaction in children's learning through play.

Table 5. 42 Two-tailed t-test on teachers' integration of play with lesson

Variable	Participants	N	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Integrate play with the lesson	Teacher/Facilitator	343	2.84	1.51	.867	.352	-.401	386	.689	-.10
	PTA	45	2.93	1.59			-.386	55	.701	-.10

In Table 5.42 shows that, teachers integration of play with lesson, the mean values of teacher/facilitators (M = 2.84 with SD = 1.51) were below the expected mean value (3.00) and

are at the interval level “undecided” while the values of PTA members ($M = 2.93$, with $SD = 1.59$) was less than expected mean value (3.00) and are in the “undecided” interval level. Furthermore, independent samples T-test values of teachers and PTA members ($t = -0.401$, and -0.386 respectively with $p < 0.352$) were obtained, indicating that there was no statistically significant difference between the two groups in their mean scores for the item indicated integration of play and teaching. In the item, neither teachers nor PTA members believed that play is integrated in the lesson. From the result it can be said that there is no significant difference between the two groups in their ideas about integrating play into the instructional process.

Table 5. 43 One-sample t-test on the practice of guideline

Variables	N	M	SD	SEM	Test value	T	DF	Sig. (2-tailed)	Mean D.
Implement play-based learning as per MoE guideline	388	2.62	1.44	.73	3	-5.15	387	<0.001	-.38

In Table 5.43 the analysis of the variables shows that there were 388 participants in the study. The mean score for teacher’s integration of play-based learning as per the MoE guideline was 2.62, with a standard deviation of 1.44 and a standard error of the mean of 0.73. The t-value was -5.15, with 387 degrees of freedom. The significance level (Sig.) was < 0.001 , which indicates that the mean difference was statistically significant. The mean difference (MD) was -0.38, indicating that there was a very small decrease in the integration of play-based learning as per the MoE guideline.

Moreover, in the interview, one of the supervisors stated that the practical implementation of preschool guidelines and principles lags behind in every school. School leaders do not fully understand what is written and told. Principals often lack enforcement capacity and lack awareness about preschool education. Therefore, it is difficult to say that guidelines and principles are applied (Sup II, May 23, 2022).

Table 5. 44 One-sample t-test on use of pre-primary school principles

No	Variables Teacher	Mean	SD	SEM	t-value	T	df	Sig. (2-tailed)	MD
1	assess children accurately	2.69	1.53	.08	3	-3.96	387	<.001	-.31
2	engage children in conversations	2.77	1.41	.07	3	-3.20	387	<.001	-.23
3	take care of the child's	3.86	1.21	.06	3	13.97	387	<.001	.863
4	purposely plan time and materials for learning through play	2.70	1.55	.08	3	-3.80	387	<.001	-.30

(N = 388)

In Table 5.44 the analysis of the variables shows that 388 participants took part in the study. The mean for accurately assessing children and planning their progress was 2.69, with a standard deviation of 1.53 and a standard error of the mean of 0.08. The t-value was -3.960, with 387 degrees of freedom. The significance level (Sig.) was <0.001, indicating that the mean difference was statistically significant. The mean difference (MD) was -0.31, indicating that teachers are able to accurately assess children and plan progress, and that the results are statistically significant.

In the same table, item 2, the analysis of the variables shows that there were 388 participants in the study. The mean score for engaging children in conversations about thinking and problem solving was 2.77, with a standard deviation of 1.41 and a standard error of the mean of 0.07. The t-value was -3.20, with 387 degrees of freedom. The significance level (Sig.) was <0.001, indicating that the mean difference was statistically significant. The mean difference (MD) was -0.23, indicating that teachers are able to engage children in conversations about thinking and problem solving and that the results are statistically significant.

In Table 5.44 the analysis of the variables of item 3, shows that there were 388 participants in the study. The mean score for “take care of the child’s physique health and safety” was 3.8608, with a standard deviation of 1.21 and a standard error of the mean of 0.062. The t-value was 13.97, with 387 degrees of freedom. The significance level (Sig.) was <0.001, indicating that the mean difference was statistically significant. The mean difference (MD) was 0.86, indicating that teachers are able to take care of children’s physique health and safety and that the results are statistically significant.

In the same table item 4, the analysis of the variables shows that there were 388 participants in the study. The average score for teachers who purposely plan time and materials to help children learn through play were 2.70, with a standard deviation of 1.55 and a standard error of the mean of 0.08. The t-value was -3.800, with 387 degrees of freedom. The significance level (Sig.) was <0.001, indicating that the mean difference was statistically significant. The mean difference (MD) was -0.30, indicating that teachers are able to plan time and materials specifically to benefit children's learning through play and is statistically significant.

Table 5. 45 Independent sample t-test on use of pre-primary school principles

Variable	Participants	N	Mean	SD	SEM	t	df	Sig. (2-tailed)	Mean Difference
Only the government approved curriculum should be used in all pre-primary schools	Teacher/Facilitator	343	2.75	1.46	.08	.27	386	.79	.06
	PTA	45	2.69	1.47	.22	.27	56	.79	.06

Hartley test for equal variance: F = 1.018, Sig. = 0.4447

Table 5.45 shows the results of an independent sample t-test analysis related on the variable "Only the government approved curriculum should be used in all pre-primary schools." The average score of the variable for Teacher/Facilitator is 2.75 and for PTA 2.69. The standard deviation (SD) values for Teacher/Facilitator, it is 1.46 and for PTA is 1.47. The standard mean error (SEM) for Teacher/Facilitator is 0.08 and for PTA is 0.22. The t-value for teacher/facilitator is 0.27 and for PTA is 0.27 with degree of freedom 386 for teacher/facilitator and 56 for PTA. The p-value for teacher/facilitator is 0.79 and for PTA is 0.79, indicating that the results are not statistically significant. The mean difference for both groups is 0.06. In general, the study results show that there is no statistically significant difference in the opinions of both groups regarding the use of only government-approved curriculum in pre-primary schools.

Table 5. 46 Independent sample t-test on use of pre-primary school principles

Variable	Participants	N	Mean	SD	SEM	t	df	Sig. (2-tailed)	Mean Difference
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All teaching and learning activities should be consistent with the approved pre-school curriculum	Teacher/Facilitator	343	2.59	1.51	.08	-1.53	386	.127	-.37
	PTA	45	2.96	1.49	.22	-1.55	57	.127	

Hartley test for equal variance: $F = 1.029$, $Sig. = 0.4725$

Table 5.46 shows the results of a one-sample t-test analysis on the variable “All teaching and learning activities should be consistent with the approved preschool curriculum.” The average score of the variable for teacher/supervisor is 2.59 and for PTA are 2.96. The standard deviation (SD) value for teacher/facilitator is 1.51 and for PTA is 1.49. The standard mean error (SEM) for teacher/facilitator is 0.08 and for PTA is 0.22. The t-value for teacher/moderator is -1.531 and for PTA -1.55 with a degree of freedom for teacher/moderator is 386 and for PTA is 57. The p-value for both groups is 0.127, indicating that the results are not statistically significant. The mean difference for both groups is -0.37. In general, the analysis of the study results shows that there is no statistically significant difference in the opinions of both respondents regarding the consistency of teaching and learning activities with the approved preschool curriculum.

Table 5. 47 Implementation of ECE guidelines in pre-primary school

No.	Variables related to curriculum	N	Mean	Std. Deviation	Std. Error Mean
1	curriculum will be used as a guide line	388	2.78	1.475	.075
2	curriculum should give an opportunity to the children	388	2.85	1.535	.08
3	curriculum should be readily available	388	2.675	1.43	.07
4	curriculum should encourage the use of play based pedagogy in the school compound	388	2.795	1.57	.08
5	curriculum should be adapted to the local context	388	4.13	.87	.04

Table 5.47 shows the average mean of variables 1-4 were rated by study respondents below the ideal average mean (3.00) to ensure that the implementation of pre-primary school guidelines is below the required standard level. However, the mean average value of the variable “The curriculum should be adapted to the local context” is 4.13, which is the highest value, indicating that the study participants agree that it is adapted to the local context. Furthermore, according to

the researcher’s observation, most public and private schools do not have the guidelines. From the observation the researcher, found that the majority of pre-primary schools observed do not have the guidelines and principles.

In addition, one of the principals who were interviewed about the use of preschool guidelines and principles stated that the practical implementation of preschool guidelines and principles is lagging behind in every school. School leaders do not fully understand what is written and told. Principals often lack enforcement capacity and lack awareness of preschool education. Therefore, it is difficult to say that guidelines and principles are being applied (Sup II, May 23, 2023)

In addition, one of the public school principals stated that curriculum documents most of the publications describing the preschool standard were available in their school because the education department made them available to them (PIX, May 12, 2022).

Similarly, the City Administration ECE coordinator strengthened this idea saying “we provide curriculum documents and instructions received from regional education bureau to education departments and districts for hierarchically distribution to schools”. In pre-primary school, it is mandatory to implement guidelines and principles. We believe that every school is implementing it (PX, May 16, 2022). However, in the study it was found in most schools the curriculum documents were not found and the guidelines and principles were not implements as planned.

Table 5. 48 School physical environment

No	Item	Poor F(%)	Good F(%)	Excellent F(%)	Total F(%)	Mean	SD
1	Child-friendly school environment	3	3	4	10	2.10	.876
2	Appropriate buildings and classrooms for preschool children	2	4	4	10	2.20	.789
3	Standardized classroom size	3	3	4	10	2.10	.876

4	Standardized tables and chairs according to the age of the students	3	3	4	10	2.10	.876
5	Availability of appropriate and neat dining rooms	6	2	2	10	1.60	.843
6	Appropriate sleeping/ napping rooms	6	3	1	10	1.50	.707
7	Adequate water supply	4	4	2	10	1.80	.789
8	Enough comfortable toilets	4	5	1	10	1.70	.675

As described in the guidelines of ECE, the physical environment and the setting of schools should be attractive, pleasant, and safe for children to allow them move freely. Moreover, the document stresses that the pre-primary social and physical environment of schools must be safe and secure as well as receptive and child-friendly. Interviews and school observation were conducted to evaluate the existing situation of the school's physical environment in order to get tangible information. In Table 5.48 item 1, regarding child-friendly school environment, it was observed that most observed schools, 4 (40%), had appropriate environments while 3 (30%) had somehow good conditions. However, 3 (30%) of the school environments the school environment is not child friendly. The Ethiopian education road map (2018) recommends that the school environment should be secure, safe, and accessible. It has to provide every child with an equitable academic situation and social and physical inclusive education. It should enable children with special needs get equal chance to succeed as their peers.

During interview, it was found out that there were different views about the physical environment of the school. Some respondents believed that there needs to be cleaner and more comfortable settings to implement play-based pedagogy. It is not conducive to students because the compound is very narrow, the rooms are cramped and heated, the yard is distracted, and there needs to be more space to place outdoor play materials. It is difficult to say there is a comfortable environment for implementing play-based pedagogy in most pre-primary schools. On the other hand, some respondents said the school compound is large enough and suitable for children to play. It also has a good playground and materials that accommodate all children they have. Some others stressed that most private schools have a large campus accommodating all play materials suitable for children. However, most public and some private schools have narrow campuses, which is inconvenient for children. ECE coordinator interview response shows that *“most public schools have limited space. As a result, they are in trouble with implementing play-based*

pedagogy. So, we are working to have their campus for future preschool” (EC II May 7, 2022). The result of the study reveals that most public and some private pre-primary schools lack appropriate physical environment.

Table 5.48 item 2 shows that appropriate buildings and classrooms for preschool children were 2(20%) poor and 4(40%) good and excellent. In the same table concerning standardized classroom size, tables and chairs according to the age of the students, it was found out to be 4(40%) excellent and 3(30%) good. However, in some schools, 3(30%) it could be better. In the interview, respondents affirmed that the schools classrooms are hot and *unsuitable* for teaching children. Furthermore, the observation confirmed that some public pre-primary schools have challenges due to the large class size (more than 100 students per class), even though there is no chair and table for some students in our classroom. They are obliged to sit on the floor.

In addition, in the interview to the question “Have you ever tried to get standards and curriculum guidelines from regional/*woreda* ECE coordinators?” one of the principal stated that most of the classrooms we teach at our school do not meet the requirements set by the regional government standard and need to be more suitable for kindergarten. It is because they are too low and have no ceiling. They are too narrow. They do not have enough windows (P1, March 15, 2022). The other principal mentioned that there is no such thing as a good school. Our classrooms were so small that they could not accommodate our students. The rooms are hot because they do not have ceilings. On average, there are more than 90 students per class. The courtyard was so crowded that there was no play area. We need proper enough water and toilets. The children use the older students’ toilet. In general, there is no set way to implement a play-based pedagogy (PI, March 15 2022), Moreover, one of the interviewed supervisors strengthened the above notion as the classrooms are not to the standard as I have seen, it is hard to say that the existing private and public school classrooms meet the standards set by the regional government.”(Sup I, May 21, 2023)

On the contrary, one principal from a private school said “*all of the classrooms we teach at our school meet the requirements set by the government. The existing of school buildings is as per the standards of the regional government.*” During observation it was found out that even though only some schools met the government standard, in most schools in the study area, there was a

severe problem. Some problems are classroom size and getting the level of children adequate tables and chairs in most public and some private schools per government standards.

As observation results have shown from Table 5.48 item number 5, in most schools, the availability of appropriate and neat dining rooms, 6(60%), was poor. However, in some schools, it was 2(20%) good, and in some private schools, 2(20%) it was identified as an excellent condition. On the other hand, regarding the appropriateness of sleeping/ napping rooms, it was found out that 6(60%) were poor, 3(30%) were good, and 1(10%) were excellent. During observation it was confirmed that most schools do not have enough dining and accommodation space. However, it was available in some private schools.

Concerning the adequacy of water supply in the observed schools, the result in Table 5.48 affirms that only two schools had sufficient supply and four were somehow good. However, four of the observed schools need more water. It is a severe problem that needs immediate intervention. Regarding the existence of enough comfortable toilets for early childhood children, out of the ten observed schools, it was found out that in 4(40%) of the school not satisfactory, in 5(50%) of it was good and only in 1(10%) school was found out to be as per the guideline.

In addition, regarding the water supply scarcity and inadequacy of toilets, one of the principals stated that our school compound is so narrow that we don't have enough toilets and drinking water. Due to lack of water and separate toilets for kids, they use the primary school students' water and toilets. Besides, the school space or the building of the school is not suitable for preschool children (PIV, March 24, 2022).

5.5 Discussion

In the previous section of the present study, the data collected from respondents through questionnaires, interviews and observations were presented, analyzed and interpreted. This section discusses major findings of the study related to implementation of play-based pedagogy in early childhood education based on objectives, research questions and literature.

Preschool teachers are responsible for implementing play-based pedagogical strategies in the early childhood education curriculum in Ethiopia. However, most teachers in public and some

private schools lack awareness about play-based pedagogical practices. Teachers lacked awareness about play-based pedagogical strategies because most teachers did not take training on the practices of it. This caused difficulty of using play-based pedagogy in classrooms. Nevertheless, some teachers were trying to teach children through singing and telling stories by looking at others. There have been concerns as to why play-based pedagogy is not practiced in schools. This posed challenges for schools spending classroom time following teacher-centered approach and not working on children's physical, mental, social and emotional development.

In addition, teachers lacked training on play-based pedagogy to interpret the curriculum objectives in their respective classrooms. The use of play-based pedagogy has multiple benefits in the implementation of preschool curriculum by promoting the holistic development of the children and taking into account their diversity in classrooms. The environment, resources and facilities in the school context have significant influence on implementation of play-based pedagogy in the ECE curriculum. The training and experience of teachers have positive influence on the success of raising children. Similarly, the lack of sufficient resources therefore makes it difficult to implement play-based pedagogy.

The main aim of the study was to investigate the status of implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia. Five questions guiding the study were:

1. How do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
2. What are the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
3. Why do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia implemented in particular ways?
 - I. What are the available facilities in the Ethiopian primary schools to implement play-based pedagogical strategies in the ECE curriculum?
 - II. What are the challenges in implementing play-based pedagogical strategies in the ECE curriculum in Ethiopia?

- III. How the principles and guidelines of ECE are utilized in the Ethiopian primary school context?

Research Question 1: How do play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?

The primary goal of early childhood education is to promote children's development through play in the teaching-learning process. In order to prepare children for primary education and future life it emphasizes children overall development by fostering their interest and helping them to understand the world around them (MoE, 2020b). Thus, teacher's awareness on the values of play-based learning is essential to facilitate the learning of children and their development. In relation to this, the creation of awareness to teachers on the values of play in the implementation of early childhood education curriculum was found out to be poor in the preschools under investigation. Teachers who were trained in teaching through play-based pedagogy had the awareness on the values of play-based pedagogy. However, those who were not trained do not have the awareness it.

The finding of the present study is congruent with the findings of Bredekamp (2017) that states that knowing the values of play-based pedagogy is essential to make children's learning effective and their participation and interaction active. Thus, knowing the term play from educational point of view is crucial to early childhood educators who facilitate the teaching-learning process of the program. Play is an important component of healthy development for children of all ages. It inspires aspects of social, emotional, cognitive, and physical development that may not be achieved by any other means. Therefore, it is essential for teachers to know the values of Play and implement them to bring about healthy development of children and better academic achievement.

The results of this study showed that most teachers who were trained know that play is fundamental in teaching pre-primary school children. The results were similar to that of McLean

(2016), who states *“Play is a vehicle through which learning occurs. It is an intrinsically motivated, voluntary activity that allows the child to construct their own knowledge.”* In addition, the findings of the study is supported by the notion of Wong and Logan's (2016) which says “play can help them develop cognitive, emotional, and social interaction and physic, and enhance their language usage”. Children living in this world, from any nation that is industrializing and emerging, play anywhere in gardens and playgrounds, refugee camps, countryside or town situations, and residences or communities. Play helps them learn their lesson quickly. Using Play as an instructional instrument can benefit children's cognitive development and academic performance.

The findings of the study reflected that most of untrained teachers/facilitators lack awareness on the values of play to implement play-based pedagogy in the study area. This is due to lack of pre and in-service training and lack of support from school leaders and supervisors. Thus, the proper implementation of pre-primary school curriculum seems to be affected by teachers’ lack of awareness on the values of play-based pedagogy. This study highlighted that most of the school principals, supervisors and teachers do not have the necessary awareness on play-based learning pedagogy. Hence, pre-primary school children are negatively affected by teachers not implementing play-based pedagogy in the teaching and learning process. As to MoE (2010b), lack of awareness about the value and type of early childhood education is a challenge that impacts play-based pedagogy implementation in the region.

Research question 2: What are the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?

From observation and interviews made with principals, supervisors, and curriculum experts, it was confirmed that though the curriculum was designed to be implemented through play-based pedagogy, there are mismatches between theoretical framework and its practice at schools. In line with teachers' use of teaching strategies to implement play-based pedagogy, although teachers' strategy for implementing play-based pedagogy varies, most of them were teaching based on the song. Some use cloth balls and various materials. Some use Montessori equipment, flashcards, language and mathematics corners, music, drama, play, and storytelling. This implies

that in some private and a few public schools teachers were attempting to use different strategies in instructional process. The difference in using play as a teaching strategy was because lack of exposure to play. However, it seems not adequate as planned in early childhood education curriculum. The present study finding is alike to the study conducted by Tarimo (2013), who reported receiving training and school manager support in favor of the child-centered teaching method influence teachers' use of play. However, the document analysis showed that the Ethiopian government emphasized play as a teaching strategy to implement early childhood education programs. It states that play has to be used as the principal means of enhancing a child's learning experiences (MoE, 2010c). Implementing play-based learning raises a number of concerns some of which can be addressed by using different teaching strategies. They give teachers a window into the child's world and give them the confidence they need to encourage play-based learning. Children's interest in taking part in the teaching-learning process is piqued by play-based strategies. Encouraging children to participate in the learning process is essential. Children need to play because it is a child's natural motivation to play, even though it is not just a way of teaching. Engaging in play during the early stages of childhood is crucial for humans to reach their full potential (Goldstein 2012). Thus, facilitators need to use strategies that enable them to implement play-based pedagogy in the instructional process.

The results show that a significant proportion of respondents believe that teachers do not encourage children to create something new with objects and that they do not encourage symbolic play. Most teachers need to improve the implementation of constructive and symbolic games as teaching strategies. However, constructive and symbolic type of play is vital to motivate children to learn and participate in class. The study's finding is supported by Bredekamp (2017), who states that constructive and symbolic play is essential for motivating children to learn and engage in class activities as it provides valuable opportunities for creativity, problem-solving, cooperative play, social skills and fine motor development. However, the study found out that most pre-primary school teachers did not use constructive and symbolic play in their classes. This indicates that there is a need for improvement in the implementation of constructive and symbolic types of play as teaching strategies.

The study findings reveal that in some private schools trained teachers use play-based pedagogy as a teaching strategy whereas the untrained ones in most public schools do not use it. This study finding is similar to the findings of Ashari and Baharuddin (2018), who found out that most early childhood education teachers still need to pay more attention to play-based pedagogy. The school must achieve remarkable success in academic and learning standards, regardless of whether the child struggles with reading proficiency and numeracy. Consequently, if play is not used in the teaching process, children's learning interaction through investigation and play will be limited in sharpening their skills and abilities and improving their curiosity. Therefore, preschool teachers need to be trained to use play-based strategies to be effective and use child-centered teaching approach.

Although music is an essential element for teaching children to reinforce their learning, it was found out that it is not used as a teaching strategy in the study area. This finding is supported by Bautista et al. (2022); the reason that affects ECE teachers' use of music in their classroom is inadequate training in the area of music education, lack of musical background, and prior knowledge of how to use it. Nevertheless, music is an essential instrument to help children learn a language, build their culture, and create a positive learning environment by entertaining them. However, most children in the study area did not benefit from using music to enhance their learning. The document analysis showed that at the pre-primary school level, teachers have to use team play, individual play, role play, demonstration, field trips, music and oral reports as teaching strategies. But they are not in a position to use these strategies in their classrooms. It implies that facilitators need to be better trained to the level they are teaching that is expected to implement these strategies in the implementation of play-based pedagogy.

Research question 3: Why do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia implemented in particular ways?

i. What facilities are available in Ethiopian primary schools for play-based pedagogy?

The findings of the study revealed that instructional facilities serve an important function in relieving children's frustration and enable them to move and play freely. However, most teachers,

lack the necessary teaching equipment to apply play-based pedagogy. This challenge is prevalent predominantly in public schools. Both public and private pre-primary school teachers mostly use textbooks in their classes, and many schools lack indoor play area items. Although the Ethiopian National Policy Framework MoE, (2010b) emphasizes the significance of culturally relevant and developmentally appropriate materials for early childhood education, many institutions face resource constraints. While some private schools have age-appropriate video and audio assistance, the majority of public schools do not. The finding of the study further revealed that the practices of public and private pre-primary schools need to match the guidelines in using corners and proper resources. Besides, regarding the school environment, in most schools it was found out that the classrooms are not comfortable and are not up to the standard. In most public schools, due to large class size, some children do not have seats. However, in some private schools, the school environment and the classroom are appropriate and meet the standard. There are also adequate number of chairs and tables.

Regarding outdoor and indoor materials, this study found out that in most public pre-primary schools, there is shortage of them to implement play-based pedagogy. However, in most private schools there are relatively adequate materials to organize outdoor and indoor activities. Indoors and outdoors materials are essential to implement play-based learning for teachers by using the required indoor corners and to experiment with teachers and the challenges. Inadequate indoor facilities can affect classroom instruction and hinder teachers from using play-based pedagogy in childhood education. These findings were similar to that of Tarimo (2013), who found out that school environment and instructional materials play a significant role in children overcoming frustration and moving and playing efficiently. They make the teaching-learning process more effective and meaningful. It can increase children's participation, motivation, and concentration on the concept taught in the instructional process. More instructional materials could positively affect the instruction process. School environment and instructional materials could be significantly detrimental, particularly to preschool children who need an assortment of materials to support or capture new experiences.

The study emphasizes the difficulties in providing sufficient resources for play-based pedagogy in pre-primary schools. The MoE, (2010a) states that for children to use various ways of

learning, there should be sufficient age-appropriate materials in the school. Nevertheless, the result of the study confirmed that most schools are not working as per the ministry guidelines. Akinrotimi and Olowe, (2016) emphasized that adequate resources with quality significantly impact the successful implementation of early childhood education curricula. Thus, resources are crucial for the effectiveness of early childhood education programs at pre-primary schools. Especially to implement play-based pedagogy at this level, resource is the critical element. In this regard, the study findings reveal that the provision of resources in the study area needs to be improved.

Research question 3. ii What are the challenges of play-based pedagogy in the ECE in Ethiopia?

The aim of the fourth objective was to find out the challenges of implementing play-based pedagogy in the ECE curriculum. Most of the research participants showed their dissatisfaction with the implementation of play-based pedagogy. This is because the study result showed that teachers were severely challenged with the scarcity of resources in the implementation of principles. According to teacher input, there are substantial hurdles in implementing play-based pedagogy in Ethiopian pre-primary schools. Major challenges include a lack of suitable teaching materials especially play items, and the issue of huge class numbers. The feedback indicates a gap between the promises of training made by educational authorities and the actual support received by teachers, particularly in public schools. The response highlights the critical need for comprehensive assistance and resources to facilitate the effective practice of play-based pedagogy in pre-primary schools of the study areas. Addressing the scarcity of teaching resources, reducing class sizes, providing specialized training for teachers, and ensuring that school administrators are able to promote and support early childhood education are concerns of the study areas. Furthermore, shortage of trained teachers, absence of teacher training institutes for pre-primary school facilitators, lack of conducive learning environment were the challenges facing the implementation of play-based pedagogy. The findings of the study emphasizes the importance of specialized training in play-based pedagogy for teachers, as well as the need for trained school leaders, such as principals and supervisors, and support and guidance in

promoting and understanding early childhood education. Disparities in availability of instructional resources and educated teachers between urban and rural areas are also notable concerns. The finding of the present study is similar to that of Fedlu (2018) who stated that most pre-primary schools have budget constraint as they were not included in the school grant budget to fulfill the required play materials. In addition, the sizes of government schools compound were narrow and not child-friendly. The Ethiopian education road map (2018) suggests that an appropriate, stable, and easily accessible school setting be created. Every child must get education that is socially and physically inclusive, as well as a fair academic environment. It ought to give disabilities the same opportunities for success as their classmates.

Research question 3. iii: How are the principles and guidelines of ECE used in the Ethiopian primary schools?

The study found out that most participants agreed that they did not have the opportunity to read pre-primary school principle and guidelines. It was found out that only some schools met state standards, while most faced serious problems such as inadequate class sizes, inadequate furniture, dining and accommodation facilities, water supply and comfortable toilets. Preschool leaders and teachers also faced challenges in accessing curriculum and guidelines, making it difficult to implement play-based pedagogy consistent with the ECE policy goals. The study found out that the implementation of the curriculum in the pre-primary schools studied was not aligned with the principles of early childhood education. While some principles were appropriately applied, others were only partially addressed, hindering child-centered learning through play-based pedagogy. In addition, the study found out that government approved curriculum was implemented only in public schools, while private pre-primary schools often used their own resources despite the guidelines that require the use of government approved curriculum. In general, the majority of teachers and school leaders agreed that the curricula offered in the study area of private and public preschools were different. Private schools have their own instructional resources, and the ability to create and offer their own subject content. They adhere to their own curriculum, prioritizing market demands and realizing the significance of building their own educational framework. Furthermore, private schools use student texts for each student, but public schools use one for the whole class. Observations revealed that the

instructional materials utilized in public and private schools differed significantly in terms of content, complexity, use of various teaching methods, and resource allocation. It was depicted in the MoE (2010) that one of the guiding principles of early childhood education is ensuring that the holistic needs of young children are met. In order to meet the holistic needs of the learners, schools have to use the government-approved curriculum. However, most private schools used a different curriculum in the study area. Thus, pre-primary schools have to follow the principles of early childhood education so as to ensure children's holistic needs are met.

The identified factors hindered the promotion of early stimulation and the best start in life for all children attending pre-primary education. According to Nigussie (2011) teachers' lack of knowledge of the pre-primary school principle and guidelines affects the implementation of play based-pedagogy. It also affects classroom arrangement, assess the increment of appropriate behavior, and the positive changes in early children's behavior, communication, cognitive, social, and emotional development. Regarding the comprehensiveness of the curriculum to address whole children's development and learning, the study found out that most respondents believe this is not the case. Therefore, there were significant challenges in ensuring the comprehensiveness of the curriculum to address the development of all children. According to Bredekamp (2017) the principles of child development and learning implication for practice indicates that the curriculum should be comprehensive, addressing the development and learning of the whole child. It is also difficult to adapt it to the local context. Furthermore, according to respondents, the curriculum does not promote play-based pedagogy on school compound

5.6 Summary

The study investigated the status of implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia based on five specific objectives. Accordingly, the study predicted that several pre-primary school lacked awareness about the values of play in implementing early childhood curriculum and that led to poor perception about it. As a result, their awareness about values of play based pedagogical practices in classrooms is expected to be raised via provisions of consecutive training and experience sharing practices to better implement early childhood education curriculum. ECE facilitators/pre-service teachers should be trained in comprehensive

play-based pedagogy to enhance their understanding of the method of teaching required to implement indoor and outdoor activities. In addition, in-service teachers in the area should receive on-the-job continuous professional development (CPD) and short training or participate in workshops to enhance their awareness of play-based pedagogical skills. In addition, school principals, and educational leaders need to be trained on the significance and implementation of play-based pedagogy to create conducive learning environment, to follow-up, monitor and evaluate the quality of instructional systems in pre-school classrooms.

The present study indicated that although play-based learning is an element for children's holistic development during their preparation in early childhood education, most pre-primary school teachers in public and private schools were not able to use play as classrooms' teaching strategy. Both in the school and out of school factors such as school leaders, their educational background, exposure and experiences affected teachers' decisions on using play-based strategies in classrooms. In addition, many teachers were predominantly using telling, explaining, and informing methods as teaching strategies. The other serious challenge which negatively affected play-based pedagogical practices in ECE curriculum are unavailability of teaching resources/ facilities and inability to provide flexible and individualized learning for each child. This problem is the worst in public/government pre-primary schools and associated with weak efforts and capabilities of educational leaders (education officials, ECE experts, and supervisors, principals) to fulfill necessary resources that support instructional process, particularly in the area of play-based pedagogy.

The present study depicted that the majority of teachers in public pre-primary schools lacked the necessary qualifications to teach at level they were assigned to teach based on ECE guidelines. In most public and some private preschools, there were needs for more budgets to facilitate play-based learning. The learning environments in some preschools were not conducive to practice play-based learning because of scarcity of student chair, tables and other learning resources such as books and puzzles. The lack of independent training institutions for early childhood education teachers, lack of sufficient supports from school leaders and educational experts, and minimal parental participation were the major challenges.

Although early childhood education guidelines and principles are aimed to meet the holistic development of children and cater for all age groups, the preschools under investigation were not

competent enough to contextualize and follow internationally and nationally recognized principles and guidelines. The intention of ECE principles and guidelines are to provide directions for key stakeholders (facilitators, committees, parents, ECE coordinators, principals and other concerned bodies) for the implementation of ECE curriculum. However, the study revealed that most principals and teachers were unable to obtain opportunities to familiarize themselves with the ECE guidelines and principles. In addition, the school environment, infrastructure and classroom equipment were not suitable for implementing play-based pedagogy in most pre-primary schools. Thus, the study emphasizes the importance of giving serious attention to the implementation of ECE principles and guidelines in the studied pre-primary schools in accordance with the standards and indicators of the country.

CHAPTER SIX

4. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter Six Summary, Conclusions, and Recommendations

This section summarizes the study's significant findings, conclusions, recommendations, and drawbacks. It starts with a summary of the result followed by conclusions and recommendations forwarded based on the identified. The study's general objective was to investigate the implementation of play-based pedagogical strategies in the ECE curriculum in pre-primary schools of Sidama National Regional State of Ethiopia. To achieve this objective, the researcher collected data from pre-primary school teachers, principals, supervisors, PTA members, ECE coordinators, and REB experts. In addition, data were collected through observation from ten pre-primary schools to determine the status of the implementation. The following were the research questions the study aimed to answer:

1. How do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
2. What are the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia?
3. Why do the play-based pedagogical strategies implemented in early childhood education curriculum in selected primary schools in Ethiopia implemented in particular ways?
 - I. What facilities are available in Ethiopian primary schools to implement play-based pedagogical strategies in the ECE curriculum?

- II. What are the challenges in implementing play-based pedagogical strategies in the ECE curriculum in Ethiopia?
- III. How are the principles and guidelines of ECE used in the Ethiopian primary school context?

To conduct the study, a descriptive survey design with a mixed convergent design was used. The study followed a mixed approach. Quantitative data was collected from pre-primary teachers and PTA members. Qualitative data was collected from principals, supervisors, and experts at the regional and city administration level. The instruments used to collect data were questionnaires, interviews, observations, and documents analysis. The questionnaire contained 102 questions that evaluate the implementation of play-based pedagogy and its challenge in pre-primary schools of the study area.

Eighteen questions were used to interview principals, supervisors, and experts. Thirty-three checklist items were used to collect data on the school environment, physical structure, and indoor and outdoor observation facilities. Three hundred and forty-three pre-primary teachers, forty-five PTA members, ten principals, four supervisors, and four curriculum and ECE experts participated. Regarding sampling techniques, all samples were selected using a simple random sampling method.

6.1. Summary of Significant Findings

The main findings of the study are summarized as follows.

Regarding teachers' awareness of the values of play in the implementation of early childhood education curriculum, the literature reveals that early childhood education benefits children in acquiring basic skills (pre-reading, prewriting, counting, and arithmetic) in preparing them for formal school. Furthermore, it is also valuable for children to develop social and emotional competence, including self-regulation, intrinsic learning motivation, and the ability to cooperate with other students. Furthermore, early childhood education benefits children in learning basic life skills such as hand-washing and good eating habits (MoE, 2010c).

However, the response of the study participant revealed that a relatively large number of pre-primary school teachers, in the study area, who needed to be trained in early childhood education pedagogy should be aware of the values of play-based pedagogy. Thus, this affects play-based pedagogy practice and benefits children's holistic development. Additionally, the response of the interviewees mainly showed that trained teachers have good awareness; however, those who need to be trained at the level they are teaching need to be aware of the value of play-based pedagogy. Since the national framework of pre-primary school was part of curriculum implementation, not taken into consideration in the play-based pedagogy practice. Therefore, the implementation of play-based pedagogy was outside of the national policy framework.

Strategies that teachers employed to implement play-based pedagogy in the ECE curriculum

Teaching strategies are vital to implement play-based pedagogy in a variety of ways. Teachers' use of various teaching strategies help children learn through fun, which brings mental, emotional, physical, social, and language development. Thus, to enhance children's learning and encourage their all-round development, the early childhood education program has to use child-centered education and play. Furthermore, it must incorporate indoor and outdoor materials that are culturally relevant and developmentally appropriate to the age level of children (MoE, 2010).

Therefore, teaching strategies are the means that teachers use to instruct children with different modalities. Play-based learning is an indispensable part of early childhood education. It is highly influential in the learning and holistic development of children, which benefits them in bringing social, emotional, cognitive, language, and physical development. Therefore, pre-school teachers are expected to use play as a teaching strategy to help children participate in the instructional process. However, the findings of the study showed that pre-primary schools' use of play as a teaching strategy in the study area was low. Most of the respondent teachers working in the study area do not use play as a teaching strategy in their respective classrooms. Nevertheless, instead of a play-based strategy, they predominately use a teacher-centered approach such as telling, explaining, and informing methods as teaching strategies. It was due to the lack of pre-primary teacher training in the area or professional commitment that impacted children's holistic cognitive, social, emotional, language, and physical development.

Furthermore, from observation and interviews with principals, supervisors and curriculum experts, although the curriculum was designed to implement through play-based pedagogy, there are mismatches between the theoretical framework works and its practice in schools. Therefore, from the findings, it is possible to say that teachers' use of strategies to implement play-based pedagogy in the ECE curriculum was poor.

Facilities that is available in school to help teachers to implement play-based pedagogy

From the perspective of learning materials, the pre-primary guidelines state that early childhood education schools need ample age-appropriate materials that the child can use in various ways. With respect to the availability of indoor materials and outdoor materials, it has to be culturally relevant, developmentally appropriate, and appropriate to follow a play-based approach. Furthermore, there should be appropriate and adequate sitting facilities and basic sanitation facilities, with water available for hand washing (MoE, 2010). Therefore, teaching facilities are an essential element in the instructional process. It allows teachers to teach children flexibly in individual game, group game, or a child-center approach. Therefore, it is the responsibility of the school management to make use of appropriate resources for the teaching-learning process.

The findings of the study reveal that the existing play facility in public schools in the study area were inadequate and also below the standard. In several instances, there are inconsistencies between the reported and observed availability and use of play facilities in the study area schools. Respondents exaggerate in their report on the use of play material to facilitate play-based pedagogy. However, as observed in most schools, existing play facilities need to be

reviewed. However, the results of the respondents showed that the facilities available needed to catch up in the study area's pre-primary schools. Woreda is responsible for providing materials for public schools; however, more budgets are needed to meet the required materials. Furthermore, the study's findings showed that there is also a need for indoor materials in most public and some private pre-primary schools. Besides, in the study area needed to use corners and appropriate resources for play-based pedagogy.

Regarding school infrastructure and facilities, differences between public and private schools were identified. The findings also revealed that classrooms, chairs, and tables do not meet the regional standard in some private schools and most public schools. The interview responses assured that public school classrooms need to meet the standard. Moreover, it was indicated by interview responses that there are not enough toilets and drinking water in some pre-primary schools. Although classrooms and school buildings were based on the requirements of the regional government in some private schools, there are others that still need to meet the standard. The physical environment of pre-primary schools in the study area could have been more conducive to teaching and learning. Some of the infrastructure lack light, windows, and ceilings. In addition, school facilities such as desks and chairs were not suitable for preschool children's age level.

The challenges teachers encountered in implementing play-based pedagogy

In the Ethiopian education road map, it was identified that pre-primary school education still suffers from challenges and problems including those related to administration, curriculum, teacher qualifications, school setting, facilities and budget (Ministry of Education Strategy

Center (ESC) 2018). Thus, implementing play-based pedagogy in early childhood programs faced many challenges in most studied pre-primary schools. Therefore, some of the challenges collected from the study respondents through questionnaires and interviews are presented below.

Data collected from respondents through questionnaires showed that in most of the studied public pre-primary schools, the budget allocation was minimal, the availability of materials and basic facilities were scarce and suitable learning environments and indoor and outdoor learning facilities were minimal. Participation of the community in pre-primary schools needed to be increased. Additionally, there was a shortage of qualified teachers and lack of trained personnel in each hierarchy of the education structure. Furthermore, in some schools, the learning environment is not conducive, the classrooms are narrow and suffocated, and there need to be more adequate chairs, tables, and books. The interviews revealed that the challenges of pre-primary schools were due to the narrow school compound in schools; there is a shortage of toilets and drinking water, and play materials such as toys, plays cards, puzzles, blocks, swings or slides. Some schools need more standard buildings and classrooms.

Therefore, the result of the study reveals that several challenges affected the implementation of play-based pedagogy in the study area. Most of the teachers assigned to public pre-primary schools need to be qualified to teach at the level to which they were assigned according to the national standards. Schools do not have adequate budget, suitable learning environment and indoor and outdoor learning facilities. In addition, training teachers is essential to implement play-based pedagogy, which contributes to the holistic development of children. In particular, it is helpful for cognitive, social, emotional, language, and physical development.

The implementation of ECE principles and guidelines in primary school

The early childhood education guideline was prepared to help schools provide quality services for the four basic pillars: parental education, health, and early stimulation programs; preschools; community-based kindergartens; and community-based non-formal school readiness. Furthermore, the policy framework shows that the guiding principles of ECE maintain Ethiopian cultural values, ensure that the holistic needs of children are met and provide support systems to ensure the quality and standardization of the provision of services of the ECE program (MoE, 2010). Therefore, some of the purposes of early childhood education guidelines and principles were to ensure that the holistic needs of children are met and serve the needs of all groups of children. The aim of the guideline was to provide direction to all stakeholders for the implementation of ECE services, including all professionals responsible for the implementation of ECE. Hence, pre-primary school teachers and principals are expected to implement the guideline and principles of ECE in their respective schools.

However, data collected through questionnaires, interview, and observation in the sample pre-primary schools showed that in most private schools a government-approved curriculum was available. Thus, most of the school principals and teachers need opportunity to read the principles and guidelines of pre-primary schools. It was found out that the school environment and infrastructure need to be more suitable for implementing play-based pedagogy in most pre-primary schools. Although the availability of indoor and outdoor materials varies between public and private schools, more materials were required to implement play-based pedagogy. The observation confirmed differences in the use of content materials, various teaching strategies, and resource allocation in public and private schools. Therefore, the implementation of the

principles and guidelines of ECE in the pre-primary schools studied was found out to be below the expectation. Furthermore, the interview responses of the study participants confirmed that in all schools, the actual implementation of the preschool guidelines and principles needs to be improved. The school manages ensure that the ECE guidelines and principles are not applied as required. Accordingly, the implementation of the principles and guidelines of ECE in the pre-primary schools studied requires serious attention.

6.2 Conclusion

The primary purpose of early childhood education is that the curriculum is adapted to the ages and stages of children's development, and teaching is conducted with a child-centered approach. Therefore, in the education process, teaching and learning are academic activities that require a high degree of performance, subject matter knowledge, relevant professional experiences, the pedagogy of early childhood education, and highly developed teamwork, communication, and interpersonal skills. One can infer from the significant findings of the study that there was an attempt to create awareness and provide training on early childhood education. However, in actual practice, it was found out that in the study area, many pre-primary school teachers need to be made aware of the importance of play in implementing early childhood curriculum.

Instructional strategies are the tools teachers use to teach children using different modalities. Play is the recommended teaching strategy to help children engage in the teaching-learning process. However, the result of the study reveals that most of the public and private school

teachers who participated in the study do not employ play as a teaching method in their classrooms. Most of them primarily employ narrative, explanation and informational methods as teaching methods rather than engaging students through play. In addition to the challenges mentioned above to implementing play-based pedagogy, it was found out that there is lack of qualified teachers, inadequacy of indoor and outdoor learning facilities, insufficiency of budget, in-conducive environment to learning, shortage of chairs, tables, and books, lack of trained school leaders, and low engagement of parents. Furthermore, the studied pre-primary schools need to improve the implementation of ECE principles and guidelines.

6.3 Recommendations

Based on the above conclusions, subsequent recommendations have been proposed to improve the implementation of play-based pedagogy in pre-primary schools of the Sidama National Regional State of Ethiopia. These are:

Teachers play important role in the implementation of pre-primary school curriculum. Their awareness of the values of play has great impact on the practice in the actual classroom instruction. It can improve the participation of the children in the lesson. Therefore, it is imperative that both teachers and school administrators are aware of the values and practice of play-based pedagogy and its influence on child learning. Consequently, to increase awareness, teachers and school principals are trained in the importance of play-based pedagogy and the benefit of a child-centered approach. Therefore, training must be provided to raise the awareness of preschool teachers and principals about play-based pedagogy. This can be done through workshops, on-site training, and an outreach program. Besides, teachers and principals are at the

front line of implementing the curriculum. The Ministry of Education has to arrange professional development opportunity to improve their skills and knowledge in the play-based pedagogy teaching method. This can incorporate play-based pedagogy to ensure overall physical, mental, social, emotional, language, and academic development of children.

Early childhood education specialists and coordinators must create strategies that integrate free-play curricula in the center to promote holistic development of children. That can be achieved by providing children with various learning opportunities. In addition, training institutions need to support novice teachers in improving their qualifications and enhancing their practice of play-based strategies in pre-primary schools in the country through equipping them with the necessary skills. This can improve the quality of education provided to children and address the shortage of trained teachers. Therefore, special training and support must be offered to school administrators to improve their leadership skills and capacity to effectively manage pre-primary schools. Strong leadership is essential to create conducive learning environment and provide professional support to teachers, as well as to drive positive change within educational institutions. Public and private school leaders must contact institutions that can provide short- and long-term training on play-based pedagogy and technology integration in the instructional process and assess students' performance to improve teachers' pedagogical and professional competencies.

To enhance the low practice of play-based pedagogy, *Woreda* Education Offices have to assign independently trained principals for public schools that can assist and guide teachers to implement the curriculum effectively. To improve the quality of early childhood education

(ECE) in general and the implementation of play-based pedagogy in particular, preschool principals need to plan communication strategies to address the most pressing issues related to collaboration and partnerships among stakeholders. To provide children with a variety of learning opportunities, stakeholders are advised to support the school through active participation and participation in committees regarding intentional and transitional planning to provide varied learning opportunities to children.

The regional education bureau, zonal and *woreda* education offices, and schools have to work to ensure the fulfillment of required resources by allocating adequate budgets to pre-primary schools. They must work with school administrators and policy makers to secure the required funding for education. This can be achieved by highlighting the importance of investing in education and advocating for a larger budget allocation for schools in need. They must advocate for better indoor and outdoor learning facilities by engaging the community and local authorities and seeking support from relevant stakeholders. This may involve fundraising efforts, seeking donations, or applying for grants to upgrade school infrastructure. In addition, they have to plan strategies to enhance the school compound and create a child-friendly environment to practice indoor and outdoor activities in the pre-primary school classrooms. Additionally, to facilitate effective teacher-child interaction, class sizes must be reduced to the standard level. Every school principal must plan to fulfill playful learning materials like playing cards, exercise books, individual play materials, corners for language, family, mathematics, science, medical, store, etc., diagrams, and drawings which enhance children's engagement of learning. In addition, there should be play equipment such as balance, swinging and sliding structures, and ladders in the school to help children play outdoors. Experts, ECE coordinators, principals, and supervisors

should pay proper attention to the follow-up of the practice of pre-primary schools to meet the national and regional state standards of ECE in general and the implementation of play-based pedagogy in particular. The regional education bureau finds donations with non-governmental organizations that can provide essential resources such as chairs, tables, books, and other educational materials. Encourage community involvement in resource mobilization efforts to bridge the gap in resource shortages.

Pre-primary school principals develop strategies to increase parental involvement in children's education through meetings and communication channels. They engage as partners in the educational process to support student learning and well-being. They mobilize parents to work to improve the existing shortage of toilets and inadequate water supply. They build separate toilets and drinking water for pre-primary school children in their respective schools. In addition, schools must use the national guideline and principles of early childhood education to examine the practice of playful learning by children to reach their Zone of proximal development.

6.4 Reflections on implementation of play-based pedagogical strategies

The researcher has made professional reflections for future play-based pedagogical strategies implementation enhancement that will increase the effectiveness in early childhood education.

Thus, some of the reflections on early childhood education policy are stated as follows:

Reflections about teachers'/facilitators play-based pedagogy implementation policy

Play-based pedagogical strategies implementation in early childhood education programs is essential policy improvements exist to officials of education policymakers, educational planners

and curriculum developers. Nevertheless, there are various types of play to enhance children learning, of which relatively few are known and practice in the actual classroom to help children engage in the instructional process. So, most of the study participants such as teachers/facilitators, PTA members, principals, supervisors and coordinators reflected different views on play-based pedagogical strategies policy framework target and in the actual practices in the instructional process.

The research identified that the early childhood education policy framework was suggested to be amended due to its lack of inclusion of cognitive and social skills development in children. Therefore, it leads to the need for further amendment, reform, and renewal. Including play-based pedagogy in early childhood education programs is a significant step towards fostering well-rounded and capable learners. By nurturing all-rounded development of children via play, an educational environment that prepares children for future life challenges and promotes joy and curiosity in learning. Continuous reflection, modification, and promotion will be important to ensure that play-based pedagogy policy is efficiently implemented in practice. This can call for appropriate and timely policy measures to develop a new early childhood education policy framework and a practical toolset grounded in child development, play-based pedagogy strategies, principles, and standards. There is a need to develop a suitable and all-rounded teachers' training model on play-based pedagogy for pre-primary school facilitators that fits the Ethiopian education curriculum.

Reflections for Future Research

The findings of the research result identified several issues that are worth stating for future study. First, there needs to be an investigation of how play-based pedagogy is implemented across various cultural contexts to highlight effective practices and adaptations. This includes examining how different communities perceive play and its role in learning. A second study has to be conducted on the learning outcomes of children who are involved in play-based learning against traditional methods of learning. Understanding how these involvements form emotional, physical, social, and cognitive development throughout their schooling can provide valuable insight. Third, future studies on inclusive practices that explore how play-based approaches can be tailored to meet the needs of children with diverse abilities; ensuring equitable access to learning opportunities has to be conducted.

References

- Addisu, M. K., and Wudu, T. M. (2019). Preschool curriculum implementation in Ethiopia: The case of selected woredas preschools. *Cypriot Journal of Educational Sciences*, 14(2), 178–189.
- Ahmad, S. (2016). *Play and Cognitive Development : Formal Operational Perspective of Piaget 's Theory*. 7(28), 72–79.
- Akinrotimi, A. A., and Olowe, P. K. (2016). *Challenges in Implementation of Early Childhood Education in Nigeria : The Way Forward*. 7(7), 33–38.
- Allen, L., and Kelly, B. B. (2015). *Transforming the Workforce for Children Birth Through Age 8*.
- Allen, S., Gordon, P., Allen, S., Gordon, P., Bloom, B., Gardner, H., Neill, A. S., and Rogers, C. (2011). *How children learn 4 Thinking on special educational needs and inclusion needs and inclusion* (M. E. Ltd. (Ed.)). Practical Pre-School Books.
- Ashari, Z. M., and Baharuddin, M. K. (2018). *Play based pedagogy in pre-school : A meta analysis research*.
- Bautista, A., Yeung, J., McLaren, M. L., Ilari, B., Bautista, A., Yeung, J., McLaren, M. L., and Ilari, B. (2022). Music in early childhood teacher education : raising awareness of a worrisome reality and proposing strategies to move forward. *Arts Education Policy Review*, 0(0), 1–11.
- Best, J. W., Kahn, I. J. V, and Jha, A. K. (2017). *Research in Education*. Pearson India Education Services Pvt. Ltd.
- Bhattacharya, D., Saxena, D., and Maurya, M. (2020). *Early childhood care and education in the new education policy (NEP)*. December.
- Bonett, D. G., and Wright, T. A. (2017). *Cronbach 's alpha reliability : Interval estimation , hypothesis testing , and sample size planning*. October 2014.
- Bordens, K. S., and Abbott, B. B. (2018). *Research Design and Methods: A Process Approach;* (Tenth (Ed.)). Mc Graw Hill Education.
- Bredenkamp, S. (2017). *Effective Practices in Early Childhood Education Building a Foundation* (3rd ed.).
- Bryman, A., and Bell, E. (2011). *Business Research Methods* (3rd ed.). Oxford University Press Inc., New York.
- Caldwell, L. F., Clinton, A., Demarie, D., Elbaum, S., Flores, R. L., Greenburg, J., Laitusis, C., and Michel, R. (2019). *Top 20 principles from psychology for early childhood teaching and learning coalition for psychology in schools and education top 20 principles from psychology for early childhood teaching and learning*. American Psychological Association.

- Chanwaiwit, P. (2019). *Using Effective Feedback to Improve Professionalism as an English Student Teacher*.
- Chaudhary, G. K. (2015). *Factors affecting curriculum implementation for students*. 1(12), 984–986.
- Claire McLachlan, Marilyn Fleer, S. E. (2010). *Early Childhood Curriculum, planning, assessment and implementation*. Cambridge University Press.
- Cochran, W. G. (1977). *Sampling Techniques Third Edition.pdf* (Third (Ed.)). John Wiley and Sons, Inc.
- Cohen, L., Manion, L., and Morrison, K. (2018). *Research Methods in Education* (Eighth). Routledge.
- Crawford, L. M. (2020). *Conceptual and Theoretical Framework in Research*. SAGE Publications, Inc.
- Creswell, J. W. (2014). *Research design: Qualitative, Quantitative, and Mixed Method Approach* (Fourth edi). SAGE Publications, Inc.
- Creswell, J. W., and David, C. and J. (2018). *Research Design Qualitative, Quantitative, and Mixed Methods Approaches* (Fifth edit). SAGE Publications, Inc.
- Daniel, M. (2019). *An Assessment of The Current Practices Of Play Based Learning In An Assessment of The Current Practices of Play Based Learning In North Gondar Preschool Education*. April.
- Dawadi, S., and Giri, R. A. (2021). *Mixed-Methods Research : A Discussion on its Types , Challenges , and Criticisms*. 25–36.
- Denscombe, M. (2014). *The Good Research Guide For small-scale social research projects* (Fifth edit). Graw Hill Education.
- Dzamesi, F. E. (2020). A professional development programme for implementing indigenous play-based pedagogy in kindergarten schools in Ghana. *South African Journal of Education*, 40(3), 1–11.
- Ebele, P., and Chukwbikem, I. (2013). *Resources for Early Childhood Education (E . C . E)*. 4(8), 161–172.
- Ebohon, O. J., Ajayi, T. O., Ado-ekiti, T. F. P., and Ganiyu, S. (2021). *Understanding Research Paradigm in Social Sciences : A critique of Two Papers on Critical Success Factors for BIM Implementation..*
- Elizabeth, A. O. (2015). *Effect Of Play Equipment On Preschool Children ' S Particaption In Outdoor Play Activities In Suba East Division , Migori County*. h
- Ellison, C. R. (2012). *The Importance of Play in Early Childhood Education*.
- Elo, S., Kääriäinen, M., Kanste, O., and Pölkki, T. (2014). *Qualitative Content Analysis : A*

Focus on Trustworthiness.

- EVERLYN, M. N. (2017). *Storytelling as an Instructional Strategy for Teaching Reading Skills at Pre-Primary School Level In Machakos County, Kenya. October.*
- Extension, K. P. (2024). *The Role of Play in Early Childhood Education : Balancing Fun and Learning The Role of Play in Early Childhood Education : Balancing Fun and Learning. August, 1–5.*
- Fedlu, R. (2018). *The Implementation and Challenge of The Policy Set for Early Childhood Care and Education in Addis Ababa.*
- Feez, S. (2010). *Early Childhood.* SAGE Publications, Inc.
- G/Egziabher, A. (2014). *Practices and challenges of Early Childhood Care and Education in Addis Ababa, Arada Sub-City Government Kindergartens.*
- Garaigordobil, M., Berruenco, L., and Celume, M. (2022). *Developing Children ' s Creativity and Social-Emotional Competencies through Play : Summary of Twenty Years of Findings of the Evidence-Based Interventions “ Game Program .”*
- Getnet, T. (2016). *An Assessment Of Adult Learners' Perception On Social And Economic Benefits Of The Integrated Functional Adult Literacy Program: The Case Of Akaki Kaliti Sub-City Woreda One.*
- Goldstein, J. (2012). *Play In Children ' S Development , Health And Well-Being. February.*
- Grace, Kabura and Waithaka, E. (2020). *Teacher Factors Influencing Use of Play as a Teaching Strategy in Pre- Primary Schools in Kiambu County , Kenya. 10(1), 17–28.*
- Hoot, J. L., Szente, J., and Mebratu, B. (2004). *Early Education in Ethiopia : Progress and Prospects.*
- Hunter, J. (2019). *Supporting Teachers to Successfully Implement a Play-based Learning Approach. 20(2), 16–29.*
- Irvin, M. (2017). *The Importance of Play in Early Childhood Education.*
- Ismail, G. (2018). *A Mixed Methods Approach to the Development and Validation of an Assessment Tool to Measure Psycho-Social Factors Associated With Willingness to Participate In Child-Centred Initiatives.*
- Israel, K. W. (2018). *Attitude of Students Towards Technical Vocational Education and Training (TVET) at Yeka Sub-city Government TVET Colleges.*
- Jensen, H., Pyle, A., Zosh, J. M., Ebrahim, H. B., Scherman, A. Z., Reunamo, J., and Hamre, B. K. (2019). *Play facilitation : the science behind the art of engaging young children.*
- Johnson, S. (2011). *Importance of Data Analysis in Research _ Dissertation Writing Assignment Help UK.*

- Jonathan, A. (2017). *Articulating the Action Figure: Essays on the Toys and Their Messages* (J. Alexandratos (Ed.)). McFarland and Company, Inc.
- Kimberly A. Gordon Biddle, Ana Garcia-Nevarez, Wanda J. Roundtree Henderson, A. V.-K. (2014). *Early Childhood Education Becoming a Professional*. SAGE.
- Korstjens, I., and Moser, A. (2018). Series : Practical guidance to qualitative research . Part 4 : Trustworthiness and publishing. *European Journal of General Practice*, 0(0), 120–124.
- Lapan, S. D., Quartaroli, M. T., and Riemer, F. J. (Eds.). (2012). *Qualitative Research An Introduction to Methods and Designs*.
- Lunga, P., Esterhuizen, S., Koen, M., Africa, S., Childhood, E., Africa, S., and Esterhuizen, S. (2019). *Play-based pedagogy : An approach to advance young children ' s holistic development*. 1–12.
- McLean, C. (2016). *Full – Day Kindergarten Play-Based Learning : Promoting a Common Understanding*.
- Mekonnen, D. (2019). *An Assessment of the Current Practices of Play Based Learning in North Gondar Preschool Education*.
- Meskerem, C. (2014). *Trends of Curriculum Development in Ethiopia- a historical perspective*.
- Ministry of Education Strategy Center (ESC). (2018). *Ethiopian Education Development Roadmap An integrated Executive Summary (Draft for Discussion)*.
- Ministry of Federal Education and Professional Training, I. G. of P. (2017). *Curriculum for Early Childhood Care And Education*.
- Ministry of Women and Child Development. (2014). *National early childhood care and education (ecce) curriculum framework*.
- MoE. (1994). *Education and training policy*.
- MoE. (2009). *Curriculum Framework for Ethiopian Education*.
- MoE. (2010a). *Guidelines for Early Childhood Care and Education*.
- MoE. (2010b). *National Policy Framework for Early Childhood Care and Education*.
- MoE. (2010c). *National Policy Framework for Early Childhood Care and Education*.
- MoE. (2014). *Background Importance of Preschool Diploma Teacher Training Program*.
- MoE. (2015a). *Education Sector Development Program IV (ESDP IV)*.
- MoE. (2015b). *Education Sector Development Program IV (ESDP IV)*.
- MoE. (2017). *Ethiopian Education Development Roadmap An integrated Executive Summary*. 1–100.

- MoE. (2019). *Education Sector Development Program V (ESDP V)* (Issue Esdp V).
- MoE. (2020a). *Education Statistics Annual Abstract September 2019-March 2020 FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA.*
- MoE. (2020b). *General Education Curriculum Framework.*
- MoE. (2021). *Education Statistics Annual Abstract.*
- Molla Bekalu. (2019). Practices , Challenges and Opportunities of Early Childhood Care and Education Program Implementation in Bahir Dar City Administration. *Journal of Education and Practice*, 10(1), 17–26.
- Moodley, G. (2020). *Improving curriculum implementation and coverage: Managers and educators’ experiences of the Jika Imfundo programme in selected school in the King Cetshwayo district. February.*
- MoPD. (2021). *Statistical Report on the LMS 2021.*
- Morgan, D. L. (2014). *Qualitative Inquiry Pragmatism as a Paradigm for Social Research. August.*
- Muhammad, S., and Kabir, S. (2018). *Methods of data collection. June.*
- Need, E. W., and Want, W. W. (2016). *Guidelines for Excellence Early Childhood Environmental Education Programs Guidelines for Excellence Early Childhood Environmental Education Programs.* North American Association for Environmental Education (NAAEE).
- Neuman, W. L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches* (7th ed.). Pearson Education Limited.
- Nigussie, G. (2011). *Policy And Pre-Ctice Of Preschool Education Oromia Regional State: The Case Of Borena Zone.*
- Nugent, M. B. A. (2017). *Teachers’ Experiences with Integrating Play-Based Learning Into Standards-Driven Curriculum A Phenomenological Study.*
- Obaki, S. O. (2017). *Impact of classroom environment on children ’ s social behavior 1 . Literature review. 5(1), 1–7.*
- OECD. (2017). *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care.* Paris.
- Onuora-Oguno, A. C. (2019). *Development and the Right to Education in Africa.* the registered company Springer International Publishing AG part of Springer Nature.
- Opsgenie. (2017). *The Froebel Approach - CareforKids.*
- Patience O. Awopegba, E. A. O. and A. B. N. (2013). *Indigenous Early Childhood Care and Education (IECCE) Curriculum Framework for Africa : A Focus on Context and Contents.*

UNESCO.

- Polit, D. F., and Beck, C. T. (2017). *Nursing research : generating and assessing evidence for nursing practice* (T. Edition (Ed.)). Wolters Kluwer.
- Pound, L., Comenius, J., Pestalozzi, J. H., Isaacs, S., Bruner, J., and Donaldson, M. (2006). *How children learn*.
- Pyle, A., and Danniels, E. (2017). A Continuum of Play-Based Learning : The Role of the Teacher in Play-Based Pedagogy and the Fear of Hijacking Play. *Early Education and Development*, 28(3), 274–289.
- Pyle, A., Poliszczuk, D., and Danniels, E. (2018). *The Challenges of Promoting Literacy Integration within a Play-based Learning Kindergarten Program : Teacher Perspectives and Implementation*.
- Ravitch, Sharon M. and Riggan, M. (2017). *Reason and Rigor How Conceptual Frameworks Guide Research* (2nd ed.). SAGE.
- Ridgway, A., and Ridgway, A. (2012). How do Early Childhood Students Conceptualize Play-Based Curriculum ? How Do Early Childhood Students Conceptualise Play-Based Curriculum ? *Australian Journal of Teacher Education*, 37(12).
- Sheridan, M. D. (2011a). *Play in Early Childhood: From Birth to Six Years, 3rd Edition*.
- Sheridan, M. D. (2011b). *Play in Early Childhood: From Birth to Six Years* (3rd ed.).
- Sibisi, P. N. (2019). *Lecturers' Experiences in the Implementation of the National Certificate (Vocational) Engineering Curriculum in a Selected Technical Vocational Education and Training College*.
- Sileshi, G. (2014). *Early Childhood Education Practices : The Case of Akaki Kality Sub City Girma Sileshi A Thesis Submitted to The Institute of Educational Research. June*.
- Singer, D. G., Golinkoff, R. M., and Hirsh-pasek, K. (2006). *Play Learning How Play Motivates and Enhances Children's Cognitive and Social-Emotional Growth*. Oxford.
- Singh, K. (2007). *Quantitative Social Research Methods*. SAGE Publications, Inc.
- Slentz, S. L. K. and K. L. (2001). *The Early Childhood Curriculum*.
- Smidt, S. (2011). *Playing to Learn the Role of Play in the Early Years*.
- Solomon, M. (2020). *Historical Upheavals of the Educational Policy Formulation and Implementation in Ethiopia : A Historical Analysis Historical Upheavals of the Educational Policy Formulation and Implementation in Ethiopia A Historical Analysis*.
- Spielgaben. (2013, September 2). *Comparison among Froebel, Montessori, Reggio Emilia and Waldorf-Steiner Methods – Part 1. f*
- Stephanie Wall, I. L. and M. T. (2015). *Early Childhood Education and Care Pedagogy Review*.

OECD.

Tadesse, M. (2015). *The Contributions of Preschool Education on the First Cycle Primary School Students Learning Process and Academic Achievement* :

Tarimo, J. J. (2013). *Teachers' use of play as a teaching strategy in pre-primary schools in Mwanga district, Kilimanjaro region, Tanzania* [KENYATTA].

Tassew Woldehanna, Jack Rossiter, Belay Hagos, Tirussew Teferra, and P. R. (2018). *Early learning in Ethiopia : equitable access and learning Early Learning Partnership Ethiopia System Diagnostic Report* (Issue June).

Taylor, M. E., and Boyer, W. (2020). Play - Based Learning : Evidence - Based Research to Improve Children ' s Learning Experiences in the Kindergarten Classroom. *Early Childhood Education Journal*, 48(2).

Tegrootenhuis, B. (2021). *The Value of Play-Based Learning in Early Childhood Classrooms*.

The FDRE Central Statistical Agency. (2021). *Agricultural Sample Survey*. 21.

Timothy J. (2020). *Symbolic Play_ Examples, Definition, Importance, and More*.

Tokić, I. S., and Borovac, T. (2020). *Children ' s symbolic play during the transition to school*.

Tolossa, B. (2019). Practice and challenges of implementing preprimary school curriculum: The case of Fitch Town, Oromia Regional State [Addis Ababa]. In *The ASHA Leader* (Vol. 24, Issue 6).

Tran, M. (2017). *Let's Have Fun: Teaching Strategies Used to Support Play-Based Learning in Elementary Classrooms*.

Tsegaye, S. (2014). *Practice and Challenges Of Pre-School Education In Nefasilk Lafto Sub City Of Addis Abeba*. Addis Ababa.

Tunku, U., and Rahman, A. (2013). *Preschool teachers ' perceptions towards the use of play-based approach in language and literacy*. 10, 79–98.

UNESCO. (2011). *International Standard Classification of Education*.

UNICEF. (2018). *Every child learns Global Annual Results Report*.

Whiren, K. S. (2014). *Developmentally Appropriate Curriculum Best Practices Early Childhood Education* (Fifth).

White, R. E. (2012). *The Power of a Research Summary on Play and Learning*.

Wisneski, Debora, File, Nancy and Mueller, J. (2012). *Curriculum in Early Childhood Education Re-examined, Rediscovered, Renewed* (A. Nancy File, Jennifer J. Mueller and D. B. Wisneski (Eds.)). Taylor and Francis.

Wong, S., and Logan, H. (2016). *Play : A Theory of Learning and Change* (T. Brabazon (Ed.)).

Springer.

Zosh, J. M., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., Hirsh-pasek, K., Solis, S. L., and Whitebread, D. (2017). *Learning through play : a review of the evidence*.

Appendix A

Questionnaires to be filled by pre-primary teachers

Dear respective respondents,

I am conducting a research entitled “**The Implementation of Play-Based Pedagogical Strategies in Early Childhood Education Curriculum in Primary Schools in Ethiopia**” for the fulfillment of doctoral degree at the University of South Africa (UNISA). As part of my study, I carry out a survey study to obtain information from you who is teaching in pre-primary school regarding the implementation of play-based pedagogy from your real experience in the actual classroom. Therefore, this questionnaire is designed to collect information about your experiences related to play-based pedagogical practice in early childhood education in public and private pre-primary schools. You have been selected by simple random sampling strategies from the population of teachers from pre-primary schools of the Sidama Regional State, Ethiopia. I kindly request you to take part in this survey study to contribute from your knowledge and experience to benefit the children to learn through play based pedagogy. Your genuine responses to these questionnaires will have great effect on the success of this study.

The result of the study will be helpful in providing experience and information for stakeholders like you on how to improve the practice of play – based pedagogical strategies in pre-primary schools. I kindly request you to fill the three parts of the questionnaire honestly and responsibly based on your personal opinion and experience. I can assure you that, this questionnaire would not be used other than academic purpose and does not have any forgeable risks. When the study is completed the summary of the research result will be made available to you electronically. To complete the questionnaire it may take roughly around 50 minutes.

Please, read each of the following statements and mark an “X” on the column that corresponds closely to your experiences and write the necessary information on the spaces provided. You are politely asked to answer all of the questions as fully and honestly as possible. If you agree to participate in the study, please read and sign the attached consent letter before you start to answer the questions.

Thank you in Advance for your Cooperation and willingness to participate!!

Part I: Background Information

For the following items mark “X” on the box that suits your response or write the required information on the spaces provided.

1. Name of the School _____ Government private
2. Name of Department _____ Subject (specialization) _____
3. Sex : Male Female
4. Age: 18-25 26-30 31-35 36-40 41 -45 Above 45

5. Qualifications :

- a) Certificate e) Not taken any training _____
 b) Diploma f), If other (Please, specify) _____
 c). BA/BSc
 d) MA/MSc

6. Teaching Experience in ECE (in pre-primary schools)

- a. <5 years c. 11-15 years
 b. 6-10 years d. 16-20 years e. Above 20 years

7. Job status: 1. permanent 2. Part-time

8. Model of Teaching

- A) Montessori
 B) Froebel
 C) Traditional
 D) Eclectic (Montessori and Froebel)

9. Number of teacher in a class

- a) classroom teacher
 b) assistant teacher
 c) care giver

Part II. General Questions

Dear respected respondent, you are expected to show the levels of your agreement by circling the number that applies in the following table on each rating scales. Besides, you are kindly requested to give your feelings freely on the spaces provided.

Strongly Agree=5, Agree =4, Undecided =3, Disagree =2, Strongly Disagree =1

I	Teachers awareness on the values of play in the implementation of ECE curriculum	Rating Scale				
		5	4	3	2	1
1	I have enough awareness and practices on paly-based learning pedagogy	5	4	3	2	1
2	I have knowledge in planning and organizing play-based activities for learners	5	4	3	2	1
3	I am qualified in implementing play –based learning pedagogy	5	4	3	2	1
4	I have taken on job trainings to implement play-based pedagogy	5	4	3	2	1
5	As ECE facilitator, I usually plan an intentional and varied learning opportunities to foster play-based learning process	5	4	3	2	1
6	I believe children learn best in pre-primary school when they have opportunities to play in the instructional process	5	4	3	2	1

7	Play- based learning given in pre-schools provides warranty for the preparation of primary school education	5	4	3	2	1
8	It is difficult to integrate play activities in curriculum implementation	5	4	3	2	1
9	It is not very easy to include play based activities during teaching and learning process	5	4	3	2	1
10	Play-activities waste valuable time for academic work	5	4	3	2	1
11	In pre-primary school academics have more priority than play	5	4	3	2	1
12	Using play-based learning is helpful to address children natural motivation of play	5	4	3	2	1
13	Play-based learning is important for children to learn freely	5	4	3	2	1
14	Play-based learning is a critical element of pre- primary school and influences children's social, emotional, language, physical, and cognitive development	5	4	3	2	1
15	Play-based learning helps children to be successful at school and beyond	5	4	3	2	1
16	Play-based learning provide children opportunities to use their creativity	5	4	3	2	1
17	Play-based learning allows children to gain confidence in their decision-making skills	5	4	3	2	1
18	I am aware of that play give children the opportunity to construct their own knowledge	5	4	3	2	1
19	Play based pedagogical strategy is a child-centred approach	5	4	3	2	1
20	Play based pedagogy is valuable to plan extended period of time for children to engage in learning activity	5	4	3	2	1
21	Play-based pedagogy is suitable and meet the learning standards	5	4	3	2	1
II	Teaching strategies to implement play based pedagogy I teach children through ...					
1	individual game method	5	4	3	2	1
2	play independently	5	4	3	2	1
3	dramatic method	5	4	3	2	1
4	role play	5	4	3	2	1
5	demonstration method	5	4	3	2	1
6	field visit as a means of teaching method	5	4	3	2	1
7	game with rules	5	4	3	2	1
8	collaborative method	5	4	3	2	1
9	play as a vehicle to deliver instructional activities	5	4	3	2	1
10	story telling	5	4	3	2	1
11	encouraging children to use objects to create something new, such as making a puppet from a sock (constructive play)	5	4	3	2	1
12	encouraging children to use one thing to represent or stand for another (symbolic play)	5	4	3	2	1
13	indoor play corners to help children master the newly taught concepts	5	4	3	2	1
14	music to enhance learning and to facilitate teaching	5	4	3	2	1
15	free outdoor play to help them learn different themes	5	4	3	2	1
16	telling, explaining and informing method	5	4	3	2	1
17	whole-group discussion method	5	4	3	2	1

18	frequently play for reinforcement of already taught concepts	5	4	3	2	1
III	Facilities used in pre-primary school implement play-based pedagogy I use frequently					
1	flash card for different lessons	5	4	3	2	1
2	age-appropriate and mentally stimulating video and audio aids	5	4	3	2	1
3	student textbooks	5	4	3	2	1
4	teachers' reference material (guide)	5	4	3	2	1
5	wall maps and charts	5	4	3	2	1
6	real objects which is related to instructional content	5	4	3	2	1
7	shop corner (balance, money note, empty pens, child cloths etc.)	5	4	3	2	1
8	construction corner (sand, shovel, hammer, building materials, etc)	5	4	3	2	1
9	medical corner (syringe, stethoscope, bandage, medication bottles, etc)	5	4	3	2	1
10	mathematics corner (small stones, tape measures, counting materials etc)	5	4	3	2	1
11	family corner (coffee pot, spoon, dishes, dolls, etc)	5	4	3	2	1
12	language corner (picture, children books, newspaper, magazine, colorful posters)	5	4	3	2	1
13	music corner (different traditional musical instrument)	5	4	3	2	1
14	science corner (science kits)	5	4	3	2	1
15	community corner (cultural wearing, paints)	5	4	3	2	1
16	painting corner (painting brush, color, cloth, wood, clay)	5	4	3	2	1
IV	Varieties of activities for play based learning strategies In my school there is					
1	an opportunity for children to engage in dramatic play	5	4	3	2	1
2	an adequate play materials for children to play independently	5	4	3	2	1
3	an opportunity to children that they can play different audio/video games	5	4	3	2	1
4	adequate instructional materials for-play-based learning	5	4	3	2	1
5	sound, safe and accessible equipment(toys, blocks, clay, sorting stone, etc)	5	4	3	2	1
6	age and developmentally appropriate materials that children can manipulate with their hands and play with	5	4	3	2	1
7	adequate outdoor space is provided per child	5	4	3	2	1
8	playground is safe and secured	5	4	3	2	1
9	supply of play materials and equipment provide sufficient opportunity for play	5	4	3	2	1
10	good arrangement of play materials and equipment that enhance children cooperative play activities	5	4	3	2	1
10	I can assess children while they are playing	5	4	3	2	1
V	Standards of Early Childhood Education					
1	I think that the school curricula are uniform throughout our region to the same developmental stage age	5	4	3	2	1
2	I think that the curriculum I am utilizing is child centered, informal and thematically integrated	5	4	3	2	1
3	I think that the curriculum that we use are developmentally appropriate to the ages and stages of children	5	4	3	2	1
4	I think that the curriculum at hand gives emphasis to play-based	5	4	3	2	1

	pedagogical strategies of learning paradigm					
5	I think that the curriculum gives emphasis to the integration between guided play and free-play based pedagogical strategies	5	4	3	2	1
6	I think the curriculum helps to use as a guide for incorporating developmentally appropriate content in the pre-school program	5	4	3	2	1
7	I think the curriculum helps to use as a guide for incorporating activities in the pre-school program.	5	4	3	2	1
8	I think the curriculum helps to foster the holistic development of all children	5	4	3	2	1
9	I think the curriculum gives children an opportunity to practice skills	5	4	3	2	1
10	The content of the curriculum can be adapted to the local context	5	4	3	2	1
11	The content of the curriculum emphasizes on different aspects of the child development	5	4	3	2	1
VI	Targets/Intents of Early Childhood Education (ECE)					
1	We implement ECE in a team to guarantee holistic development of the children	5	4	3	2	1
2	We are implementing ECE to prepare children to compulsory education	5	4	3	2	1
3	We are implementing ECE through play based pedagogical strategies to make children the future innovators, creators and high order thinkers	5	4	3	2	1
4	We use integrated play-based pedagogical strategies to enhance children's learning	5	4	3	2	1
5	I accomplish my tasks of teaching as facilitator, scaffolder, mentor and advisor to contribute to the holistic development of children	5	4	3	2	1
6	I usually organize and implement indoor activities to maintain the holistic development of children	5	4	3	2	1
7	I usually organize and implement outdoor activities to maintain the holistic development of children	5	4	3	2	1
8	In our school adequate time is given for play, discovery and to have ample break after playing and classroom learning	5	4	3	2	1
VII	Physical environment of pre-primary school					
1	I think that the buildings of my school are to the standards of the regional state	5	4	3	2	1
2	I think that the classrooms of my school fit the standards	5	4	3	2	1
3	I think that the chairs and tables of my school fit the standards	5	4	3	2	1
4	I think that the playing toys and dolls of my school are according to the standards	5	4	3	2	1
5	There is a convenient place for children to keep personal belongings	5	4	3	2	1
6	There are places where children may work alone, with a small group, or in a large group	5	4	3	2	1
7	The environment is filled with colourful written words, books and symbols	5	4	3	2	1
8	The learning environment is friendly	5	4	3	2	1
9	The learning environment provides adequate opportunity for the children to interact to each other freely	5	4	3	2	1
10	There is a variety of visuals rich in colour, texture and shape hanged on	5	4	3	2	1

	the walls of the classroom					
11	The school environment provides adequate opportunities to children for exploration and discovery	5	4	3	2	1
12	The school environment is an attractive, pleasant and physically safe for the children	5	4	3	2	1
13	The classroom setting allows free space for children to move	5	4	3	2	1
14	There are adequate tables and chairs in the classroom	5	4	3	2	1
15	The chairs and tables are appropriate and comfortable to the size and age of the children	5	4	3	2	1
16	The classroom is well ventilated with enough windows	5	4	3	2	1
17	There is an area for displaying the children's creative work in the class	5	4	3	2	1
18	There is indoor materials to organize and implement activities in order to maintain holistic development of children	5	4	3	2	1
19	There are enough outdoor materials to organize and implement activities in order to maintain holistic development of children	5	4	3	2	1
20	There are adequate latrine in the school compound	5	4	3	2	1
21	There is adequate water supply within the school compound	5	4	3	2	1
22	There are adequate and appropriate play equipment (balance, swinging, slid, ladder etc) in the school	5	4	3	2	1
VIII	School resource allocation for play-based pedagogical strategies to ECE class					
1	The school leaders usually fulfil educational resources(inputs) for play-based pedagogical strategies in ECE	5	4	3	2	1
2	The school leaders are competent enough in managing play-based pedagogical strategies through giving constructive supports	5	4	3	2	1
3	The school leaders give or facilitate on job training for teachers on play-based pedagogical strategies and assessment techniques	5	4	3	2	1
4	The school leaders are keen enough in making the learning environment friendly (clean and attractive) for play-based pedagogical strategies	5	4	3	2	1
5	The school leaders are enthusiastic to promote children happiness, health and well-being	5	4	3	2	1
6	The school leaders work on appropriate standards of child- teacher ratio to safeguard the service delivery	5	4	3	2	1
7	The school leaders are competent enough in accessing digital technologies (computer, internet) in their respective school to promote play-based pedagogical strategies	5	4	3	2	1
8	The school leaders encourage teachers to use play-based pedagogies as a teaching strategy	5	4	3	2	1
9	The school leaders give recognition for teachers who use play-based pedagogical strategies as a teaching method	5	4	3	2	1
10	The school leaders reward teachers who use play-based pedagogical strategies in the instructional process	5	4	3	2	1
11	The school environment encourages teachers to use play-based pedagogical strategy	5	4	3	2	1
12	The school leaders provide adequate material for indoor and outdoor play activities	5	4	3	2	1

IX	Communication and Collaboration					
1	I usually work collaboratively with caregivers, other teachers, principals and parents on play-based learning	5	4	3	2	1
2	I usually work collaboratively with stakeholders on children's playful and joyful learning individually, in small groups and whole groups to ensure love, plays and works.	5	4	3	2	1
3	I communicate regularly with stakeholders to support the children until they reach to their zones of proximal development	5	4	3	2	1
4	I usually inform parents to give time for children's play and evaluate their learning through enjoyment	5	4	3	2	1
5	I communicated with regional/woreda ECE coordinators about the relevance of curricular materials, playing materials and methods of teaching	5	4	3	2	1
6	I communicated with regional/woreda ECE coordinators to get information about the standards and curriculum guidelines	5	4	3	2	1
7	School leaders have been communicating with private and governmental sectors to create positive learning atmosphere for children	5	4	3	2	1
8	School leaders usually adjust parents day at the beginning of the year, at middle and end of the year targeted to discuss on their children's learning	5	4	3	2	1
X	Challenges of implementing play based pedagogical strategies in pre-primary school					
1	There is shortage of budget to fulfil play based learning materials	5	4	3	2	1
2	The school leaders are not well trained to lead play based pedagogy	5	4	3	2	1
3	There is no adequate playing material to implement play based learning	5	4	3	2	1
4	The school leaders do not organize training for teachers on implementing play based learning strategies	5	4	3	2	1
5	There is no adequate support from the educational experts (principals, supervisors) to implement play based pedagogy	5	4	3	2	1
6	I have shortage of knowledge to use learning materials	5	4	3	2	1
7	The allocation of time is not enough to practice play based learning	5	4	3	2	1
8	The existing space is not suitable to implement play based learning	5	4	3	2	1
XI	Principles in primary school					
1	I have an opportunity to read principle and guideline of pre-primary school	5	4	3	2	1
2	I implement play-based learning based on MoE guideline	5	4	3	2	1
3	The curriculum is comprehensive, addressing the development and learning of the whole children	5	4	3	2	1
4	I assess children accurately and plan for their progress	5	4	3	2	1
5	I engage children in conversations about thinking and problem solving	5	4	3	2	1
6	I take care of the child's physique health and safety	5	4	3	2	1
7	I use a variety of teaching strategies both teacher-guided and child centered to meet the needs of individual child	5	4	3	2	1
8	I purposely plan time and materials for the benefit of children's learning through play.	5	4	3	2	1
9	I observe children while they learn through play and interact with them	5	4	3	2	1

	to guide them to play according to the instruction					
10	I integrate play with the lesson through the implementation of the instruction	5	4	3	2	1
XII	Guideline in primary school					
1	Only the government-approved curriculum should be used in all pre-schools.	5	4	3	2	1
2	The curriculum should be adapted to the local context	5	4	3	2	1
3	The curriculum will be used as a guide line to incorporate appropriate content, concepts and activities according to the age and the developmental level of the children	5	4	3	2	1
4	The curriculum should give an opportunity to the children to practice skills that will enable them to function effectively out of the school environment	5	4	3	2	1
5	All teaching and learning activities should be consistent with the approved pre-school curriculum	5	4	3	2	1
6	The curriculum should be readily available to all teachers teaching in pre-schools	5	4	3	2	1
7	The curriculum should encourage the use of play based pedagogy in the school compound	5	4	3	2	1

Part III. Open-ended questions

Instruction three: - under this instruction you will find some open ended questions. Please write your answer on the blank space provided below each question.

1. What are the values of play based pedagogy in a pre-primary school?

2. What do you say about the implementation of play based pedagogical strategies in particular reference to your school?

3. What do you say regarding the support given to teachers in your school from the sides of principals, ECE Coordinators and *Woreda* supervisors?

4. What are the major challenges do you observe in your pre-schools from the sides of

- learning environment
- leadership

- community engagement
- availability of resources

5. Are there any major challenges in the implementation of play-based pedagogical strategies in your pre-school rather than mentioned above on item XII?

6. How do you evaluate the teacher-student ratio to run the indoor and outdoor activities in your respective school?

7. What are your overall suggestions to improve the implementation of play based pedagogical strategies in pre-schools? Please mention as much you can.

Appendix B

Interview Guiding Questions for ECE Coordinators, Principals and Supervisors

1. What do you suggest on developmentally appropriate curriculum practices in ECE in your pre-primary school?
2. What do you say about the awareness of teachers on the values of play in the implementation of ECE curriculum?
3. How do you evaluate the implementation of play-based pedagogical strategies in your school?
4. Are their strategies that teachers use to implement play-based pedagogy at your school?
5. How do you evaluate the effectiveness of teachers in the implementation of play-based pedagogical strategies?
6. What are the major activities planned and implemented in your office to enhance the implementation of play-based pedagogical strategies in pre-primary school?
7. What are the available resources that can help facilitators to implement play based pedagogy in your specific school?
8. What are the existing opportunities to implement play based pedagogy in pre-primary schools?
9. How do you evaluate the teacher student ratio to run the indoor and outdoor activities in your respective school?
10. How do you evaluate the support given to teachers at your school from the sides of principals, ECE Coordinators and *Woreda* supervisors in providing on job training and workshops on play-based pedagogical strategies?
11. What are your overall suggestions to improve play based pedagogical approaches in ECE in pre-primary schools?
12. Have you ever tried to get standards and curriculum guidelines from regional/*woreda* ECE coordinators?
13. As a school leader, how often do you plan to meet and discuss with parents about the implementation of early childhood education?
14. Are school leaders communicate with private sectors and government bodies to create positive learning atmosphere for children in ECE?
15. What are the major challenges you encountered in coordinating pre-primary school play-based pedagogy?
16. What are the major challenges that you observed in your pre-primary school about the implementation of play-based pedagogical strategies?
17. Are pre-primary school guidelines and principles of ECE are utilized in your school? How?
18. Other, Please specify

Thank you for your cooperation!!

Appendix C

Observation checklist

No	Items	Excellent	Very Good	Good	Poor	Very poor
I	Child-friendly environment in schools					
1	Availability of literacy and numeracy resources					
2	Availability of resources for indoor play activities					
3	Availability of resources for outdoor play activities					
4	Attractiveness and neatness of the school environment					
5	Availability of digital playing materials					
6	Availability of playing materials for individual learner					
7	Availability of play materials for small groups					
8	Availability of play materials for whole class					
II	Physical surrounding of the schools					
1	Appropriate buildings and classrooms for preschool children					
2	Availability of Standardized classroom size					
3	Availability of standardized tables and chairs according to the age of the students					
4	Availability of appropriate and neat dining rooms					
5	Availability of appropriate sleeping/napping rooms					
6	Availability of adequate water supply					
7	Availability of enough and comfortable toilets					
8	Adequate space and facilities for children to play					
9	Availability of swings					
10	Availability of sliding panels					
11	Availability of sand play areas					
12	Availability of water play areas					
13	Availability of adequate learning materials such as play cards, puzzles, blocks, etc					
14	The convenience of school compound for play					
15	Adequate and comfortable playing field					
16	The physical environment of the school is child-friendly					
III	Classroom observation indoor and outdoor					
1	Classroom wall is equipped with colourful teaching aids aids such as color, texture and shape					
2	Adequacy of table and chair					
3	Proper arrangement of tables and chairs					

4	Effort of teachers as co-players and co-producers or other wise					
5	Children initiated free plays					
6	Teacher initiated guided play of children					
7	Discipline of children while playing					
8	Provision of variety of activities					
9	The convenience of a place to keep personal belongings					

Appendix D

GUIDELINES FOR DOCUMENT ANALYSIS

1. Analysis of the curriculum:
 - a. Is it developmentally appropriate to the ages of children?
 - b. Is it play-based?
 - c. Is it thematically integrated?
2. Analysis of pedagogical strategies;
 - a. Is it play-based learning?
 - b. Are free play and guided play integrated?
 - c. Are there spaces for indoor and outdoor activities?
3. Analysis of plan;
 - a. Is there intentional planning?
 - b. Is there transitional planning?
4. Is there documentation of children's day- to-day life activities as assessment strategies?

Appendix E

Interview/questionnaire consent form

A—Consent Form

Interview/questionnaire filling protocol for the Research entitled “The implementation of play-based pedagogical strategies in early childhood education curriculum in selected primary schools in Ethiopia”

Consent Form

School: _____

Name of Interviewee:/respondent _____ Title: _____ Date:

Years of Service: _____ Phone: _____

Interviewed By: _____

This interview/questionnaire is designed to collect information about the implementation of play – based pedagogical strategies in early childhood education curriculum, awareness of teachers on the values of play in the implementation of ECE curriculum, the strategies that teachers are using to implement play based pedagogy, the existing facilities in school to help practice play-based pedagogical strategies and the challenges in the implementation of play – based pedagogical strategies. The aim is to investigate the implementation of play-based pedagogical strategies in Ethiopia pre-primary schools.

The information you provide in this questionnaire/interview will be used only for the purpose of the research identified above and by no means expose your private personality as a result of breaking confidentiality. The interest of the research is in learning from your experience in the implementation of play – based pedagogical strategies in pre-primary school. The collected information from you and other study participants will be summarized, coded and analysed to fulfil the intention of implementation of play – based pedagogical strategies in the ECE curriculum.

Thank you in advance for your willingness to be interviewed / fill the questionnaire.

Solomon Wolde

PhD candidate

I the undersigned agreed to participate in the study on implementation of play –based pedagogical strategies to fill a questionnaire, interviewed and observed while teaching at pre-primary school.

I have read the consent form and recognize that my participation in this study is entirely voluntary and that you are free to withdraw at any time during the course of the study. I understand that my information collected from this study will be strictly confidential. I may ask you for further information about this study if needed.

I agree to participate in this study.

_____ Date _____

Participant's Signature

Appendix F

Request for Permission Form to Sidama Regional Education Bureau

Request to get permission to conduct a research at Hawassa City Administration and different *woredas* where the pre-primary schools are found.

Title of the research: The implementation of play-based pedagogical strategies in early childhood education curriculum in selected primary schools in Ethiopia.

Date: _____

Name of the person: _____

Sidama Regional Education Bureau Head

Telephone Number: _____

E-mail Address: _____

Dear _____

I, Solomon Wolde Roba, who is a PhD candidate, conducting a research entitled “The implementation of play-based pedagogical strategies in early childhood education curriculum in selected primary schools in Ethiopia” under the supervision of Professor Tebogo Mogashoa an Associate Professor in the Department of Curriculum and Instructional Studies at the University of South Africa. I kindly request you for giving permission to conduct a study in your institution. The objective of the study is to scrutinize the awareness of teachers on the values of play in the implementation of ECE curriculum, to identify the strategies that teachers are using to implement play based pedagogical strategies in the implementation of ECE curriculum, to assess the existing facilities in the school that help the teachers to practice play-based pedagogical strategies and to find out its challenges in the implementation of ECE curriculum at pre-primary schools that your Bureau is fully responsible and accountable. The schools are selected because the study focuses to investigate the implementation of play-based pedagogical strategies in the ECE curriculum in Ethiopia.

The study will involve 365 pre-primary school facilitators (teachers), ten principals, four supervisors, two curriculum and two ECE experts, 48 PTA members, are considered as the sample population of the study from pre-primary schools at Sidama Regional State in Ethiopia.

The study will give an agenda to reform a pre-primary education not only in Sidama Regional State but also throughout Ethiopia. This problem might be among one of the major problems in our educational system. The study findings may enhance stakeholders (facilitators, principals, supervisors, curriculum, and ECE experts) awareness on the existing practice and challenges of play – based pedagogical strategies implementation in the area. Hence, it will provide them a chance to work on improving implementation of play – based pedagogical strategies in their schools. It may also give chances to others who are working at pre-primary schools in the region as well as in Ethiopia so as to gain experience and learn lessons on how to implement play – based pedagogical strategies in their classroom instruction.

Participating in this study will not have any risk at all for both organizations and study participants for being the part of this study. I confirm that the response of the study participants will not be exposed and kept confidentially by respecting their privacy. The study participants will participate in the study voluntarily and they have the right to withdraw from the participation with no any consequences. On the other hand, study participants will not be rewarded and provided any payment for their participation in the study.

The final findings of this research will be communicated to your institution as a feedback in both soft and hard copy at the end of the study. I kindly request your esteemed office/ bureau to allow me to conduct the study in pre-primary school at Sidama Regional State Ethiopia.

Yours sincerely

Signature of researcher _____

Name of the signatory _____

Signatory's position _____

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2021/10/13

Ref: **2021/10/13/58543694/19/AM**

Name: Mr SW Roba

Student No.: 58543694

Dear Mr SW Roba

Decision: Ethics Approval from
2021/10/13 to 2026/10/13

Researcher(s): Name: Mr SW Roba
E-mail address: 58543694@mylife.unisa.ac.za
Telephone: +251462122169

Supervisor(s): Name: Prof TI. Mogashoa
E-mail address: mogasti@unisa.ac.za
Telephone: 0763725084

Title of research:

**Play based pedagogy in early childhood education in selected primary schools of
Sidama Regional State, Ethiopia**

Qualification: PhD Curriculum studies

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2021/10/13 to 2026/10/13.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2021/10/13 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.

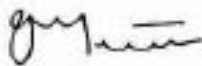


3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
8. No field work activities may continue after the expiry date **2026/10/13**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **2021/10/13/58543694/19/AM** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,



Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za



Prof PM Sebato
EXECUTIVE DEAN
Sebatpm@unisa.ac.za

Appendix H



UNISA 00000

UNISA S B INC
P O BOX 19
HELLENBURG
2010

STUDENT NUMBER : 4014-000-0

REGISTERED NAME : MURIELLE PRINCE NGIDI
REGISTERED TEL : 011 470 5400

DATE : 2020-03-10

Dear Student

I wish to inform you that your registration has been accepted for the current academic year. No printed material is available for the compulsory module in Research Methodology. Kindly activate your Unisa eLife account for future communication purposes and access to study material (<https://myunisa.co.za/portal>).

DEGREE : PhD (EDUCATION) (4014)

TITLE : The implementation of play-based pedagogical strategies in early childhood education curriculum in selected primary schools in Ekhupeni.

SUPERVISOR : Prof TI SOGOMBE (Tsogombe@unisa.ac.za)

ACADEMIC YEAR : 2020

TYPE : THESIS

SUBJECTS REGISTERED: TYPICAL PhD - Education (Curriculum Studies)

The outcome of the compulsory research proposal module is the submission of an acceptable research proposal (a final research title will be approved and supervisor(s) will be appointed). On official approval of the result, you will be allowed to register for the mini-dissertation within the permitted registration period. Please access the information with regard to your personal dissertation on the following link: <http://www.unisa.ac.za/librisfwd>.

Yours faithfully,

Prof M Tsogombe
Acting Registrar



University of South Africa
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Ref.No.

ቁጥር/ 22/ዲ.ቁ 20/16 ዓ.ም

Date: 10 July 2024

ቀን _____

To whom it may concern:

I hereby confirm that I undertook the language editing for:

**THE IMPLEMENTATION OF PLAY BASED PEDAGOGICAL STRATEGIES IN
EARLY CHILDHOOD EDUCATION CURRICULUM IN SELECTED PRIMARY
SCHOOLS IN ETHIOPIA**

By

Solomon Wolde Roba 58543694

The thesis was well written overall.

Mengistu Dinato (BA in English Language and Literature, MA in TEFL, PhD in Applied
Linguistics and Communication, Addis Ababa University)
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