



COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCES
DEPARTMENT OF EDUCATIONAL PLANNING AND
MANAGEMENT

PRACTICES AND DETERMINANTS OF QUALITY SERVICE
PROVISION IN PRE-PRIMARY SCHOOLS OF GAMBELLA
REGIONAL STATE, ETHIOPIA

CHALLA AYALE LEGEDE

DISSERTATION RESEARCH SUBMITTED TO THE DEPARTMENT OF
EDUCATIONAL PLANNING AND MANAGEMENT
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF DOCTOR OF EDUCATION IN EDUCATION POLICY AND STRATEGIC
MANAGEMENT

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Declaration

I declare that Practices and Determinants of Quality Services Provision in Pre-Primary Schools of Gambella Regional State, Ethiopia is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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Examination Board Approval

We, the undersigned members of the Examination Board, certify that we have thoroughly reviewed and evaluated the dissertation research titled:

“Practices and Determinants of Quality Service Provision in Pre-Primary Schools of Gambella Regional State, Ethiopia”

Submitted by Challa Ayale Legede in partial fulfillment of the requirements for the degree of Doctor of Education (DEd).

We recommend that this dissertation be accepted as fulfilling the dissertation requirements.

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Abstract

Pre-primary education constitutes a critical developmental phase, establishing essential foundations for cognitive, social, and emotional growth while shaping long-term academic paths. This study investigates practices, and determinants that influence quality service provision in preprimary schools within Gambella Regional State, Ethiopia. Utilizing a pragmatist philosophical paradigm, the research employs a convergent parallel design focuses on current implementation practices, teacher-related factors, parental engagement, learning resources and, supervision roles. Quantitative data were collected via questionnaires administered to 95 school principals and 190 pre-primary school teachers, while qualitative insights were derived from focus group discussions, semi-structured interviews, and observational protocols involving purposively sampled stakeholders, including regional education officials (n=5), zonal administrators (n=3), woreda education officers (n=28), and Parent-Teacher Association leaders (n=8). Findings revealed deficiency across multiple domains. Infrastructure deficits including insufficient physical learning spaces, facilities, and scarce pedagogical materials were compounded by weak supervisory mechanisms and misaligned integration between pre-primary and primary educational systems. Regression analyses identified teacher related factors as the strongest predictor of quality service provision ($\beta=0.564$, $p<0.001$), accounting for 56.4% of observed variance. Parental engagement emerged as a moderate yet significant factor ($R^2=0.113$, $p<0.05$), correlating with enhanced literacy outcomes, stakeholder satisfaction, and student retention. Learning resource availability explained 35.2% of quality service provision variance ($p<0.01$), underscoring acute material shortages as critical barriers to effective implementation. The study revealed fragmented structures that lack clear accountability mechanisms. Prolonged underfunding has exacerbated the situation, leading to insufficient resource allocation, and limited community participation. These factors collectively undermine the region's capacity to meet national pre-primary education standards. Theoretical implications highlight the necessity of adopting ecological models that integrate institutional, family, and resource-based variables in pre-primary education quality frameworks. Practically, the findings advocate for multi-tiered interventions: infrastructure modernization, evidence-based teacher professional development programs, and community-driven parental involvement initiatives. Policy recommendations emphasize the urgent need for earmarked pre-primary education budgeting, and intersectional collaboration frameworks. This research contributes to global discourse on equitable early childhood education by elucidating context-specific barriers in immersed region while proposing actionable pathways for systemic improvement.

Key words: *Engagement, Gambella Regional State, Provision, Pre-primary, Quality, Service*

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List of Acronyms and Abbreviations

ASR – Accelerated School Readiness

CRCD – Child Rights and Childhood Development

CRC – Convention on the Rights of the Child

ECCE – Early Childhood Care and Education

ECCD – Early Childhood Care and Development

ECD – Early Childhood Development

ECEC – Early Childhood Education and Care

EFA – Education for All

EMIS – Education Management Information System

ESDP – Education Sector Development Plan

FCM – Fuzzy Cognitive Map

FDRE – Federal Democratic Republic of Ethiopia

GMR – Global Monitoring Report (UNESCO)

MELQO – Measuring Early Learning Quality and Outcomes

MoE – Ministry of Education

NAEYC – National Association for the Education of Young Children

NGOs – Non-Governmental Organizations

OECD – Organization for Economic Co-operation and Development

PTA – Parent Teachers Association

SDG – Sustainable Development Goal (UN)

UN – United Nations

UNCRC – United Nations Convention on the Rights of the Child

UNESCO – United Nations Educational, Scientific and Cultural Organization

UNICEF – United Nations Children’s Fund

ZPD– Zone of Proximal Development

CHAPTER ONE

1. INTRODUCTION

This chapter provides an overview of the study, outlining its background, key objectives, and organizational structure. It begins by contextualizing the research within the broader academic and practical landscape, followed by a clear problem statement that justifies the need for the investigation. The research objectives and guiding questions were defined to ensure intensive approach. The chapter highlights the study's significance, emphasizing its potential contributions to theory, policy, and practice. It also defines the scope and acknowledges limitations to establish feasibility. Key terms were operationally defined to avoid ambiguity. Finally, the chapter concludes with an overview of the thesis structure, providing a roadmap for the remaining sections.

1.1. Background of the Study

Early childhood is a period of remarkable growth, where the foundations for lifelong learning, behavior, and health are established. Pre-primary education, which serves children between the ages of 3 and 6, plays a pivotal role in preparing them for formal schooling (Choudhury et al., 2023; Kim et al., 2022; Rao et al., 2014; UNICEF, 2019). This stage is not merely a preparatory phase but a critical window of opportunity where cognitive, socio-emotional, and psychological skills are rapidly developed (Gustafsson-Wright et al., 2016).

Research in neuroscience underscores the heightened neuroplasticity of young children, demonstrating that their brains are exceptionally receptive to environmental stimuli during this period (Black et al., 2016). Consequently, providing enriched learning environments in pre-primary settings is essential for fostering optimal neural development and adaptive learning capacities (Engle et al., 2011). Given its far-reaching implications, pre-primary education is increasingly recognized as a fundamental driver of equitable development, social justice, and economic prosperity (Amogne, 2015; Yoshikawa et al., 2013).

The first five years of life are particularly transformative, marked by accelerated learning and skill acquisition. During this time, children develop foundational cognitive abilities, interpersonal skills, and self-regulation strategies, all of which significantly influence their long-term academic achievement and social adjustment (Campbell et al., 2016; Darling-Churchill & Lippman, 2016; Jones et al., 2016). This phase represents a sensitive period in human development, where the

quality of environmental inputs such as nurturing care, stimulating interactions, and organized learning can profoundly shape developmental trajectories (Yoshikawa & Kabay, 2015). Recognizing this, global education frameworks emphasize the necessity of high-quality pre-primary programs that are developmentally appropriate, inclusive, and responsive to the diverse needs of young learners (National Association for the Education of Young Children [NAEYC], 2020; Yoshikawa et al., 2013).

However, the benefits of pre-primary education are not automatic it depend heavily on the quality of services provided. High-quality programs are characterized by well-trained teachers, adequate learning resource and materials, effective supervision, and strong parental engagement (Crouch et al., 2020; Gove et al., 2018). Conversely, low-quality provision can yield minimal benefits or even adverse effects, undermining children's developmental potential (Yoshikawa & Kabay, 2015). The Federal Democratic Republic of Ethiopia (FDRE, 2022) underscores this concern in its early childhood education policy, warning that failure to ensure quality service provision jeopardizes children's fundamental rights and their future contributions to society. Therefore, investing in provision of quality service in pre-primary education is not merely an educational imperative but a societal obligation to secure a more equitable and prosperous future.

Understanding the determinants of quality service provision is crucial for improving early childhood education systems. Empirical research so far identifies several determinants influencing the provision of quality services in pre-primary education, positively impacting development and learning outcomes. Sylva et al. (2004) examined factors contributing to quality services in pre-primary education, revealing critical determinants such as staff qualifications, curriculum implementation, parental involvement, and the overall learning environment. These elements are essential for influencing the effectiveness of quality service provision in pre-primary schools settings.

According to the European Commission's framework (2014), six determinants of quality service provision in pre-primary education systems are widely recognized: equitable and inclusive access; curriculum; teaching and learning materials; teachers and school leadership; parental and community support; and system financing, management, and leadership (Rossiter, 2016a). While the European Commission (2014) identifies six key determinants of quality pre-primary education, this study focuses on four variables deemed most relevant to the specific research context and

objectives. This selective approach allows for a more in-depth exploration of the chosen variables, which are critical in addressing the unique challenges faced in the context of Ethiopian pre-primary education.

To ensure and improve the quality of pre-primary education, comprehensive studies on influencing factors using models like fuzzy cognitive mapping (FCM) are pivotal (Xu & Zhang, 2020). FCM is particularly valuable in this study as it aggregates expert knowledge, determines correlations, and simulates quality variations, thereby identifying critical factors affecting quality service provision. Although FCM's significance was noted, its specific application in this research involves mapping out the relationships between the identified determinants and their influence on quality service provision, allowing for a nuanced understanding of the interconnected variables that drive early childhood education quality.

International organizations emphasize, and further reinforced the importance of quality service provision in pre-primary education. The United Nations Convention on the Rights of the Child ([UNCRC], 1989) affirms every child's right to care and education. The Sustainable Development Goals ([SDGs], 2015) reinforce this commitment through Target 4.2, aiming to ensure universal access to quality pre-primary education by 2030 United Nations Educational, Scientific and Cultural Organization (UNESCO], 2015b). Organizations like the United Nations Children's Fund ([UNICEF], 2019) highlight early education's critical role in child development and lifelong learning, while the World Bank (2019) and the Organisation for Economic Co-operation and Development ([OECD], 2012) advocate for pre-primary education as essential for long-term social and economic benefits.

Despite these global commitments, stark inequities persist. In high-income countries, disparities in access and quality often reflect entrenched socioeconomic stratification, where children from affluent families benefit from superior early learning opportunities compared to their disadvantaged peers (Maunganidze & Tsamaase, 2014; Vandenberg & Lazzari, 2014). In Europe and Australia, marginalized groups particularly children from immigrant backgrounds and low-income households face systemic barriers to accessing quality pre-primary education (Yizengaw & Tessega, 2020). Similarly, in India, nearly half of all young children are excluded from early education, largely due to low parental awareness and insufficient government investment (Ghosh, 2019).

The situation is even more acute in sub-Saharan Africa, where pre-primary education remains severely underfunded and inaccessible for millions of children (Akkari, 2022). In South Africa, systemic inequalities disproportionately affect marginalized communities (Shaik, 2023), while Nigeria struggles with chronic shortages of trained teachers and basic resources (Oludele & Olufunke Abosedo, 2015). Other nations, such as Botswana, Malawi, and Liberia, grapple with inadequate infrastructure, insufficient funding, and rural-urban disparities, all of which undermine early learning outcomes (Greenwood et al., 2020; Neuman & Powers, 2021).

In Ethiopia, pre-primary education was historically neglected, with services primarily provided by private and non-governmental organizations for a small fraction of children, mostly in urban areas (Tefera, 2018). Although the 1994 Education and Training Policy (MoE, 1994) acknowledged the importance of early education, substantive government action only began in 2010, when enrollment rates remained critically low and largely restricted to wealthier urban families (Tefera, 2018). Recent policy initiatives, such as the National Policy Framework for Early Childhood Care and Education (MoE, MoH & MoWA, 2010), seek to expand access and improve quality. However, progress has been uneven, particularly in emerging regions like Gambella, where systemic challenges persist.

Ethiopia's current education strategy, articulated in the Education Sector Development Plan VI (ESDP VI, MoE, 2021), emphasizes decentralization and universal access, integrating pre-primary schools with primary institutions. Despite these efforts, infrastructure gaps, lack of trained teacher, and resource shortages continue to hinder quality service provision. This study, therefore, focuses on Gambella Regional State, where pre-primary education expansion has been prioritized but where empirical research on quality service provision within the pre-primary schools remains scarce. By examining teacher related factors, parental engagement, learning resource availability, and supervisory practices, this research aims to identify key barriers and opportunities for improving pre-primary education in the region. The findings will inform targeted policy reforms, teacher training programs, and resource allocation strategies, ultimately contributing to more equitable and effective pre-primary education systems in Ethiopia and similar low-resource contexts.

1.2. Statement of the Problem

The expansion of pre-primary education has become a global priority, recognized for its critical role in shaping children's learning outcomes and future economic opportunities, especially for disadvantaged populations (Engle et al., 2011; Kim, 2022; Yoshikawa et al., 2013). Although high-quality pre-primary education consistently demonstrates benefits such as improved cognitive and social skills, which contribute to long-term academic success and economic stability, the effectiveness of recent expansions in achieving quality service remains uncertain. Alarming, in low-income countries, only one in five children has access to such programs (Kim, 2022; Richter et al., 2018; UNICEF, 2019; Zubairi & Rose, 2017).

Several critical challenges impede progress in this area. Infrastructural deficiencies, as highlighted by UNESCO (2015) and various local studies (Boitumelo & Abatihun, 2021; Fantahun, 2016; Tefera, 2018), reveal that overcrowded and substandard facilities significantly undermine pedagogical effectiveness. These inadequacies hinder the teaching and learning process and create environments that are not conducive to the holistic development of young children. Additionally, inconsistent policy implementation, coupled with regional disparities in resource allocation and community priorities, exacerbates these challenges, particularly affecting children from low-income households who face compounded barriers to early learning opportunities (Kim et al., 2022; World Bank, 2021).

In Ethiopia, the government has enacted progressive policies over the past fifteen years, including the National ECCE Policy Framework introduced in 2010. This framework emphasizes children's rights to holistic development within safe environments and the necessity for quality service provision (MoE, 2010a). Complementary guidelines (MoE, 2010b; MoE, 2015b) have further operationalized standards for quality, contributing to gains in enrollment rates and institutional expansion. While Ethiopia's policies are progressive, structural, institutional, and operational challenges within the education system hinder their implementation. In Gambella Regional State, these barriers persist due to unique socio-economic and geographic.

Existing research has predominantly focused on urban contexts, overlooking the unique challenges faced by rural pre-primary education settings (Astatke & Kassaw, 2017; Biniyam, 2014; G/Egziabher, 2014; Girma, 2014; Melaku & Haile, 2019; Rahel, 2014) have inadequately explored

the realities of rural government pre-primary schools. Notably, investigations such as those by Diale and Sewagegn (2021) and Yizengaw & Tessega (2020) have primarily addressed challenges in urban and private sectors, omitting empirical analyses of rural public institutions. Additionally, fragmented examinations of isolated factors such as teacher qualifications (Tsegai, 2015), learning resources (Haile & Mohammed, 2017), and parental engagement (Belay, 2018) lack integrative frameworks necessary for assessing overall pre-primary education quality.

Methodologically, the reliance on quantitative approaches (Boitumelo & Abatihun, 2021; Tilbe & Xiaosong, 2024; Tsegai, 2015) has limited the exploration of contextual factors affecting educational practices. Existing research predominantly utilizes survey data, which may obscure the unique socio-cultural, economic, and institutional challenges faced by individual schools, particularly in low-resource settings like Ethiopia. While quantitative studies provide broad trends, they often fail to capture the lived experiences of teachers, administrators, and students (Creswell & Clark, 2017). For instance, in Ethiopia, general challenges such as overcrowded classrooms, teacher shortages, and disparities in rural-urban resource allocation are rarely examined in depth through qualitative lenses (Amare, 2020; Semela, 2012; Woldehanna & Hagos, 2015). A mixed-methods approach combining surveys with interviews, classroom observations, and focus group discussion could bridge this gap, offering policymakers actionable insights tailored to local realities.

These empirical, and methodological gaps are particularly urgent in Gambella, where the rapid expansion of pre-primary education under the sixth Education Sector Development Plan (ESDP VI) intersects with unique economic and infrastructural challenges. Gambella's significant infrastructural underdevelopment indicate the gap between national policy aspirations and localized implementation realities. Despite the pressing need for empirical studies, no research has holistically examined the determinants of quality service provision, such as teacher-related factors, resource availability, supervisory practices, and parental engagement within public pre-primary schools in this region. This oversight undermines efforts to align educational expansion with the Sustainable Development Goal 4.2 mandate for universal, quality pre-primary education by 2030 (UN, 2015) and limits the ability to design targeted interventions that address the specific needs of vulnerable populations. Therefore, this study aims to fill this critical gaps by investigating the

practices and determinants of quality service provision in the pre-primary schools of Gambella Regionla Stae.

1.3. Basic Research Questions

This study was aimed at addressing the following research questions based on the above-presented research and knowledge gaps.

1. What are the existing practices and status of quality service provision of pre-primary schools in Gambella Regional State?
2. To what extent do teacher related factors influence the provision of quality services in pre-primary schools of Gambella Regional State?
3. How does parent engagement contribute to the provision of quality services in pre-primary schools of Gambella Regional State?
4. How do learning resources and facilities contribute to the provision of service quality in pre-primary schools of Gambella Regional State?
5. To what extent does supervision enhance quality service provision in pre-primary schools of Gambella Regional State?
6. What are the challenges impeding the provision of quality services in pre-primary schools of Gambella Regional State, and what strategies can address them?

1.4. Objectives of the Study

1.4.1. Main objective

The main objective of this study is to investigate the pre-primary education practices and key determinants of its quality service provision in pre-primary schools of the Gambella Region State.

1.4.2. Specific Objectives

This study was further guided by six specific objectives, which included the following;

1. To assess the existing practices and quality service provision in pre-primary education within Gambella Regional State.
2. To investigate the extent to which teacher-related factors influence the provision of quality services in pre-primary schools of Gambella Regional State.

3. To explore how parent engagements contribute to the provision of quality services in pre-primary schools of Gambella Regional State.
4. To examine the contribution of learning resources and facilities to the provision of quality service in pre-primary schools of Gambella Regional State.
5. To assess the effectiveness of continuous supervision and how it enhances the provision of quality services in pre-primary schools of Gambella Regional State.
6. To identify and analyze the challenges that impede the provision of quality services in pre-primary schools of Gambella Regional State and propose framework for quality service enhancement.

1.5. Significance of the Study

This study investigates pre-primary education practices and the determinants of quality service provision in pre-primary schools in Gambella Regional State, Ethiopia. The findings will have significant implications for various stakeholders and contribute to multiple domains.

In terms of practice, the study aims to improve teaching methodologies by identifying effective instructive approaches tailored to the unique context of Gambella. It enhances teacher professional development by highlighting specific training needs and best practices for early childhood educators. Furthermore, the research guides resource allocation by pinpointing gaps in learning materials, infrastructure, and classroom environments. By emphasizing the role of families in supporting early childhood learning, it promotes parental engagement. Additionally, the study strengthens school leadership by providing insights into effective management practices for pre-primary institutions.

From a policy perspective, the study informs policy reform by offering evidence-based recommendations to improve pre-primary education frameworks in Gambella. It supports resource distribution by identifying disparities in the quality of service across pre-primary schools in the region. By demonstrating the long-term benefits of early childhood education, the research advocates for increased investment in this critical sector. It also guides regulatory standards regarding teacher qualifications, curriculum implementation, and school facilities, ensuring alignment with national and regional education goals.

In expanding the body of knowledge, this study enriches academic discourse on early childhood education in understudied contexts like Gambella. It identifies determinants of quality service

provision in pre-primary education within a diverse, resource-constrained setting. The insights offered contribute to global literature on early childhood education, providing a unique perspective from Gambella Regional State, the Ethiopian landscape.

Finally, the study sets a foundation for future research by exploring scalable and sustainable pre-primary education models in similar regions. These contributions aim to transform early childhood education in Gambella by bridging research, policy, and practice. The study underscores the urgency of prioritizing pre-primary education as a cornerstone for cognitive, social, and emotional development, ultimately fostering lifelong learning and sustainable community progress.

1.6. Scope of the Study

This study specifically investigates the factors influencing the provision of quality services in pre-primary schools within the Gambella Regional State. Geographically, the research is confined to four woredas in this region. The study exclusively focuses on public pre-primary schools, purposely excluding private institutions and other early childhood education settings. Private schools may operate under different contexts, resources, and implementation practices that could affect service quality in distinct ways. Consequently, this research does not consider private schools within the Gambella Regional State. Moreover, the study emphasizes the main determinants of quality service provision, including teacher-related factors, the availability of learning resources and facilities, parental involvement, and supervision practices. While these determinants are recognized as directly influencing quality, the primary focus remains on their influence within the context of pre-primary education in Gambella.

1.7. Operational Definition of Terms

The following operational definitions clarify the terms used in this study:

Pre-Primary School: This term refers to educational institutions attached to government primary schools that provide educational services to children aged five to six years. These schools aim to facilitate the children's transition to primary education, typically covering a duration of one to two years.

Practice in Pre-Primary Education: This term refers to the specific teaching methodologies and pedagogical approaches employed by educators in pre-primary schools. It encompasses various

instructional strategies, classroom management techniques, and engagement activities that facilitate children's learning and development.

Quality Service Provision in Pre-Primary Education: This term refers to the delivery of educational experiences that are developmentally appropriate, inclusive, and responsive to the diverse needs of young children. It emphasizes achieving key learning outcomes, such as basic literacy skills, while also promoting the holistic development and well-being of children.

Teacher-Related Factors: This includes the educational background, certifications, and practical knowledge that teachers possess, as well as the number of years they have spent teaching. These factors are critical in assessing the overall quality of education.

Parental Engagements: This term refers to the extent and nature of active participation and support from parents or guardians in school activities and their children's educational experiences. It encompasses both engagement in school events and support at home.

Teaching Resources and Facilities: This term includes tangible items and educational aids used by teachers to facilitate and enhance curriculum delivery. Examples include books, learning tools, play equipment, and the physical environment of the classrooms that support the educational process in pre-primary education.

Supervision Role: For this study, supervision practices refer to the ongoing monitoring and evaluation of teaching and learning processes in pre-primary schools by educational experts and relevant stakeholders. This includes active observation and assessment of classroom activities, as well as the provision of constructive feedback aimed at enhancing educational effectiveness.

Urban Areas: Urban areas are towns or cities that have an officially registered mayor, indicating formal governance and administrative structures Ethiopian Urban Planning Institute ([EUPI], 2015).

Rural Areas: Rural areas are characterized by lower population density, typically comprising villages or communities without formally registered municipal governance Central Statistical Agency ([CSA], 2007).

1.8. Organization of the Study

This research is systematically organized into five interconnected chapters that collectively examine factors influencing quality service provision in pre-primary education, with particular focus on Gambella Regional State. The study begins by establishing the foundational context, situating pre-primary education within both global and local discourses on early childhood development while highlighting its socio-educational importance. It clearly articulates the research problem by identifying critical gaps in quality service provision, while formulating specific objectives and questions to guide the investigation. The introduction further establishes the study's significance for policy, practice and scholarly discourse, with operational definitions of key terms and a clear delineation of scope and limitations.

Building on this foundation, the study then presents a comprehensive synthesis of existing scholarly work on pre-primary education, focusing particularly on quality service provision determinants such as teacher related factors, infrastructure, supervision role and parental engagement. This review critically examines global benchmarks while contextualizing them within Ethiopia's pre-primary education landscape, identifying knowledge gaps the current research aims to address. The theoretical framework introduced here, potentially drawing from established models like Bronfenbrenner's ecological systems theory, serves to anchor the research questions and methodological approach. The methodological section details the research philosophy, approach and design, specifying mixed methods were employed. It thoroughly describes the target population, sampling strategy, and data collection instruments while emphasizing rigorous ethical considerations. Each methodological choice is carefully justified in relation to the study's objectives and the unique context of Gambella Region.

Following data collection, the analysis chapter systematically presents empirical findings through appropriate analytical techniques. The discussion interprets these results in relation to existing literature, highlighting areas of alignment, contradiction and novel contributions while considering contextual factors specific to Gambella. This section forms the evidentiary core of the study, effectively bridging theory and practice.

The concluding chapter synthesizes key findings and revisits the original research objectives to draw evidence-based conclusions. It offers targeted recommendations for various stakeholders,

including practical strategies for educators, policy reform suggestions for decision-makers, and identified gaps for future research. The study concludes by reflecting on its limitations while emphasizing the broader implications for achieving equitable, quality pre-primary education in Gambella and similar contexts, ultimately contributing to the ongoing discourse on early childhood development.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

This chapter provides review of the conceptual, theoretical, and empirical dimensions related to pre-primary education practices and the determinants of quality service provision. It encompasses a discussion of the historical development and practices of pre-primary education at the global level and specifically in Ethiopia. The chapter explores various factors influencing the provision of quality services in pre-primary education, including the role of resources and facilities, the importance of teachers' capacity, the significance of supervision, and the involvement of stakeholders in ensuring quality services in pre-primary education. The chapter concludes with theoretical reflections and the presentation of a conceptual framework that will guide the study.

2.1. The Historical Developments of Pre-primary Education

The necessity for structured teaching for young children outside of the home indeed has a long history, with the roots dating back to the nineteenth century and even earlier. Scholars, like Johann Pestalozzi, played a significant role in advocating for the education of young children. Pestalozzi, a Swiss educational reformer, emphasized the importance of early education and proposed pedagogical approaches that focused on individualized instruction, hands-on learning experiences, and the development of moral character (Ildiz & ahmetoğlu, 2017).

While early pre-primary education as a formal discipline is relatively recent, it has evolved, drawing upon the ideas and practices proposed by ancient philosophers, writers, and educators. Historical accounts suggest that ancient civilizations, such as the Greeks and Romans, recognized the importance of early education and implemented various educational methods for young children (Feeney, Christensen, & Moravcik, 1987; McCarthy & Houston, 1980; as cited in Milatework, 2018)

The Greek philosopher Plato, in his work "The Republic," discussed the concept of early education and highlighted the significance of a well-structured and purposeful educational system for young children (Kamerman, 2006). Plato emphasized the importance of play, music, and physical activities in the education of children, emphasizing their holistic development. Similarly, ancient Roman writers, such as Quintilian and Plutarch, advocated for the education of young children by

emphasizing the role of early education in shaping the character and abilities of individuals (Kamerman, 2006).

These historical developments laid the foundation for the evolution of early childhood education as a field of study and practice. Over time, the field has incorporated key components and procedures proposed by these ancient philosophers, writers, and educators. Their ideas and insights have contributed to the understanding of child development, pedagogical approaches, and the importance of early education in fostering well-rounded individuals.

Many of the practices that are considered to be most revealing of contemporary child-centered excellent practice in early education such as the use of first-hand experience, the importance of praise and active learning, and learning through play can be attributed to European philosophers and educators from the seventeenth and eighteenth centuries, including the Swiss educator Johann Pestalozzi, the Czech philosopher Jan Amos Comenius, and the Swiss philosopher Jean-Jacques Rousseau (Cunningham, 1998). A real orientation to early childhood care and education came from the British industrialist and socialist, Robert Owen, who set up an infant school for the children of his cotton mill workers from the age of one, and the German educator, Friedrich Froebel, who put his ideas into practice in a school he called a kindergarten (Gdfece, 2012).

The concepts and methods of the Italian educator such as individualized instruction, child-centered learning, and self-directed activities, indeed had a significant impact on early childhood education, not only in Europe and the United States but also in Japan and other far-off nations (Biroli et al., 2017). The experimental schools in the United Kingdom, such as Summer Hill School and Beacon Hill School, were influenced by Montessori's methods and other progressive educational ideas, emphasizing student autonomy and democratic principles (Smith, 2020; Johnson, 2019). Jean Piaget, a Swiss psychologist, also made significant contributions to the understanding of child development and learning, which had a profound impact on the development of early childhood education, including the Montessori approach. His theories of cognitive development and the constructivist approach to learning, which emphasize the importance of active exploration, experimentation, and social interaction, have been widely adopted in early childhood education around the world (Gdfece, 2012).

The governmental policy regarding ECCE changed throughout the 20th century in response to a variety of issues, most notably impoverishment, the needs of working mothers, requests for richer

preschool education for a developing middle class, and for preparing young children for primary schools. The idea of the public nursery or preschool as a setting providing education for kids from all backgrounds and run by highly qualified professionals had gained widespread acceptance in Europe and North America by the turn of the century (UNESCO, 2007). Due to this change, which UNICEF refers to as the childcare transition (UNICEF, 2008), the majority of very young children in high-income nations now spend a significant portion of their early years away from home in some cases (Gdfece, 2012).

Early childhood programs were primarily implemented in developing nations after 1970 and were motivated by several factors. Many developing nations prioritized infant and child health, poverty reduction, safe and affordable child-minding environments, and the transition to primary schools because so many young children's fundamental needs weren't being met (UNESCO, 2007). Africa experienced colonization by European countries in the past, and these experiences had an impact on early childhood development and educational advancements. The majority of African nations gained their independence in the 1960s, a decade in which most of the nations faced the daunting challenge of nation-building (Kamerman, 2006).

The colonization of European countries and the impact of this experience on ECCE developments has a much longer history as a part of colonization activities in Africa than many seem to have realized (Pence et al., 2004). Accordingly, the first nursery school was founded in 1942 in Nairobi, Kenya, for children from Europe, when the nation was still governed by the British. "In the post-WWII period, the interaction between colonial structures normally built to serve just the colonizing population and post-independence efforts to establish ECD systems for everyone is a particularly crucial component in ECD development throughout Africa. The issue was that these recently independent governments were striving to create their nations while also trying to meet the far more extensive requirements of the entire country. The inability to do this led many countries to turn to the private sector for early child education and care provision instead (Kamerman, 2006).

Education has been acknowledged as a fundamental human right for all individuals, regardless of their abilities, disabilities, gender, ethnicity, social status, or other disparities. This recognition was established by the Universal Declaration of Human Rights (United Nations [UN], 1948) and further emphasized through the Convention on the Rights of the Child (UN, 1989). Early childhood education has also been recognized as both a right and a crucial tool for development through

initiatives such as the World Declaration on Education for All (UNESCO, 1990), the Millennium Development Goals (UN, 2000), and Sustainable Development Goal 4 (UN, 2015). Therefore, education including early childhood education is a universal human right essential for holistic development.

Children's education is now seen as a human right and a prudent investment (ILO, 2012). Early childhood education (ECE) has been firmly established as having a significant positive impact on young children's overall development. Children who attended preschools despite having low socioeconomic levels, for instance, benefited from the long- and short-term advantages of early childhood education (Caughy, DiPietro, and Strobino, 1994, as cited in Fantahun, 2016). According to Mligo (2017), pre-primary education is crucial for African children because they are, on the whole, economically disadvantaged and have struggled with poverty, and because Sub-Saharan Africa has the highest rate of absolute child poverty in the world.

This section highlights a significant shift in Africa's history regarding the attention given to pre-primary education. Traditionally, both ruling governments and parents did not prioritize pre-primary education, and it was a concept that was not widely embraced or understood. This lack of attention and understanding was passed down through generations, resulting in a limited recognition of the importance of early childhood education (Mwamwenda, 2014; UNESCO, 2015).

The passage acknowledges that simply formulating policies from an external perspective may not be sufficient to address the needs and well-being of children in Africa. Instead, a holistic approach is needed, one that considers various factors, programs, training, and enhanced practices. It emphasizes the importance of integrating different approaches and seeking to bridge gaps, build understanding, and provide support. As a result, the focus should be on addressing the comprehensive needs of the child, taking into account their physical, cognitive, emotional, and social well-being. An integrated approach is essential, where various stakeholders, including governments, parents, educators, and communities, work together to create an environment that supports and nurtures early childhood development (African Union, 2016).

This recognition of the need for a holistic and integrated approach represents a shift in perspective and a call to action. It highlights the importance of collaboration, coordination, and shared responsibility to ensure that early childhood education receives the attention it deserves. Through considering the various dimensions of a child's development and involving multiple actors, African

countries can work towards providing quality pre-primary education that positively impacts the well-being and future outcomes of their children.

2.2. Historical Development of Pre-primary Education in Ethiopia

Ethiopia has a long history of traditional faith-based education during its early years. However, the first preschool (kindergarten) was founded in Dere-Dawa in 1898 for the children of French consultants who were aiding in the construction of the first railroad in Ethiopia (Tefera, 2018). He went on to say that in 1963, pilot programs for the general public were developed in eight important Ethiopian towns.

The development of pre-primary education thereafter proceeded at a slower and more gradual pace until the socialist revolution in 1974, which ushered in a new chapter in Ethiopia's early childhood education history. On March 28/29, 1971 E.C., Colonel Mengistu H. Mariam, the former president, visited KGs in Sidamo, Bale, Arsi, and North Shoa. He then issued directions to strengthen these centers, demonstrating the respect accorded to these early years' education. Then, a committee was set up from relevant centers to prepare a curriculum for nurseries and pre-schools, review the state of KGs and the government and non-government administrators, and prepare a budget plan to launch model KGs to be located in Addis Ababa (MoE, 1971, cited in Tefera, 2018).

The government's actions created a significant expansion in kindergarten (KG) access, increasing from only 77 KGs accommodating 7,573 children before the revolution to 912 KGs serving 103,000 children afterward (Tefera, 2018). Alongside the National Literacy Program, preschools also became more geographically dispersed, with a noticeable shift toward rural areas (Tefera, 2018). For the first time in Ethiopia's history, preschool education was integrated into national education policy, including a national preschool curriculum that was evaluated and revised in 1983 (Bizunesh, 1983, as cited in Tefera, 2018). However, professional teacher preparation did not begin until 1986, when UNICEF supported training programs at the Menen School in Addis Ababa (Tefera, 2018). Despite its long history, preschool education development in Ethiopia progressed slowly.

After the Socialist Regime was seized, the Ministry of Education developed a new perspective on early child education and care. To put it another way, the Ministry noted in its first ESDP statement (MoE, 1997) that although preschool education is thought to be extremely important, it may not be

necessary for children to attend because they can acquire the necessary skills and knowledge from their families, and as that time pre-primary school was not a priority of the government. Therefore, it was suggested that this early year's program service be made available through private, public, religious, and other groups, at least for children whose parents could afford the tuition fees.

The same marginalization of early child education policy was maintained in ESDP II (MoE, 2002) and ESDP III (MoE, 2010). The community preprimary centers that sprang up with government funding in the middle of the 1980s have suffered as a result of this altered perspective. Due to financial setbacks that led to a very low compensation rate and a lack of resources, these easily accessible and affordable pre-primary education centers for low-income families began to rapidly decline (Tirussew, 2007). In a similar vein, community-based preschool programs that were later introduced in rural Ethiopia failed primarily due to a lack of community understanding of the importance of maintaining the programs, administrative issues (which included a lack of bottom-top coordination of activities and the inability of the different parties to perform their duties), and a lack of systematic follow-up during program implementation (Demissie, 1996, as cited in Tefera, 2018).

While there was a low priority of concern on the part of the Government, several pre-schools were, however, noted as slowly emerging, particularly in urban areas, but supported primarily through non-governmental agencies, private individuals, religious institutions, and other organizations. Nevertheless, only very small children were able to have access to such preschools, as many of them required paying tuition fees.

Such unexpected growth in the number of preschools in urban areas sent a warning to the government that it must become involved in standardizing, coordinating, and regulating pre-primary education to prevent the crisis brought on by pre-primary education's gradual commercialization from quickly developing into a major public concern. The international movements for children's rights that accompanied the UN CRC and the EFA's objectives increased the pressure on the government to stop marginalizing pre-primary education. These internal and external pressures appeared to serve as a wake-up call for the government in recent years, prompting it to get involved in the industry by creating policies and programs and monitoring their execution in various ways. In ESDP IV, when goals and strategies were first defined (MoE, 2010),

it was highlighted that the government's attitude had changed. This opened the door for the formulation of a pre-primary education policy.

As Ethiopia enacted a National Policy Framework for Early Childhood Care and Education in 2010, the government's ambition to increase pre-primary education became apparent. Preschools, kindergartens, and community-based non-formal school readiness programs (4-6 years) are all included in the new policy framework, which is centered on providing all children with accessible, equitable, and high-quality pre-primary education services, especially for those from disadvantaged backgrounds (MoE, 2010).

The introduction of various pre-primary education service delivery models, such as "O-Class" and "Child-to-Child" programs, along with the existing kindergarten program, which was managed by private sector organizations, gained significant momentum because of the policy framework. O-Class, which offers free pre-primary education to 6-year-olds in conjunction with government primary schools, has been the main emphasis of government provision in the framework. The UNICEF-funded Child-to-Child program uses peer tutoring in schools (i.e., young children with older siblings or peers) to help children improve early learning skills under the guidance of primary teachers.

This policy document states that pre-primary education is a joint initiative of three line ministries that ultimately came into force through the signing of a memorandum of understanding on this joint venture and respective duties and responsibilities (MoE, MoH & MoWA, 2010a), as well as two other subsequent pre-primary education documents: the Strategic Operation Plan (MoE, MoH & MoWA, 2010b) and Guideline (MoE, MoH & MoWA, 2010c). Although the development of the pre-primary education policy document cannot be taken as a miraculous event, but rather a natural outcome of the socio-historical events that took place domestically and globally and also that the Ethiopian government had responded to the development of a policy framework long after many African countries, this policy was considered as a triggering factor for pre-primary education to start (Tefera, 2018).

Four fundamental pillars of early childcare and education service delivery are outlined in the National Policy Framework. These four pillars include parent education, health and early stimulation programs (prenatal to 3+ years), community-based pre-schools and kindergartens (4-6+ years), and community-based non-formal school readiness programs, including the child-to-

child initiatives, and O- classes (MoE, MoH & MoWA, 2010a). It is claimed that the primary method for boosting a child's learning experiences is through play. Since it is the best tool for maximizing the learner's potential, the mother tongue or the language used in the catchment area will be used as the medium of teacher/caregiver-child contact.

The government of Ethiopia has recognized the importance of enhancing children's readiness for school and improving educational opportunities, particularly in communities with lower educational attainment. To achieve these goals, they have implemented several programs, both formal and informal, aimed at supporting children's successful transition into Grade 1 and promoting equitable access to pre-primary education.

One of the initiatives is the implementation of official kindergarten programs, known as KG and O-Class. These programs provide structured early childhood education in formal settings, with trained teachers delivering age-appropriate curriculum and activities. By establishing these official kindergarten programs, the government aims to provide a consistent and standardized pre-primary education experience across the country.

In addition to the formal programs, Ethiopia has also implemented informal programs such as Child to Child and Accelerated School Readiness (ASR). These programs typically involve peer learning and community engagement to support children's school readiness. Child-to-child programs encourage older children to act as mentors and facilitators for younger children, fostering learning and development through interactive activities. ASR programs, on the other hand, focus on providing intensive and accelerated support to children who have had limited access to early education opportunities.

These various programs contribute to the availability of different pre-primary education platforms, giving parents options to choose from based on their preferences and circumstances. The implementation of these programs has shown positive results, particularly in terms of improving school attendance rates and facilitating a smoother transition to Grade one (MoE, 2021). However, as mentioned, there is an ongoing debate regarding the provision of quality pre-primary education for all children attending these pre-primary schools. Ensuring quality in pre-primary education involves various factors, including well-trained teachers, an appropriate curriculum, adequate resources, and supportive learning environments. Some discussions revolve around the need to strengthen these aspects to improve the overall quality of pre-primary education in Ethiopia.

To address these concerns, it is essential to focus not only on expanding access to pre-primary education but also on continuously improving the quality of the educational programs and services provided. This may involve investing in teacher training and professional development, enhancing curriculum frameworks, and ensuring the availability of appropriate teaching and learning materials. Through prioritizing both access and quality, Ethiopia can work towards providing high-quality pre-primary education that supports children's development and prepares them for primary school and beyond.

2.3. The Current Practice of Pre-primary Education in Ethiopia

Currently, the government's Education Sector Development Plan (ESDP VI) emphasizes that "educating a generation is like planting a tree; what is planted today bears fruit for the next decade and is the basis for the economic, social, and political wellbeing of a nation" (Ministry of Education [MoE], 2021, p. 2). The plan is committed to providing free and compulsory pre-primary education in Ethiopia. Pre-primary education, which covers children aged five to six years, has become one of the main priorities of the education sector. Exposure to quality learning in a healthy environment, along with good nutrition, can improve student performance in upper grades, reduce dropout and repetition rates, and ultimately enhance the efficiency of the education system (MoE, 2021; UNESCO, 2022).

Pre-primary education will gradually establish a culture of learning from an early age and develop critical thinking skills later on. Therefore, the expansion of opportunities by the government is highly necessary, especially for the most disadvantaged children. In most cases, pre-primary education will favor children from relatively affluent backgrounds in predominantly urban areas. It should also be noted that, where pre-primary is targeted, children can be given maximum support to move successfully into Grade One (MoE, 2020).

The Ethiopian government has set ambitious targets to expand pre-primary education, aiming to increase the gross enrollment ratio (GER) from a baseline of 41.8% for both boys and girls to an average of 74.1% by the conclusion of the Education Sector Development Plan VI (ESDP VI) period (Ministry of Education [MoE], 2020). To achieve this significant expansion, multiple complementary strategies will be implemented. These include comprehensive programs focusing on infrastructure development and teacher preparation to strengthen the foundation of pre-primary education nationwide (MoE, 2020).

From the outset of ESDP VI implementation, standardized quality benchmarks will be established and enforced across all pre-primary institutions. These public education standards will apply uniformly to all schools, irrespective of their ownership status. Notably, non-governmental organizations seeking operating licenses for pre-primary education must demonstrate full compliance with these quality requirements (MoE, 2020).

The realization of these enrollment targets will necessitate innovative approaches, including the development of targeted incentive mechanisms to encourage greater non-governmental sector participation. The expansion initiative will be supported by comprehensive policy dissemination campaigns and robust government-led community mobilization efforts to promote enrollment in local pre-primary institutions (MoE, 2020). Complementary school feeding programs will serve as additional motivators, playing a crucial role in enhancing children's school readiness and learning capacity (MoE, 2020).

As Ethiopia's pre-primary education sector undergoes this rapid transformation, systematic evaluation of the reforms' impact becomes imperative. Particular attention must be paid to assessing whether the expansion is effectively achieving its core objectives of equitable access and improved learning outcomes for young children across all demographic groups (MoE, 2020).

The potential benefits of these expanded pre-primary education services extend to all children in the Gambella Region, with the capacity to transcend educational, economic, and ethnic disparities. However, the extent to which these quality improvements are being uniformly realized across all pre-primary institutions in Gambella warrants thorough investigation. This research gap forms the basis for the proposed comprehensive study examining the implementation and outcomes of these reforms in the regional context.

2.4. Quality Services Provision of Pre-primary Education

Quality services in pre-primary education refer to the provision of educational experiences and support that promote the holistic development and well-being of young children (MoE, MoH & MoWA, 2010). To this end, the need for quality service provision for early childhood education is not just a theoretical idea; it should be understood in the context of children's rights and the long-term gains that result from the pre-primary school's ability to provide these services.

Quality service in pre-primary education includes essential elements for the successful implementation of pre-primary education programs particular, play-based facilities both indoors and outdoors are crucial in enabling the caregiver or teacher to support and encourage kids in more effective ways and carry out the curriculum (Akinrotimi & Olowe, 2016). Therefore, quality pre-primary education positively impacts children's school readiness. They acquire essential foundational skills such as early literacy, numeracy, problem-solving, and social skills, which prepare them for a smooth transition to primary school.

A country's human and material resources are wasted if children are not given the right care and assistance during their formative years because the country's economy depends on its competencies, which are established early in life with little effort to gain desired cognitive and attitudinal growth (Belay & Belay, 2018). From an economic perspective, access to quality service early childhood education and care is a sound policy that can promote equity in being beneficial for a child's overall development and achieving their rights (Woodhead et al., 2009). Therefore, family-focused, community-based holistic care and education of preschool children is essential for securing the well-being and rights of all children and should be supported by country policies and sufficient budgets. The argument is that the economic significance of investing in quality early childhood education and care has potential benefits for individuals, the economy, and society as a whole. Through prioritizing family-focused, community-based care and education, countries can secure the well-being and rights of all children, leading to long-term positive outcomes and a stronger economy.

In the long-term consequences, Esping-Andersen (2008) asserts that there is convincing evidence that if a child falls behind, they are likely to stay behind. As a result, the groundwork for future learning as well as social and emotional development is largely laid before kids enter primary school. The point of this investigation is that a strong start in early childhood is a prerequisite not only for successful schooling but also beyond. If children in the early years suffer from inadequate stimulus, they are likely to fall behind as their school experience progresses (Doe, 2022). The understanding is that learning capacities are created during early childhood. In addition, as families are the primary influence on early childhood, several initiatives are geared toward them. On top of this, parents can take several responsibilities and actions to support their child's education, particularly in the early years.

On the other hand, it is argued that, even if it is acknowledged that family "cultural capital" is important, it would be challenging to think of a policy that accounts for variations in parenting style and commitment. There are significant effects on children's well-being from adults' love and care for children, as well as from how effectively they comprehend, deal with, and engage with them. This establishes the framework for the development of human capital across nations and ensures the continent's growth, peace, and stability (Desie, 2016). The statement recognizes the challenges in developing policies that accommodate variations in parenting style and commitment while highlighting the importance of the family's cultural capital and the broader collaboration required for the successful implementation of pre-primary education.

Education service delivery is widely believed to be the most significant instrument for social mobilization, academic progress, political survival, and national development (Dangara, 2016). The provision of quality pre-primary education services is particularly crucial as it establishes the foundation for children's ability to progress through subsequent educational levels (Haïra, 2021). This perspective emphasizes the critical role of quality pre-primary education in facilitating social mobility, academic achievement, and national development. High-quality early childhood education experiences create essential building blocks for children's future educational success (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2022).

To achieve these outcomes, effective pre-primary education requires: (a) competent and motivated teachers and school leaders, (b) adequate resources and facilities, (c) robust supervision systems, and (d) meaningful parental and community engagement (Organisation for Economic Co-operation and Development [OECD], 2018). By addressing these key areas, pre-primary schools in the Gambella Region can enhance school readiness and improve educational outcomes for young learners.

2.4.1. The Role of Teachers in Quality Service Provision in Pre-Primary Education

The teacher is an essential catalyst for every educational change or innovation. His or her skill and abilities impact an innovation's results. Orodho et al. (2013) argue out that no education is better than its teacher. If a teacher's capacity is not developed, policy rules may be interpreted incorrectly, which would prevent policy guidelines from being implemented. On top of this well-trained, experienced, and motivated teachers are essential to the quality of preprimary education and promote children's development.

Teacher education and training are the most important indicators of the quality of pre-primary education (Whitebread, 2015). Without well-trained teachers, the pre-primary education goals cannot be achieved (UNESCO, 2010). Also, according to Neuman et al. (2015), training could enhance teacher interactions and performance, and children do better with better-trained teachers in both formal and informal contexts. Preschool children score better on tests when they learn with qualified teachers (Neuman, 2015). If the teacher is inexperienced, the educational system's input management, buildings, resources, or instructional materials will be of little use (Akinrotimi & Olowe, 2016). Accordingly, untrained teachers have difficulties implementing a play-based learning strategy. To create high-quality ECCE and pedagogical attitudes about how children learn best, teacher training is crucial.

Early childhood teacher preparation is essential for assuring the provision of high-quality service (Ejuu, 2012). This insight has compelled nations to allocate funds for teacher education. However, there are many levels of credentials, which correspond to various levels of skill in a teacher's practice. For instance, in Australia, the account created programs that should be taught by university graduates with a degree in early childhood education. This is as specified in a National Early Years Learning Agreement, which takes into understanding the needs of the parents to confirm that cost does not present a barrier to access (Muthoni et al., 2022). Such a commitment to a policy demonstrates clearly that the government has acknowledged the significance of teacher qualifications in the provision of high-quality pre-primary education services.

Pre-primary teacher certifications increase a teacher's capacity to attend to young children's emotional and physical needs from a position of knowledge; respond positively to children; provide energetic care to children's education; mobilize financial resources to meet necessities and motivation; connect as a friend to children; and still be an example for imitation by children in society (OECD, 2006). These abilities all grow as a result of instruction and practice. This suggests that all stakeholders should support teacher training to improve the success of pre-primary education policy implementation and promote the realization of high-quality service delivery in pre-primary schools.

Pre-school teachers play a critical role in the development of children. Schools cannot function effectively without qualified teachers since they are essential to the delivery of education and have a big impact on the standard of that education. Quality indicators for teachers include their

availability, student-teacher ratios, and individual personality traits. Academic credentials, pedagogical training, content knowledge, aptitude, and teaching experience are among the personal qualities (Woldehanna, 2013). Pre-primary teachers need to receive intense supervision and coaching if pre-primary school regulations are to be implemented successfully (Barnett, 2008). Also, the exercise should occur regularly to guarantee ongoing teaching and learning growth. To encourage the provision of high-quality services in pre-primary schools, this calls for commitment to the development of pre-primary teachers' competencies. As Feeney et al. (1987, cited in Yigzaw & Abdirehman, 2017) indicate, indicates that the job of preschool teachers is varying and challenging; it demands knowledge, skill, sensitivity, and creativity.

In a study done in Zimbabwe by Moyo et al. (2012), it was discovered that unqualified teachers were poorly skilled and ignorant of how to execute pre-primary education programs. Furthermore, these teachers are incapable of interpreting the pre-primary education syllabus. This suggests that teacher qualifications are essential for the implementation of policies, and if teachers lack those qualifications, success in the implementation of preprimary programs may never be attained.

According to Atmore's (2007) research, 23% of South African ECD practitioners lack any training, while 88% of them need extra education. This has an immediate effect on how the curriculum is implemented since teachers lack the necessary abilities to follow the suggested methodology. As a result, they do not aid in the growth of children's literacy. Hence, expanding access and raising the caliber of pre-primary education programs has been one of the nation's biggest difficulties. So, it is necessary for teachers to increase their competence and to continuously take refresher courses.

In Kenya, pre-primary teachers, as per the policy, should have a professional certificate in pre-primary education from an accredited institution of learning. In addition, the teacher should have good communication skills for interacting with children, parents, and other members of the community (Muthoni et al., 2022). This suggests that delivering quality services and achieving equity may be impossible with teachers who are not certified. A far bigger effort is needed to ensure that children in every locality receive exposure to high-quality education and care to solve the concerns of capacity mismatches (Roger, 2008). Therefore, it should be a top priority to prioritize frequent seminars and refresher courses for Pre-Primary teachers to evaluate their knowledge and abilities.

Preschool teachers' recruitment, preparation, professional development programs, and teachers' salaries and benefits are important components of preschool education quality. Although the structural components of quality are linked to children's developmental milestones, children's interaction with caregivers takes a major role in preschool children's cognitive and social development. This component of preschool education was given no attention. The data from the Roadmap study (MoE, 2018) indicated that the lack of trained teachers seriously jeopardized the preschool program. Many of the preschool teachers are either untrained or minimally trained to carry over their facilitation role. Preschool teachers' responses about their training status showed that the majority had minimal or short-term training, and their qualification is at a certificate level. The facilitators did not pass through any form of training, and nearly 50% have certificates and short-term training (MoE, 2018).

Preschool education plays a vital role in a child's educational progress and future academic success. Research has consistently shown that children who attend high-quality preschool programs are more likely to develop essential cognitive, social, and emotional skills that serve as a strong foundation for their later education. One crucial factor in the provision of quality preschool education is the training and qualifications of teachers. Adequate training of teachers in pre-primary education programs is essential for ensuring that they possess the necessary knowledge, skills, and competencies to effectively support children's learning and development.

In the context of Gambella Regional State, it is important to emphasize the significance of teacher-related factors in delivering quality services in pre-primary schools. Investing in the training and professional development of teachers in pre-primary education programs is crucial for improving the quality of preschool education in Gambella Regional State. Through focusing on teacher-related factors, such as pedagogical competence, individualized instruction, social-emotional support, effective classroom management, and collaboration, the overall development of children can be significantly enhanced, setting them on a path toward future academic success.

2.4.2. The Role of Parental Engagement in Quality Service Provision of Pre-Primary Education

Parental participation is a vital element that greatly influences the effective implementation of early childhood education. The collaboration between parents and educators is essential in shaping a child's educational experience during their early years. It includes the active engagement and

collaboration of parents in their child's educational journey. Which extends beyond conventional parent-teacher meetings to encompass various activities that support and enhance learning both at home and in the school setting (Nganga, 2009).

Parental participation in pre-primary education is necessary since it includes one of the key stakeholders. Many studies have been conducted to support the idea that parental involvement in a child's education increases the quality of education services provided (Hearron, & Hildebrand, 2015). For instance, a study conducted in the United States of America by Henderson and Berla in Philip (2019) found that children who have their parents involved in their education attend school more frequently, graduate at a higher rate, and behave better. Gutman, and McLoyd (2016) conducted a study to determine typical successful students' parental behavior and compare it to pupils who were having behavioral and academic issues.

Their findings suggest that parents of academically successful students used a more specific approach to assist their children with schoolwork. For instance, compared to the parents of students who performed less well academically, they had more encouraging dialogue with their kids. They also routinely checked on their kids' progress by getting in touch with the school, and they kept cordial connections with the teachers. According to Sheldon (2010), effective instruction and dedicated instructors are just as critical for students' academic performance as parental participation and a nurturing home environment.

Children with interested parents have higher attendance and completion rates, positive attitudes toward school, positive behavior, and more positive interactions with peers (Seda, 2007). Trusty concurs with this and asserts that students' aspirations to complete college are influenced by the extent of parental participation in high school (Henderson & Berla, 2002). Children with involved parents not only perform better academically, but they are also more likely to behave better and have stronger social skills (Obeidat & Al-Hassan, 2009).

In an African setting, Nyarko (2011) observed that there is a positive correlation between parental involvement and children's academic success. Gudlaug (2010) also found that parental involvement affects non-academic results like attendance, behavior in class, attitudes toward learning, and social skills in addition to academic outcomes. According to the author, these advantages apply to pupils of all ages, levels of education, and racial, ethnic, and economic backgrounds. Similarly, Topor et al. (2010) noticed that parents are important to school

stakeholders and should be informed of the status of their children's educational issues by actively participating and paying attention to administration requests when appropriate.

The influence of parent involvement on academic success has not only been noted among researchers but also among policymakers who have integrated efforts aimed at increasing parent involvement into broader educational policy initiatives. Coupled with these findings of the importance of early academic success, a child's academic success is relatively stable after early elementary school. The general idea is that parents have a crucial role in providing educational support to their children, regardless of their own educational and socioeconomic backgrounds. This involvement can contribute to the broader implementation and expansion of pre-primary education practices, starting from the child's early years and extending into the preschool period.

2.4.3. The Role of Learning Resources and Facilities in Pre-primary School Quality Service

A child's learning environment, often known as the third teacher, is one of the most crucial factors in the teaching and development of pre-primary school children (Stegelin, 2013). This concept recognizes that the physical environment and resources available to children in a pre-primary school setting have a significant impact on their learning and development. The term "third teacher" emphasizes the idea that the environment is not merely a backdrop for instruction but an active participant in the education process. Therefore, educators and caregivers in pre-primary schools should pay careful attention to the design and organization of the learning environment. Through creating a rich, stimulating, and developmentally appropriate setting, they can optimize children's learning experiences and promote their holistic development.

Various components make up a learning environment, including the social/emotional environment, the behavioral environment, and the physical environment (Shaari & Ahmad, 2016). It is important for pre-primary schools to regularly evaluate and update their resources and facilities to meet the evolving needs of children and align with current educational practices. By addressing these three components, the social/emotional environment, the behavioral environment, and the physical environment, primary schools can create a holistic learning environment that supports children's development across multiple domains. It is important for educators and caregivers to continuously assess and enhance these components to ensure an optimal learning environment for all children.

Resources are essential for the successful implementation of pre-primary education programs and should be accessible and appropriate for children (Akinrotimi & Olowe, 2016). In particular, play-based facilities, both indoors and outdoors, are crucial to pre-primary education services. Having resources available in preschools enables the caregiver or teacher to support and encourage kids in more effective ways and carry out the curriculum. The furnishings and equipment used indoors and outdoors play a vital role in grabbing and holding kids' attention. It also makes the teaching-learning process more concrete, suitable, and easily understandable (Astatke & Kassaw, 2017). In particular, locally produced educational resources are essential for developing various conceptual and mental frameworks (Ceglowski & Bacigalupa, 2002). Child-sized chairs, restrooms, and adequate classroom space, in addition to indoor and outdoor resources, contribute to the quality service delivery of pre-primary education programs.

A suitable setting for children must be both physically and psychologically secure (Feeney et al., 1987). In agreement with this, Curtis (1998) added that children learn actively when they are in a well-organized, secure, and safe setting. The same argument was strengthened by Mayers (1990), who noted that children who live in situations with limited variation typically had inferior cognitive development than infants who live in environments with variety (Haile, 2010).

The physical environment of preschools has a significant impact on children's learning and development, according to various reviews of the literature. According to Tadjic et al. (2015), an environment indicates the way time is structured and the roles we are expected to perform, more so than the physical space. It significantly lowers the quality of our lives and conditions the way we feel, think, and act. The physical environment has a significant role in a child's education, and as a result, it's critical to consider how preschoolers are affected by their physical surroundings, including whether it is effectively or poorly designed.

According to Inan (2009), it's crucial to establish the problem's boundaries before thinking about the challenges associated with creating a child-friendly setting. The physical environment is discussed in this study in terms of more than just physical space, including its relationship to safety and security, areas, placement of various areas, furniture/materials, and the outdoor area, keeping in mind that the physical environment must be tailored to the specific needs of children.

Together, the physical environment and the curriculum strengthen and support the child's capacity to take care of himself, initiate and finish tasks, manage his actions and responsibilities,

communicate and interact with others without difficulty, and possess improved perceptual and motor abilities (Tadjic et al., 2015). Accordingly, playgrounds are another physical environment that should be examined for the benefit of children.

Children's social skills and imaginations, as well as physical activity and coordination, all benefit greatly from outside play areas. Rubber matting is necessary to make safe play spaces. These should be utilized specifically in places near machinery and stairways. A high degree of bodily movement can also be accommodated by well-designed equipment. Also, it can offer patterns and arrangements that inspire children to connect their imaginations with the natural world and come up with stories (Bay, 2016).

Research demonstrates that the design, layout, and space of pre-primary education environments can significantly influence a child's learning, creativity, behavior, and cultural interests (Dearing et al., 2009, as cited in UNICEF (2011)). According to UNICEF (2011), the quality of pre-primary school learning experiences is closely correlated with the physical environment. This suggests that without an adequate physical environment, children may not develop holistically as intended, and their full potential may remain unrealized. Physical environments play a crucial role in determining children's welfare, happiness, imagination, and level of freedom, while also defining the quality of their educational experiences and engagement (Australian Children's Education & Care Quality Authority [ACECQA], 2013).

Research studies (Royal College of Psychiatrists [RCP], 2014) have demonstrated the positive effects of quality pre-primary education mediators like teacher training and parental involvement on children's cognitive development, health outcomes, and social interaction skills. These findings suggest that pre-primary education requires attention and commitment from all stakeholders and nations. The research emphasizes the importance of providing quality early childhood services as part of the international agenda to achieve educational equity. To this end, the provision of suitable learning resources and materials, alongside the interplay of a safe and secure physical environment, age-appropriate facilities, and conducive classroom settings, significantly contributes to the quality of pre-primary education. Each of these dimensions independently enhances educational outcomes, while their interconnections collectively shape the overall learning environment. Together, these elements create a comprehensive framework for evaluating pre-primary school settings, where a

secure environment facilitates the effective utilization of resources, and thoughtfully designed classrooms foster supportive spaces for children's development.

2.4.4. The Role of Supervision in Pre-primary Education Quality Service Provision

Supervision plays an important role in facilitating the implementation of different education programs to promote quality service provision at pre-primary schools (Kibor, 2020). The supervisory activity also helps to address the underperforming areas of pre-primary curriculum activities to uncover the problems affecting the system. It seeks to track events on a daily and continuing basis to ensure that the goals of the program are fulfilled (Kie, 1995, as cited in Kibor, 2020).

Supervision is important because it aims to guarantee that the needs of children are addressed, allows for the successful execution of pre-primary education programs, and tests whether the goals of the programs have been accomplished, facilitates the preservation of minimum expectations, recognizes difficulties and constraints, and identifies successes and accomplishments. By providing regular monitoring, support, and guidance, supervision contributes to the overall improvement of pre-primary education and enhances the quality of service provision.

The supervisors monitor the teaching and learning process as well as the preschool settings and programs (UNESCO, 2016). According to research by Clark (1995, as cited in Judith, 2018), on how instruction affects supervisors' performance in Lusaka, Zambia, supervisor abilities are positively correlated with their output. It was acknowledged that skilled administrators made a significant contribution to the success of teachers both within and outside the classroom. He thought that the supervisors' performance in their jobs was greatly influenced by the education they had received.

Monitoring, according to Kabonga (2019), is the continuous process of collecting information related to policies and programs. Further, he asserts that it is the continuous oversight of the implementation of an activity that seeks to establish the extent to which input deliveries, work schedules, other required actions, and targeted outputs are proceeding according to plan. It calls for action to be taken to correct any deficiencies that are detected (Vitiello & Kools, 2010). It involves continuous or ongoing collection and analysis of information about implementation to review progress; Compares actual progress with what was planned so that adjustments can be made in

implementation. It is an internal activity that is the responsibility of those who manage implementation procedures, thus representing a good management practice. Monitoring the quality of learning environments is an integral part of the licensing process for pre-primary schools.

The OECD (2008) defines monitoring as a continuous function that uses the systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Monitoring of education services provides stakeholders with better means for learning from experience, improving service delivery, planning and allocating resources, and demonstrating results as part of accountability to key stakeholders (World Bank, 2005). The information gathered while monitoring helps give feedback to the stakeholders for decision-making. Monitoring helps to keep track of the activities in school on track and lets stakeholders are informed of what is going on in schools.

Vitiello & Kools (2010) assert that there is a need for a holistic, comprehensive pre-primary schools monitoring system that covers the multiple facets (education, health, social protection, and socioeconomic context in which the child is born) of public and private pre-primary schools interventions in a country. To them, such a system is essential for ensuring that all children can reap the benefits of pre-primary schools. Monitoring serves as a means of support and oversight for monitoring the performance and planning of pre-primary education policies and programs in a developing country.

Evaluation is a periodic assessment of the relevance, efficiency, effectiveness, impact, and/or sustainability of an activity or intervention; is a systematic search for answers about an intervention (project, program, or policy); and Measures the effects of an intervention and compares them with the goals and objectives of the intervention (UNESCO, 2016). The evaluation aims to determine whether the project is achieving the intended results and to measure the impact of the project.

One of the main purposes of monitoring and evaluation (M&E) in education is to ensure that equitable and quality education is being provided to all of the population and at all levels. Quality education is a multidimensional concept that takes into account the quality aspects of inputs (human, material, and financial), processes (teaching-learning and effective management practices), and outputs and outcomes (learning outcomes and quality of results) (International

Institute for Educational Planning [IIEP], 2007). Therefore, the involvement of all stakeholders in the M&E process would greatly enhance their ownership of it.

M&E in the education sector, as in other development sectors, has gone through several stages of evolution over the years, starting from broad input-output monitoring, through project-based monitoring systems designed to meet donor agency requirements, to the current discourse emphasizing timely and reliable data on evidence-based indicators of progress at different implementation levels, including local schools and communities (IIEP, 2007; UNESCO, 2017).

The preprimary program must be continuously supervised and monitored to ensure the delivery of high-quality services, similarly, its system needs to include a monitoring and evaluation mechanism to increase quality (Rossiter, 2016b). The pre-primary education program's implementation deficiencies are found via supervision and evaluation. Information from children, parents, caregivers, and communities can be acquired during the supervision process and used to remedy mistakes and change practices (Awino, 2014). He continued by saying that monitoring in early childhood education promotes children's holistic development, facilitates effective curriculum implementation, and verifies whether program goals have been met. Therefore, supervision in pre-primary schools is vital for ensuring the effective implementation of education programs, addressing challenges, meeting children's needs, maintaining quality standards, and celebrating achievements.

Gap in the Literature

The existing literature on quality service provision in pre-primary education emphasizes critical components such as teacher qualifications, parental engagement, learning resources, and supervision. However, several significant gaps warrant further investigation:

Existing literature has predominantly examined the roles of teachers, learning resources, supervisory mechanisms, and parental involvement as discrete determinants of educational quality. However, a critical gap persists in understanding how the intersection and synergistic interplay of these factors collectively shape service provision in early childhood education. While isolated analyses offer valuable insights, they fail to capture the systemic nature of quality improvement, which inherently depends on stakeholder collaboration. This oversight is particularly consequential in resource-constrained contexts like Gambella, where fragmented approaches to teacher support, resource allocation, and community engagement may exacerbate inequities. A more holistic

investigation one that examines how these variables interact to either facilitate or hinder effective practice is thus imperative to advance both theoretical and policy-oriented discourse in quality service provision in pre-primary education.

Although the literature underscores the necessity of trained teachers, adequate facilities, and parental involvement, empirical research on these factors in low-resource regions, such as Gambella, Ethiopia, is limited. Most studies predominantly draw from developed or urban contexts (e.g., the U.S., Australia, South Africa), failing to fully capture the unique challenges faced in rural or marginalized communities where infrastructure, teacher training, and parental awareness are significantly constrained.

The literature acknowledges the need for qualified teachers (UNESCO, 2010; Neuman et al., 2015), yet there is a lack of evidence regarding scalable, cost-effective training models suitable for regions with limited access to formal teacher education. Furthermore, research does not sufficiently explore the potential of community-based training, mentorship programs in enhancing teacher competency in underserved areas. Although supervision and monitoring and evaluation (M&E) are recognized as critical components (Kibor, 2020; Vitiello & Kools, 2010), there is limited research on the development of locally adaptable M&E tools for pre-primary schools in sub-Saharan Africa. Most existing frameworks derive from primary or secondary education, neglecting the unique developmental needs of pre-primary learners and the informal nature of many early childhood programs in rural settings. While the significance of resources is often acknowledged, there is insufficient analysis of how resource allocation affects equity in access to quality pre-primary education. Research focusing on marginalized communities could illuminate strategies for overcoming systemic barriers. Therefore, understanding these barriers to effective policy execution is essential for informing future initiatives and reforms and addressing these identified gaps, researcher and policymakers can better support equitable and high-quality pre-primary education in regions like Gambella, where systemic barriers persist despite the recognized significance of early childhood development. Bridging these gaps could enhance the understanding and effectiveness of pre-primary education systems, ultimately benefiting children's holistic development and educational trajectories.

2.5. Theoretical Framework

The provision of quality service in pre-primary education is supported by various theoretical principles. This study aims to conceptualize the principles of quality service provision in pre-primary schools within the Gambella Regional State. The primary theoretical framework supporting this study is the ecological systems theory (Bronfenbrenner, 1977) and social constructivism (Vygotsky, 1978). These theories collectively contribute to creating an engaging learning environment in pre-primary schools and supporting child development, aligning well with play-based learning and developmentally appropriate practices. The discussion was focused on how these theories synergistically combine to enhance our understanding of the factors that influence the provision of quality services in pre-primary education.

2.5.1. Ecological Systems Theory

This study is grounded in the ecological systems theory proposed by Urie Bronfenbrenner in the 1970s (Chong et al., 2023). The ecological systems theory suggests that a child's environment can significantly influence their engagement in pre-primary education, either positively or negatively (Bapna et al., 2021). Access to quality pre-primary education for children depends upon the surrounding environment. Bronfenbrenner identified four key contexts that can affect children's engagement in pre-primary education: the micro-system, meso-system, exo-system, and macro-system (Panopoulos & Drossinou-Korea, 2020).

The micro-system represents the child's immediate environment, including home, school, parents, teachers, and siblings, which directly influences their involvement in pre-primary education (Bapna et al., 2021). Within this study, the micro-system encompasses the direct interactions between children and their primary caregivers, particularly parents and teachers. Teachers play a crucial role in this context, as they are integral to the educational experiences of children. Their knowledge, skills, and teaching practices significantly affect the quality of service provision in pre-primary education. Furthermore, parental involvement is closely linked to the micro-system, as parents influence their children's learning experiences through interactions at home and participation in school activities. Effective communication between parents and teachers fosters a collaborative environment that supports educational outcomes for children. Alam and Ogawa (2023) emphasize that young children's access to high-quality pre-primary education is significantly influenced by

parental goals, concerns, and socio-economic status. Thus, the immediate environment surrounding children plays a vital role in their enrollment in pre-primary schools.

The meso-system, which concerns the interactions within the micro-system, also influences children's access and engagement in pre-primary education. This setting encompasses relationships such as teacher-parent partnerships and home-school collaborations (Ghate et al., 2020). Ovati et al. (2024) highlight that effective teacher-parent collaboration is predictive of children's access to quality pre-primary education and overall learning outcomes. A lack of robust teacher-parent partnerships can detrimentally affect children's accessibility and engagement in educational settings. In this study, the meso-system is critical for understanding how relationships between home and educational environments facilitate or hinder children's development. By analyzing these interactions, researchers can identify strategies to strengthen partnerships between parents and educators, thereby enhancing educational outcomes.

The exo-system refers to the external environment that indirectly influences children's access and engagement in pre-primary education, including parents' workplaces, policies, and legislation (Reserve, 2017). This system encompasses broader social structures that affect the child, such as community resources and policies that shape the environment in which the child develops. For example, a parent's workplace may offer flexible hours or supportive policies that enable greater parental involvement in their child's education. Additionally, community resources such as healthcare facilities, libraries, and recreational areas significantly contribute to supporting families and children. In the context of this study, the exo-system includes governmental policies concerning early childhood education and the community's support for educational initiatives. The availability of resources and facilities within the community can critically impact the quality of education that children receive. Understanding these external factors is vital for constructing a comprehensive understanding of the influences on a child's educational experience.

The macro-system encompasses the overarching cultural and societal values, norms, and beliefs that shape the environment in which a child develops. This layer includes societal expectations regarding education, cultural beliefs about child-rearing, and the broader historical context of early childhood education in Ethiopia. The macro-system elucidates how cultural attitudes towards education influence the development of policies and practices in pre-primary settings. This system affects how children access and engage in pre-primary education (Panopoulos & Drossinou-Korea,

2020). Alam et al. (2023) further assert that cultural factors such as customs, values, religious beliefs, and social expectations significantly influence children's access to quality pre-primary education. In Ethiopia, understanding cultural values and beliefs surrounding early childhood education is crucial for designing and implementing educational programs. The macro-system also involves the role of supervisors and educational leaders, who interact with both teachers and parents to ensure the maintenance of quality practices within educational settings. Their influence can substantially shape the educational landscape and the quality of services provided to children.

The study aims to clarify the barriers influencing the quality of service provision in pre-primary schools in the Gambella Regional State. To enhance the quality of pre-primary education for children, strategies must consider multiple contexts as proposed by the ecological systems theory, as all contexts significantly influence children's access to quality service provision in pre-primary education. To this end, Bronfenbrenner's Ecological Systems Theory provides a valuable framework for understanding the intricate influences on child development and educational quality. By considering the multiple layers of environmental systems and their interconnections, educators, policymakers, and researchers can gain deeper insights into the factors that shape pre-primary education. This comprehensive understanding is essential for designing effective interventions and policies that enhance the quality of educational services, ultimately fostering optimal development for all children, particularly those in underserved communities such as the Gambella Regional State in Ethiopia.

The following figure illustrates the Ecological Systems Theory, providing a visual representation of the various systems and their interactions.

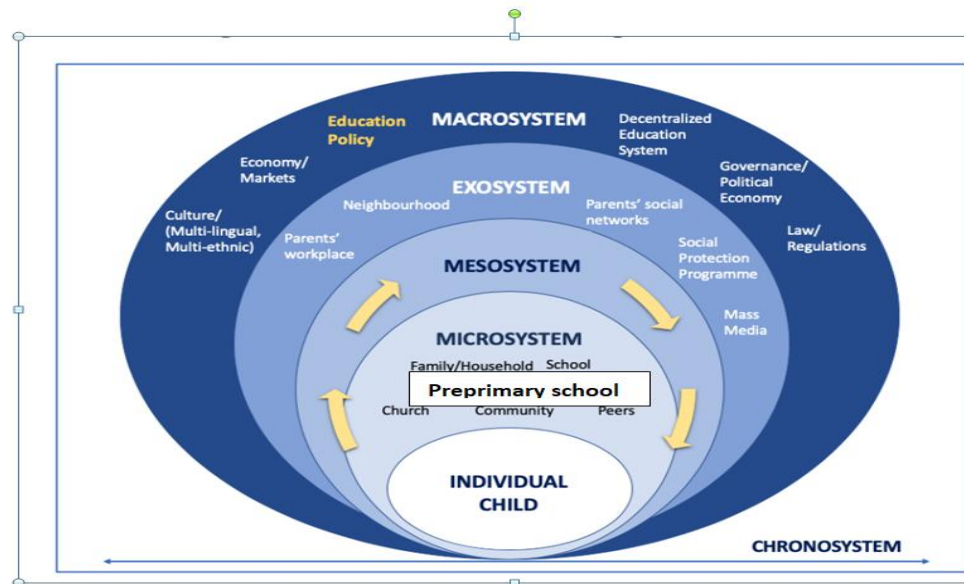


Figure 1: Bioecological Model of Human Development. Source: Adaptation of Bronfenbrenner's (1979, 1986) bioecological model of child development

2.5.2. Vygotsky's Theory of Cognitive Development

The process of human cognition has been explored by various schools of psychology, with social constructivism emphasizing the significance of social environment, culture, and interaction in this process. Lev Vygotsky, a prominent Russian theorist in 1962, introduced a novel theory on cognitive development that gained popularity for its concepts of scaffolding and the Zone of Proximal Development (ZPD) within psychology and education. According to Vygotsky's theory, children benefit from guidance provided by more experienced individuals who assist them in achieving their learning objectives through discourse and communication. Additionally, Vygotsky emphasized the importance of play for concept formation as it enables children to better comprehend and apply what they have learned (Matangi et al., 2013; Santrock, 2011).

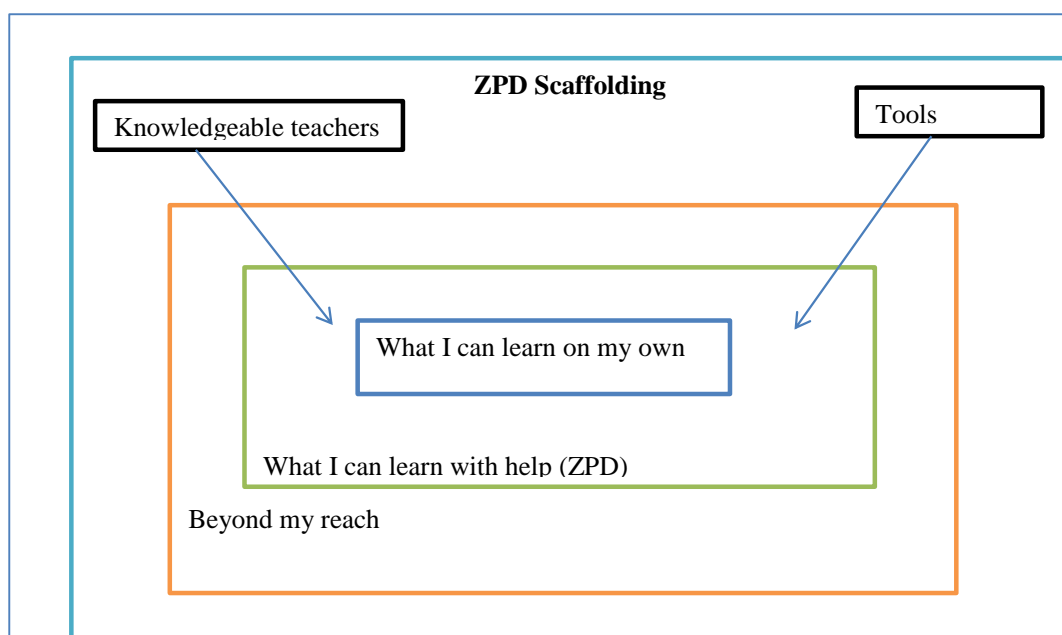


Figure 2: Zone of Proximal Development for Child Learning Source. Steve Wheeler, 2013

Lev Vygotsky's theory of cognitive development emphasizes the critical role of social interaction and cultural context in learning, particularly through concepts such as scaffolding and the Zone of Proximal Development (ZPD). This framework is instrumental in enhancing the quality of service provided in pre-primary schools, as it directly influences key learning outcomes, as the following.

Vygotsky posits that children thrive when guided by more experienced individuals (Vygotsky, 1978). In a pre-primary setting, skilled teachers can provide scaffolding that supports children as they navigate new concepts. This personalized assistance enables children to progress within their ZPD, facilitating an environment where they can achieve significant learning milestones (Wood, Bruner, & Ross, 1976). By leveraging scaffolding techniques, teachers can enhance children's reading skills. Through interactive reading sessions and guided discussions, children develop phonemic awareness and comprehension, leading to measurable improvements in their reading abilities (Guthrie & Wigfield, 2000).

Vygotsky's emphasis on social interaction can be utilized to promote letter recognition. Teachers can create engaging, collaborative activities where children learn to identify and articulate letters, thereby reinforcing their understanding in a supportive environment (Roskos & Neuman, 2014). When children experience positive interactions and receive tailored support, their interest in

learning grows (Deci & Ryan, 2000). Vygotsky's theory suggests that this engagement is crucial for fostering a love for school, resulting in improved attendance and enthusiasm for daily learning activities.

The implementation of Vygotsky's strategies leads to improved classroom performance. As children receive the necessary guidance and encouragement, they become more confident in their abilities, which reflects in their participation and academic achievements (Pianta, 1999). A supportive learning environment that aligns with Vygotsky's principles can significantly improve child retention rates. When children feel understood and supported by their teachers, they are more likely to remain enrolled in pre-primary programs, benefiting from continuous learning experiences (Burchinal et al., 2002). Therefore, Vygotsky's theory of cognitive development provides a robust framework for enhancing the quality of service in pre-primary schools. By focusing on effective strategies such as scaffolding within the ZPD, educators can significantly influence key learning outcomes, including improvements in reading skills, letter recognition, daily attendance, classroom performance, and student retention. Thus, investing in teacher qualifications and appropriate learning resources is essential for maximizing educational quality in early childhood settings.

Table 1. Synergies between Theories and Study’s Determinants

| Determinant | Ecological Systems Lens | Social Constructivism Lens |
|-------------------------|-----------------------------------|-------------------------------------------------|
| Teacher Related Factors | Microsystem: Training adequacy. | Scaffolding skills for play-based learning. |
| Parental Engagement | Mesosystem: Home-school links. | Parents as co-constructors of knowledge. |
| Resources/Facilities | Exosystem: Policy-driven funding. | Tools (e.g., play materials) enable ZPD. |
| Supervision | Exosystem: Monitoring mechanisms. | Ensures teachers apply scaffolding effectively. |

Note. This table presents an original synthesis of theoretical frameworks and determinants.

Bronfenbrenner explains where/why these interactions succeed/ limited, and Vygotsky focuses on how children learn (social interaction, scaffolding. By integrating Ecological Systems Theory and Vygotsky’s Theory, this study achieved a comprehensive analysis of pre-primary education in

Gambella balancing systemic influences with classroom learning processes. This dual framework strengthened the validity of findings and ensured that recommendations addressed both policy-level and instructional-level challenges.

2.6. Conceptual Framework of the Study

This study is anchored in a conceptual framework that synthesizes key theoretical perspectives to explain the determinants influencing the quality of service provision in pre-primary schools within Gambella Regional State. Drawing on Bronfenbrenner's Ecological Systems Theory and Vygotsky's Sociocultural Theory of Cognitive Development, the framework establishes a multidimensional lens through which the interplay of contextual, relational, and resource-based factors were examined. These theories collectively inform the identification of four independent variables: teacher-related factors, learning resources and facilities, parental engagement, and supervisory roles hypothesized to directly shape the dependent variable, quality service provision in pre-primary schools of the Gambella regional State.

The operationalizing of constructs from ecological and social constructivist theories, the framework facilitates a holistic understanding of the barriers within Gambella's pre-primary education quality service provision. It further enables the derivation of context-specific insights, ensuring that findings are theoretically grounded and pragmatically actionable for policymakers and practitioners.

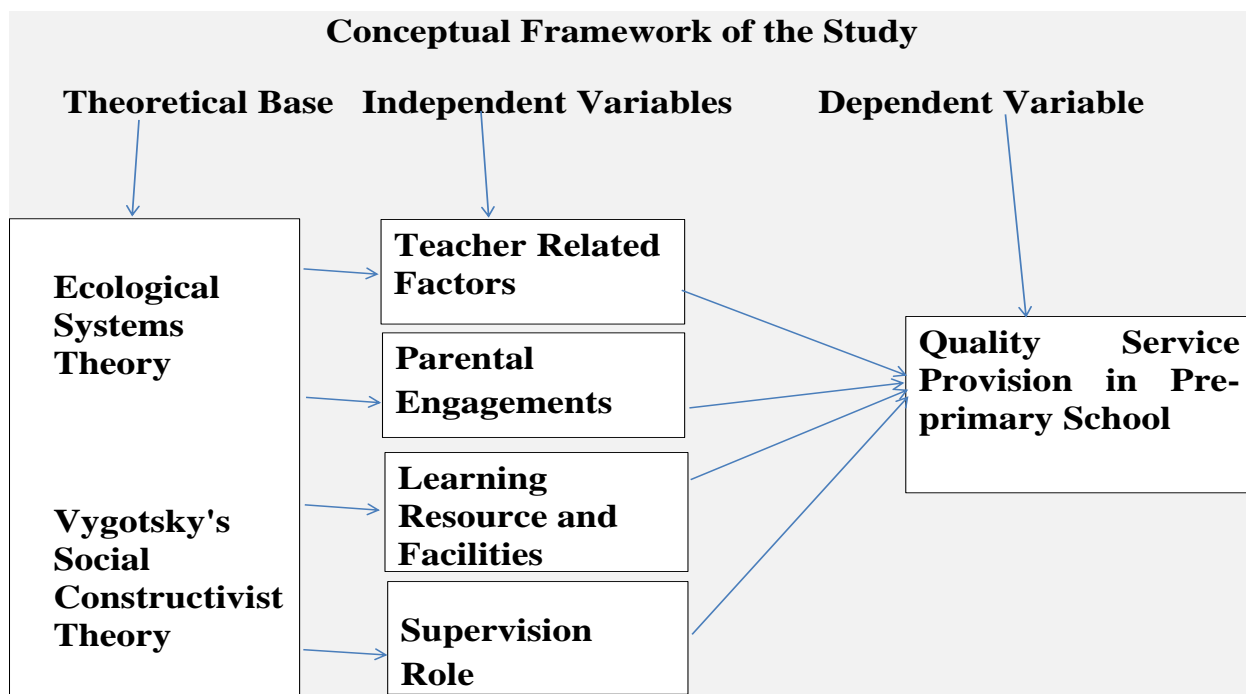


Figure 3: Conceptual Framework of the Study. Source: Researcher (2024)

The conceptual framework of this study integrates two foundational theories: Bronfenbrenner’s Ecological Systems Theory (EST) and Vygotsky’s Sociocultural Theory (SCT). This integration allows for analysis of the factors influencing the quality of service provision in pre-primary schools.

1. Bronfenbrenner’s Ecological Systems Theory (EST): This theory provides a multi-level perspective on how various environmental systems impact child development and educational quality. It emphasizes the interconnectedness of different contexts, such as family, school, and community, which collectively shape a child's learning experiences.
2. Vygotsky's Social Constructivist Theory (SCT): This theory focuses on the role of social interactions in cognitive development. It posits that learning is a socially mediated process, where interactions with more knowledgeable others (teachers, peers) and the use of scaffolding techniques enhance educational outcomes.

Independent Variables

Teacher quality is universally recognized as the most critical school-based factor in early childhood education (NAEYC, 2020). Research specific to low-resource settings shows, teachers trained in

child-centered pedagogy create more effective classroom interactions that align with Vygotsky's ZPD, leading to better learning outcomes (Mwaura et al., 2008). Continuous professional development improves teachers' ability to implement play-based learning, a cornerstone of quality early childhood education (UNESCO, 2017). In Ethiopia, teacher qualifications have been directly linked to pre-primary program quality (Tirussew et al., 2019). Therefore, it was imagined that pre-primary schools with better-qualified and trained teachers would demonstrate higher quality service provision.

In the parental engagement, the home-school connection is vital in early education. Epstein's (2018) framework shows that parental involvement boosts cognitive and social development through reinforcement of school learning. In African contexts, family engagement is particularly impactful where formal early childhood education access is limited (Mwaura et al., 2010). Ethiopian studies note that parental understanding of early childhood education benefits correlates with enrollment and quality participation (Tsegaye et al., 2021). Therefore, schools with stronger parental engagement programs will provide higher-quality services.

Learning Resources & Facilities are fundamental: UNICEF's (2019) quality standards emphasize that developmentally appropriate materials enable the scaffolding Vygotsky described. Research in similar contexts shows that resource availability mediates teacher effectiveness (Aboud & Hossain, 2011). In Ethiopia, the lack of play materials consistently emerges as a quality barrier (MoE Ethiopia, 2016). This suggests that, availability of adequate learning resources positively predicts quality service provision in pre-primary schools.

The supervision role ensures quality service provision in pre-primary schools: World Bank (2021) findings show that regular monitoring improves compliance with early childhood education standards globally. In Sub-Saharan Africa, effective supervision compensates for resource constraints (Bidwell & Watine, 2014). Ethiopia's education sector plans emphasize supervision as a quality lever (ESDP VI, 2021). To this end, schools receiving regular, effective supervision demonstrate better quality provision.

Dependent Variable

Quality Service Provision in Pre-primary Schools is operationalized through several empirical indicators: Child-Centered Pedagogy: This approach aligns with Vygotsky's emphasis on social

learning, focusing on the needs and interests of children. It facilitates engagement and promotes active participation in the learning process.

Safe, Inclusive Environments: Reflecting the macrosystem influences of Bronfenbrenner's Ecological Systems Theory, these environments ensure that all children feel secure and valued. Quality service provision is measured through classroom observation tools such as CLASS (Pianta et al., 2008), which are particularly impactful in African early childhood education contexts (Marfo & Biersteker, 2011).

Holistic Development Outcomes: This dimension encompasses cognitive, social, and emotional development, which are essential for preparing children for future educational success (NAEYC, 2020). It aligns with Ethiopia's Early Learning and Development Standards (ELDS), ensuring a comprehensive approach to early childhood education. By integrating Bronfenbrenner's and Vygotsky's theories, this study provides a robust framework for understanding the multifaceted influences on quality service provision in pre-primary education.

2.7. Summary of the Literature Review

The literature review examines the evolution and significance of quality services in pre-primary education in both global and Ethiopian contexts. It emphasizes education as a fundamental human right, advocating for sustained investment in high-quality early childhood education to ensure equitable access for all children, regardless of their backgrounds.

High-quality pre-primary education is vital for the holistic development and well-being of young children, facilitating essential early learning experiences that foster foundational skills in literacy, numeracy, problem-solving, and social interaction. Effective pre-primary education incorporates play-based methodologies that support these developmental needs, easing children's transition to primary school.

Investment in quality early childhood education is not only beneficial for individual development but also promotes economic equity and supports children's rights. A family-centric and community-oriented approach is crucial, necessitating robust national policies and sufficient funding to ensure that all children receive appropriate care and education. The long-term influence of quality early childhood experiences is profound, as children who fall behind early often face ongoing

educational challenges. The role of families is paramount, highlighting the need for initiatives that empower parents while acknowledging the complexities of diverse parenting styles.

Key components of quality pre-primary education include adequate resources and facilities, which significantly affect learning outcomes. A thoughtfully designed learning environment is essential for supporting children's development across various domains.

Teachers are pivotal as primary agents of educational change; their qualifications and training are crucial for implementing effective educational practices, underscoring the importance of continuous professional development. Additionally, effective supervision is necessary to monitor educational program implementation, ensuring that children's needs are met and quality standards are upheld. Continuous assessment and support are vital for promoting improvement. Parental engagement emerges as a critical factor in the success of pre-primary education, positively correlating with children's academic performance and social skills. Active parental involvement fosters a supportive educational environment, enhancing overall educational quality.

Empirical evidence identifies key determinants influencing the provision of quality services in pre-primary education, including staff qualifications, curriculum implementation, parental involvement, and the broader learning environment. The roles of supervisors, teachers, and school leaders are integral to maintaining high educational standards. Comprehensive studies are necessary to explore these factors in depth, particularly regarding teacher competence, job satisfaction, physical environment adequacy, supportive governmental policies, and resource availability.

The review also articulates two theoretical frameworks: Ecological Systems Theory and Vygotsky's Theory of Cognitive Development. These frameworks elucidate the factors affecting the quality of education and child development. The conceptual framework synthesizes insights from both theories, identifying four key determinants that influence the quality of service in pre-primary education. By addressing these interconnected factors, the study advocates for a collaborative approach among families, educators, and communities to enhance educational outcomes and support the holistic development of children.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter presents an outline and discussion of the study's setting, research paradigm, approach, design, and method used in the study. Moreover, the chapter presents data sources, population, sample size and sampling techniques, instruments of data collection, validity and reliability checks, procedures of data collection, method of data analysis, and ethical considerations.

3.1. Description of Study Area

The study was conducted in Gambella Regional State which is 34063 km² area and is located at 6028 '38', 8034' north latitude and 330 to 35011'11 "east longitude lines, and 777 km southwest of the federal capital Addis Ababa. Bordering the north, in the northeast and the east with the Oromia Region, in the South and Southeast with Southern Ethiopia Nations, Nationalities, and People's Region, it is bordered to the west and northwest by South Sudan.

The administrative structure of the Gambella Regional State Government is divided into three ethnic Zones, twelve Woredas, one special Woreda, and one Town administration. In total, there are 223 Kebeles within the region. Among these Kebeles, 201 are located in rural areas, while 22 are classified as urban.

Based on the 2007 census data, the population of the region was recorded as 307,096 individuals. This population comprised 159,787 men and 147,309 women. Out of the total population, 77,925 individuals, or approximately 25.37%, resided in urban areas.



Figure 4: The Research Site. Source: Designed by ArcGIS Arc Map 10 software based on the CSA 2007 data of the region.

In Gambella Regional State, the educational system encompasses multiple levels of education. According to statistics from the Gambella Regional State Education Bureau in 2024, the region had a total of 44 private kindergartens, 215 preprimary schools attached to primary schools, 312 primary schools, and 75 secondary schools. The region of Gambella had a substantial student enrollment across various educational levels in the year 2024. In terms of pre-primary education, there were 20,852 students enrolled. Among them, 12,776 students were enrolled in government pre-primary schools.

For primary education, the region had a total of 134,368 students enrolled, with 71,008 boys and 63,360 girls. In the secondary education level, there were 43,536 students enrolled, comprising 24,624 boys and 18,912 girls. In Gambella Regional State, the educational workforce comprises a total of 5,741 teachers. Among them, 918 teachers are employed in pre-primary schools, with 562 belonging to government pre-primary schools. Additionally, there are 3,411 teachers in primary schools and 1,412 teachers in secondary schools. Regarding the gender distribution of teachers, the majority are male. Out of the total number of teachers, 4,383 are male, while 1,358 are female.

3.2. Research Paradigm

In social science research, the concept of a 'paradigm' encompasses the philosophical assumptions and epistemological beliefs that shape a researcher's worldview (Lincoln et al., 2011). Originating from Thomas Kuhn's (1970) foundational work, the term denotes the shared frameworks of understanding and methodological commitments that define scholarly inquiry within a given discipline. Among the various research paradigms, pragmatism has emerged as a particularly influential approach, rooted in the philosophical tradition articulated by Maxcy (2003). This paradigm prioritizes practical utility, advocating for the adoption of methodological and philosophical strategies best suited to addressing the specific demands of the research problem (Tashakkori & Teddlie, 1998).

Pragmatism is frequently associated with mixed-methods research (Biesta, 2010; Clark, 2011; Johnson & Onwuegbuzie, 2004; Morgan, 2014a), as it shifts the focus from methodological purity to the practical consequences and applicability of research outcomes. By embracing both objective and subjective forms of knowledge, pragmatism facilitates the integration of diverse methodological approaches, thereby enabling a more comprehensive examination of complex research questions (Creswell & Clark, 2011). This flexibility is particularly valuable in studies where rigid adherence to either quantitative or qualitative methodologies may prove limiting.

This study adopted a pragmatic paradigm to investigate pre-primary education practices and the determinants of quality service provision in Gambella Regional State. As Creswell (2012) explains, pragmatism aligns methodological choices with the research objectives and the nature of the research questions. This approach is particularly valuable in educational research, where complex phenomena require flexible investigation strategies. The pragmatic worldview allowed the study to adapt to the contextual realities of pre-primary education in the region while maintaining rigorous methodological standards.

Pragmatism is especially well-suited to mixed-methods research due to its emphasis on practical solutions, methodological pluralism, and the recognition of multiple forms of knowledge (Creswell, 2014). This flexibility enabled the researcher to employ complementary qualitative and quantitative methods, enhancing the depth and robustness of the analysis (Creswell & David, 2018). By transcending the limitations of singular methodological approaches, the pragmatic

paradigm facilitated a more nuanced and empirically grounded assessment of pre-primary education quality in Gambella Regional State

3.3. Research Approach

In the context of this study on the provision of quality services in pre-primary schools in Gambella Regional State, a mixed research approach was employed. This approach involves combining quantitative and qualitative methods to provide a comprehensive understanding of the research topic and collect empirical data from multiple perspectives and contexts (Creswell & David, 2018). It is important to note that the choice of a mixed research approach should align with the research objectives, context, and research questions of the study.

The justification for using a mixed research approach lies in its ability to offer a holistic view of the phenomenon under investigation. By integrating both quantitative and qualitative approaches, the researcher can gather comprehensive empirical data that encompasses various facets of the research topic in different contexts. This approach allows for a better understanding of the complexities involved in introducing and scaling up pre-primary education programs.

The use of mixed methods also enables researchers to answer research questions with depth and breadth. The qualitative component of the study, involving interviews, observations, and focus groups, the discussion provides a deeper understanding of the quality service provision in pre-primary education from the perspectives of top-level managers, directors, and experts.

On the other hand, the quantitative component of the study, involving surveys, allows for data collection from a larger number of participants, such as pre-primary school teachers and principals. This quantitative data provides a broader representation of the population and increases the possibility of generalizing the findings to a wider context (Creswell & David, 2018).

3.4. Research Design

Research design refers to the overall plan or framework that guides the process of conducting research (Kothari, 2004). It outlines the specific steps, procedures, and methods that will be utilized to address the research questions or objectives. Research design is a crucial aspect of any research study as it provides a systematic and structured approach to collecting, analyzing, and interpreting data (Creswell & Plano Clark, 2018).

In this study, the convergent parallel design, as identified by Creswell (2014), was utilized to gain a comprehensive and holistic understanding of the research topic. This design serves two main purposes: triangulation and complementarity.

Triangulation involves gathering and analyzing both quantitative and qualitative data to find convergence or agreement between the two types of data. This approach facilitates a deeper understanding and insight into the research problem by examining the consistency and convergence of findings obtained through different data collection methods. Through using multiple instruments, the researcher can validate and strengthen his results.

Complementarity refers to the use of one method to clarify and enhance the results obtained from another method. By employing both quantitative and qualitative methods, the researcher can gain a more comprehensive understanding of the research topic. The combination of different methods improves the breadth and depth of the data, providing a richer and more nuanced analysis.

In this study, the convergent parallel design was employed to gather data on practices, and determinants of quality service provision in pre-primary schools in Gambella Regional State. The quantitative method was used to collect respondents' opinions, while the qualitative method captured participants' experiences and perspectives related to pre-primary education.

The quantitative method aims to gather numerical data to understand respondents' opinions on pre-primary education practices. On the other hand, the qualitative method focuses on capturing the richness and depth of participants' experiences, providing insights into their perspectives and the broader context of pre-primary education in the Gambella Regional State. This comprehensive approach was generated a more robust understanding of the research topic, leading to reliable and valid findings.

3.5. Source of Data

In this study, data was sourced from both primary and secondary sources. Primary data was collected directly from the Regional Education Bureau, Zonal Education Department, Woreda Education Offices, and pre-primary school principals, teachers, and parent representatives using various methods such as questionnaires, interviews, focus group discussions, and observations. These methods aim to gather participants' opinions, judgments, and ideas regarding pre-primary

education practices and the quality of services in pre-primary schools within Gambella Regional State.

On the other hand, secondary data was obtained from regional education statistics and official reports from the education sector. These secondary sources, related to pre-primary education participation released within the previous five years, provided additional information and context relevant to the research topic. Through utilizing a combination of primary and secondary sources, the study aims to gather comprehensive and diverse data to analyze and draw meaningful conclusions about pre-primary education practices and service quality in Gambella Regional State.

3.6. Population, Sample Size, and Sampling Techniques

3.6.1. Population

The population is the broader group from which a sample is typically drawn to collect data and make inferences about the population as a whole (Lodico, Spaulding, & Voegtle, 2006). In this particular study, the population of interest includes individuals from the regional education bureau, the Zonal education department, Woreda education offices, and pre-primary schools in Gambella Regional State. For qualitative data collection, the target population consists of leaders and directors from the Gambella education bureau, directors' Zonal education department, leaders and directors from Woreda education offices, and pre-primary/primary/parent-teacher association leaders. These individuals provided valuable insights, perspectives, and experiences related to pre-primary education practices and determinants of its quality of service provision in pre-primary schools of Gambella Regional State.

On the other hand, for quantitative data collection, the target population includes pre-primary school teachers and primary/pre-primary/ school principals from 95 pre-primary schools in the study samples. These individuals provided quantitative data through questionnaires, offering their opinions, regarding pre-primary education practices and determinants of quality services provision.

The number of individuals in each population category for both qualitative and quantitative data collection was 12 from Regional Education Bureau leaders and directors, 9 from zonal education departments, 28 from Woreda's education office head & team leaders, 95 from parent-teacher association (PTA) leaders, 95 principals, and 190 pre-primary teachers. Given these populations,

the study aims to gather comprehensive data that represents the perspectives and experiences of key stakeholders involved in pre-primary education in Gambella Regional State.

3.6.2. Sample Size and Sampling Technique

The study intended to employ a simple random sampling method to select a sample consisting of four woredas from a total of 13 woredas located in the Gambella Regional State. This sample size represents about 30.7 percent of the entire population of woredas in the region. The primary objective of this sampling approach is to ensure a random and unbiased selection of four woredas from the larger population for the study. The rationale for using simple random sampling is that it ensures each Woreda in the population has an equal chance of being selected. This approach helps in obtaining a representative sample that accurately reflects the characteristics of the entire population of woredas in Gambella Regional State.

To determine the sample size, the study refers to DelIce (2010), who suggests that a sample representing 20 percent of the total population is satisfactory for conducting research. Additionally, Cohen, Manion, and Morrison (2018) discuss the importance of selecting an appropriate sample size, indicating that a sample size of around 10-30% can be sufficient depending on the study's objectives and the population's homogeneity. By selecting four woredas out of the 13 available, the study aims to meet this recommended sample size. The random selection process guarantees that all woredas have an equal opportunity to be included in the sample. This eliminates potential biases and increases the likelihood of generalizing the findings to the entire population of woredas in Gambella Regional State.

To collect qualitative data for this study, the researcher engaged in a purposive sampling technique to carefully select specific participants for interviews and focus group discussions. This approach involved intentionally choosing individuals believed to possess the relevant information and insights needed to contribute to the understanding of the phenomenon under investigation. By selecting participants who likely had valuable experiences, knowledge, or perspectives, the researcher gathered in-depth and meaningful qualitative data that enriched the overall findings of the study.

In this particular study, the researcher selected one vice bureau head and four directors from the regional education bureau's teacher's development, curriculum, inspection, and school

improvement departments to participate in semi-structured one-on-one interviews. These individuals were chosen because of their roles in the planning, monitoring, and evaluation, teacher capacity building and placement, textbook distribution, and other activities related to the pre-primary education program and three zonal education department quality assurance directors. Likewise, eight parent-teacher association leaders (PTA) were selected to take part in semi-structured one-on-one interviews.

In addition, this study utilized four focus group discussions (FGDs) as a means of collecting data. The FGDs consisted of education office heads and team leaders from four chosen woredas. Specifically, there were a total of 4 office heads and 24 team leaders. The selection of participants for the FGDs was purposeful, as they hold key responsibilities in overseeing pre-primary education at the school level. According to Graue (2015), qualitative sampling often involves selecting cases based on their typicality or possession of specific characteristics that align with the research focus. In this study, the participants for the FGDs were chosen based on their relevance and expertise in the field of pre-primary education.

To collect quantitative data, this study employed a census approach, encompassing all 190 pre-primary teachers and 95 principals from the 95 pre-primary schools across the four selected woredas. The decision to utilize a complete enumeration rather than sampling was methodologically justified by the small, well-defined nature of the target population (Fraenkel et al., 2019; Cohen et al., 2018). This comprehensive approach offers distinct advantages for localized educational research by ensuring complete population representation and eliminating potential sampling biases (Gay et al., 2012). By including all members of the target population, the study achieves maximum coverage and enhances the reliability of findings, while maintaining methodological rigor appropriate for the study's context and scale. The census methodology thereby provides a robust foundation for analyzing pre-primary education practices across the selected administrative units.

Table 2. Target Population Sample Size and Sampling Techniques

| No. | Participants | Number of Target Population | Sample Size | | Sampling Techniques |
|-----|----------------------------------------------|-----------------------------|---------------|------|---------------------|
| | | | No of samples | % | |
| 1 | Regional Education leaders& directorates | 12 | 5 | 41.6 | Purposive |
| 2 | Zonal Education Department | 9 | 3 | 33 | Purposive |
| 2 | Woredas education office head & team leaders | 28 | 28 | 100 | Census |
| 4 | Parents, teacher association leaders | 95 | 8 | 8 | Purposive |
| 5 | Pre-primary/primary/school principals | 95 | 95 | 100 | Census |
| 6 | Pre-primary school teachers | 190 | 190 | 100 | Census |
| | Total | 429 | 329 | | |

Source: GREB EMIS, 2024

3.7. Instruments of Data Collection

In this study, survey questionnaires, semi-structured interviews, focus group discussions, observation checklists, and document reviews were used for data collection. The following subsections describe each of the five data-collection instruments.

3.7. 1. Questionnaire

This study utilized a structured questionnaire as a data collection instrument to gather relevant information from pre-primary school teachers and principals. The questionnaire contained of closed-ended items, allowing for a diverse range of perspectives and enabling a thorough exploration of the research topic. The instrument drew quantitative data from an adapted version of the Measuring Early Learning Quality and Outcomes (MELQO) assessment (UNESCO, 2017), aligning the learning assessment with Ethiopia's national curriculum (Rossiter et al., 2018). This

adaptation ensured that the items reflected the specific context of pre-primary education in the Gambella Region.

Initially prepared in English, the questionnaire was translated into the predominant language to accommodate respondents. It was administered to pre-primary school teachers and principals to gather their perspectives on pre-primary education practices and the determinants of quality service provision. The questionnaire encompassed various themes, including demographic information such as educational qualifications and teaching experience in preschool, teaching practices that evaluate interactive strategies, learning environment assessments focusing on safety, inclusivity, and resource availability, parental involvement gauging the extent of engagement in children's education, and supervision mechanisms examining the effectiveness of oversight in pre-primary education.

Adaptation made to the questionnaire included language simplification, where technical jargon was replaced with accessible terms to enhance understanding among respondents. The focus on local resources involved, including specific references to facilities available in Gambella, to provide a clearer picture of the educational landscape. Additionally, contextual questions were added based on preliminary research and feedback from local stakeholders to address unique regional challenges. The rationale for these adaptations centered on ensuring accessibility, enabling broader participation among educators through simplified language. Contextual relevance was emphasized by including local resources and challenges, facilitating comprehensive analysis and actionable insights.

3.7.2. Interviews

One of the key methods for collecting comprehensive and accurate qualitative data in studies is through interviews (Taherdoost, 2021). Therefore, in this study, in-depth one-on-one interviews were conducted with regional education bureau vice heads and directors; and preprimary/primary schools PTA leaders. The purpose of these interviews was to examine their viewpoints, justifications, and claims regarding the practice of pre-primary education and the provision of quality services in pre-primary schools in the Gambella Regional State.

Semi-structured interviews were used, with leading questions provided to elicit more information about pre-primary education practices beyond what is covered by the leading questions. Each

interview lasted a minimum of one hour. To facilitate the interviewing process, an interview protocol was created, consisting of three main components. The first section included the study's title and a summary, while the second part gathered general information about the interviewee. The third part contained the leading questions for the interview and closing statements that allowed the interviewee to provide any final thoughts, ask questions, or clarify any points discussed during the interview.

The interview process consisted of two key parts: the pre-interview and the actual interview. During the pre-interview phase, the researcher contacted the specified individuals in person or over the phone to inform them about the study and establish rapport. Consent to participate in the study was obtained, and a suitable location and time for the interview were determined.

At the beginning of each interview, the researcher introduced themselves, explained the study's goals, and asked the interviewees to sign the consent form, which was completed beforehand. A comfortable environment was created, and the consent form was signed by engaging in open dialogue with the interview candidate before the formal interview began. Throughout the interview, the researcher employed various methods to keep the interviewees motivated. The interview was recorded on a mobile phone for later use and data analysis, with full disclosure to the participants about the recording.

At the end of the interview, the interviewees had the opportunity to share any final thoughts or ask questions, and the researcher expressed gratitude to all the participants. Therefore, by following this structured approach to interviews, the study gathered in-depth insights and perspectives from regional education bureau vice heads and directors, and parent representatives regarding pre-primary education practices and determinants of its quality service in the Gambella Regional State preprimary schools.

3.7.3. Focus Group Discussions

A focus group discussion is a research technique where a group of individuals is brought together to engage in a facilitated discussion on a specific topic. This method aims to extract information from participants' diverse personal experiences, beliefs, perceptions, and attitudes through interactive dialogue (Nyumba et al., 2018). In this study, the researcher conducted four focus group discussions, with each group consisting of seven participants. These discussions took place at the

Woreda Education Office level and involved Woreda Education Office heads and team leaders. Each focus group discussion lasted a minimum of one and a half hours. The purpose of these focus group discussions was to gather data on the overall status of pre-primary education practices and the quality of services provided in each pre-primary school within their respective Woredas.

The researchers aimed to gain insights into participants' complex personal experiences, perceptions, and attitudes related to pre-primary education in the Gambella Regional State. Through engaging in moderated dialogue within the focus group setting, participants had the opportunity to share their perspectives and engage in interactive discussions with one another. This communication and exchange of ideas among focus group members provided more detailed and comprehensive information compared to individual interviews.

The researcher guided the discussions, ensuring that the topics of interest were explored and that all participants had the chance to contribute their insights. The focus group discussions delved into various aspects of pre-primary education, including identifying areas for improvement to enhance the effectiveness and quality of services in pre-primary schools. By conducting these focus group discussions, the researcher gathered in-depth data that informed the understanding of pre-primary education practices and supported the identification of strategies for improvement in the Gambella Regional State.

3.7.4. Observation

In addition to the methods mentioned earlier, another tool for data collection in this study was an observation checklist. The observation checklist was used to gather data specifically related to the provision of quality pre-primary education services in the selected pre-primary schools in the Gambella Regional State. The observation checklist consisted of 20 items that assessed various aspects of the pre-primary school environment. These items were covered indoor and outdoor activities, the adequacy of physical space for play, the availability of child-sized furniture for routine care and education, the availability of play and learning materials, and the provision and suitability of facilities to promote children's development.

The observation processes were conducted at 8 sample pre-primary schools inside and outside the classroom setting. The observer was carefully assessed and documents the presence or absence of the specified items on the checklist. This direct observation method was provided qualitative data

that can offer valuable insights into the actual practices and conditions within the pre-primary schools.

The collected observational data were analyzed qualitatively. The results obtained from the observation checklist were combined with the quantitative results from other data collection methods. The researcher compared, interpreted, and described the findings, integrating both qualitative and quantitative data to gain a comprehensive understanding of the provision of quality pre-primary education services in the sample pre-primary schools of the Gambella Regional State. Therefore, by utilizing the observation checklist as a data collection tool, this study aims to gather detailed information about the physical environment, learning materials, and teacher-child interactions within the pre-primary schools. This was contributed to an assessment of the quality of pre-primary education services provided in the Gambella Regional State.

3.7.5. Document Review

In this study, document analysis was employed as a qualitative research method to gather information related to the topic of study. Document analysis involves the interpretation and examination of various documents by the researcher to extract relevant information. The documents that were analyzed in this study include annual reports, annual education abstracts from the past five years, recent regional and national Education Sector Development Plans (ESDP V and VI), the Education and Training Roadmap, and the current Ethiopian Education and Training Policy. These documents are valuable sources of information regarding pre-primary education practices and the provision of quality services, specifically within the context of the Gambella Region State.

The document analysis served two main purposes. Firstly, it enriches and enhances the results obtained from other data collection methods, such as interviews and questionnaires. Through analyzing the documents, the researcher can gain additional insights and perspectives that complement and strengthen the findings from other sources. Secondly, document analysis allows for the triangulation of results with the findings from the survey. By comparing and aligning the information obtained from different sources, the researcher can establish convergence and consistency in the study's findings, thus increasing the overall validity and reliability of the research outcomes. Therefore, through utilizing document analysis alongside other data collection methods, this study aims to provide a robust and comprehensive analysis of pre-primary education practices

and quality service provision in the Gambella Regional State, ultimately contributing to evidence-based recommendations for improvement.

3.8. Validity and Reliability of the Instruments

Validity refers to the extent to which a research instrument accurately measures the intended construct and yields credible findings (Bolarinwa, 2015). To ensure the validity of the questionnaire, content validity was established through expert consultation. Experts evaluated the alignment between the questionnaire items and the theoretical constructs under investigation, ensuring that the operational measures adequately represented the study's conceptual framework (Haynes et al., 1995).

In this study, the instrument used for data collection underwent a thorough validation process utilizing expert judgment. Initially, the research questions were submitted to the researcher's supervisors for examination. The supervisors examined the items, assessing their alignment with the research questions. Additionally, two experts in language and pedagogy from Ethiopian universities and three experts from the Gambella Regional Education Bureau participated in the review process. Their insights further enhanced the validation, ensuring that the instrument was robust and relevant for the target population. They provided specific comments and recommendations that guided the refinement of the instrument. Key aspects that were improved based on their feedback included:

Clarity of Items: Experts suggested simplifying certain questions to enhance understanding, ensuring that respondents could accurately interpret and respond to the items. **Relevance of Content:** Some items were reworded or replaced to better align with the theoretical constructs being measured, ensuring that all questions were directly relevant to the research objectives. After integrating these recommendations, the questionnaire was piloted in pre-primary schools. This pilot phase allowed for further assessment and refinement based on participant feedback, which helped finalize the instrument used for data collection.

The reliability of the research instrument, defined as its capacity to produce consistent and stable results, was evaluated through a pre-test involving six variables and a total of 81 items. The pilot test was conducted from January 2 to 5, 2024, with participation from 24 pre-primary teachers and 12 principals from 12 primary schools in the Gambella Woreda, similar to those included in the

main study. This setup facilitated the measurement of internal consistency using appropriate statistical techniques, notably Cronbach's alpha.

The results of the pilot test yielded a Cronbach's alpha value of 0.81, indicating a strong level of reliability. The overall Cronbach's alpha coefficient across the six categories was found to be 0.814. The reliability coefficients for all six variables exceeded the recommended threshold of 0.7 (Sekaran, 2013), confirming the robustness of the research instrument for the intended study. This iterative process ensured that the final instrument was reliable and effectively captured the intended information from the target population.

3.9. Data Collection Procedure

Before commencing the data collection process, certain preparatory steps were taken to ensure smooth implementation. Firstly, an introduction letter from Jimma University was obtained, which facilitated the acquisition of a research permit from the Gambella Region Education Bureau. This permit is necessary to conduct the study within the region. Additionally, a letter from the employer was obtained to gain authorization to collect information from public pre-primary schools.

The study employed a convergent design, where multiple data collection instruments were utilized simultaneously to capture both quantitative and qualitative data. These instruments include questionnaires for pre-primary school teachers and principals. Once the questionnaires have been piloted, amended, and finalized, it distributed to the sampled participants, including 190 pre-primary school teachers and 95 principals. Participants were given 3-7 days to complete the questionnaires. Finally, the questionnaires were collected by the researcher from the participants.

Concurrently, the qualitative data collection process was carried out. Interviews were conducted with the regional education bureau head and directors, zonal education department directors, and parent representatives. A focus group discussion was held with the head of the Woreda's education office and team leaders. Furthermore, an observation checklist was used to assess pre-primary school classrooms in 8 selected samples. Lastly, supporting documentation was reviewed as part of the data collection process. By utilizing this concurrent design and employing various data collection instruments, the study aims to gather a comprehensive and diverse range of data to address the research objectives effectively.

3.10. Data Analysis

In this study, descriptive, inferential statistics, and thematic analysis were utilized to analyze quantitative and qualitative data.

3.10.1. Quantitative Analysis

Quantitative data analysis plays a crucial role in fulfilling research objectives and addressing research questions (Brymer & Cramer, 2015). In this study, quantitative data collected were analyzed using the Statistical Package for the Social Sciences (SPSS) version 24. The analysis involved both descriptive and inferential statistics.

Descriptive analysis aims to provide a summary of the data and was conducted using frequencies and percentages for analyzing the background information of the participants. Measures of central tendency, such as the arithmetic mean, and measures of dispersion, such as the standard deviation, were utilized to assess the average and variability of the data, respectively.

For inferential analysis, correlation, and regression techniques were employed to examine the relationship, direction, and strength between independent and dependent variables. Correlation analysis, specifically the Pearson product-moment correlation coefficient (r), was used to determine the extent of linear dependence between two variables for questions two, three, four, and five. The coefficient (r) indicated both the direction (positive or negative) and the strength of the relationship.

Regression analysis, on the other hand, is a statistical method that explores the nature of the influence of independent variables on the dependent variable (Mugenda & Mugenda, 2003, as cited in Karimi, 2020). In this study, for basic questions, two, three, four, and five regression analyses were used to assess the influence of the variables under investigation.

3.10.2. Qualitative Analysis

In qualitative studies, the researcher aims to analyze information systematically to derive meaningful conclusions and recommendations. This analysis process began with the collection of qualitative data through interviews, focus group discussions (FGD), observations, and document reviews.

The study conducted four FGD, included seven participants each and lasting about 60 to 80 minutes each, were also conducted to gather in-depth insights and providing a platform for diverse perspectives on the research topic. The discussions were guided by a semi-structured interview protocol, allowing for flexibility while ensuring key topics were covered. All sessions were audio-recorded with participants' consent to maintain the integrity of the data.

The study conducted 16 interviews, lasting about 45 to 60 minutes each, were also conducted to gather in-depth insights. These interviews followed a similar semi-structured format and focused on specific aspects of the research questions. In addition to FGDs and interviews, the researcher conducted direct observations in relevant settings, such as at 8 pre-primary schools. These observations aimed to capture real-time interactions and behaviors related to the quality of service provision. The researcher took detailed field notes during these sessions, documenting contextual elements and participant interactions that could enhance the understanding of the qualitative data.

The study also included a review of relevant documents, such as policy guidelines, curriculum materials, and reports related to the pre-primary education sector. This document review provided additional context and background information, helping to triangulate findings from interviews, FGDs, and observations. The qualitative data collected from these diverse sources were then transcribed and analyzed systematically. This included the coding process, which involved organizing the data into meaningful segments and identifying patterns and themes, as detailed in the previous sections.

The recorded data from both FGDs and interviews were transcribed verbatim to capture the participants' exact words and meanings. This transcription process involved converting audio recordings into written text, employing a line-by-line and word-by-word approach to maintain fidelity to the original content. For participants who spoke in a different language than English, the transcripts were subsequently translated into English to facilitate further analysis.

Following transcription, the qualitative data underwent a systematic coding process. Coding involves organizing transcribed and translated data into meaningful segments and assigning labels or codes to represent those segments (Creswell & David, 2018). This process aimed to develop a general understanding of the data by identifying patterns, themes, and categories.

Initial Coding: During this first step, multiple category codes were generated without restricting them to specific themes. The researcher identified emerging ideas, keywords, and phrases frequently used by participants. This open coding approach allowed for a broad exploration of the data. In this subsequent step, the researcher refined the initial codes by eliminating redundant codes, combining similar codes, and subdividing categories as necessary. Techniques such as axial coding were employed to establish connections between codes and to develop a more structured coding framework. To promote shared understanding and agreement on the meaning of the codes, the researcher created a comprehensive codebook. This codebook contained the assigned codes, brief definitions, and guidelines for their application, ensuring consistency throughout the analysis.

Finally, the qualitative data were analyzed in conjunction with the quantitative findings to triangulate the data. This integrative approach provided deeper insights into the practices and determinants of quality-of-service provision in the sampled pre-primary schools of the study region. By systematically following these steps in data preparation and analysis, the researcher derived meaningful findings from both qualitative and quantitative data, contributing to a comprehensive understanding of the research topic.

3.11. Ethical Consideration

An effort was made to make the research process professional and ethical. Since both quantitative and qualitative data were collected and analyzed in mixed methods research, both types of inquiry need to take ethical considerations into account. Getting consent, ensuring respondents' anonymity, treating respondents with respect, maintaining confidentiality, not releasing sensitive material, and protecting participants' identities are some of the ethical problems to take into account (Lyons et al., 2012).

In this respect, before proceeding to data collection, a letter of contact from Jimma University was made accessible, which helped to get authorization from data collection sites. Second, permission was secured from the study sites (Gambella Education Bureau, Woreda Education Offices, and pre-primary schools). Finally, participants were up-to-date about the purpose, nature, and procedures of the study and that their involvement was voluntary. The researcher guarantees that the data are confidential to uphold the participants' rights and prevent them from suffering any harm. More importantly, it was made clear to participants that their participation in the focus group discussion and interview is fully voluntary and that they are free to leave at any time. The use of

pseudonyms will be taken into consideration to protect participants' identities. According to the participants' willingness, suitable consent documents were created and delivered to them for signature. Indeed, the findings were reported honestly, without misrepresenting any responses given or intentionally misleading readers.

CHAPTER FOUR

4. RESULT AND DISCUSSION

This chapter describes the findings derived from the investigation of variables aligned with the study's objectives. Procedurally, the analysis encompasses the return rate of questionnaires, demographic characteristics of participants, and statistical validations. Thematic exploration further addresses the interplay between pre-primary education practices and the provision of quality service in preprimary schools, with emphasis on the influence of teacher-related factors, the role of learning resources and facilities, the influence of supervision role, the contribution of parent engagement, and the challenges that hinder the provision of quality services to children in government preprimary schools in Gambella Regional State. These variables were thoroughly examined and analyzed to provide a comprehensive understanding of the study's findings and their implications for pre-primary education in the region.

4.1. Questioner Response Rate

The research study involved the distribution of 285 questionnaires to a diverse group of participants, including 95 principals and 190 pre-primary school teachers. Additionally, the study incorporated four focus group discussions, which involved 28 participants consisting of Woreda education office heads and educational experts. Furthermore, interviews were conducted with key stakeholders, including five representatives from the Regional Education Bureau, three from the Zonal Education Department, and eight leaders from the Parent-Teacher Association.

Consequently, a total of 329 respondents contributed to the study's findings. Out of the 285 questionnaires distributed, 279 were appropriately completed and returned, while all 16 interviews and four focus group discussions were successfully conducted. Overall, the study achieved a high response rate of 97.8%, indicating the active engagement of purposively selected participants from the Woreda education office, Regional education bureau, and Zonal education department. The study's success in attracting a significant number of responses can be attributed to the direct involvement and accessibility of the targeted teachers and head teachers within the sampled schools.

4.2. Backgrounds of Respondents

This section provides an analysis of the background information obtained from the study respondents. The background information collected includes the respondents' category, gender, age, qualifications, teaching experience as a pre-primary teacher or primary school principal, training in preschool education, duration of training, and training in educational leadership.

4.2.1. Distribution of Respondents by Gender

The study examined the gender demographics of the respondents, recognizing the potential impact of gender on the results. As shown in Figure 5, the respondents were asked to identify their gender, and the findings were presented accordingly.

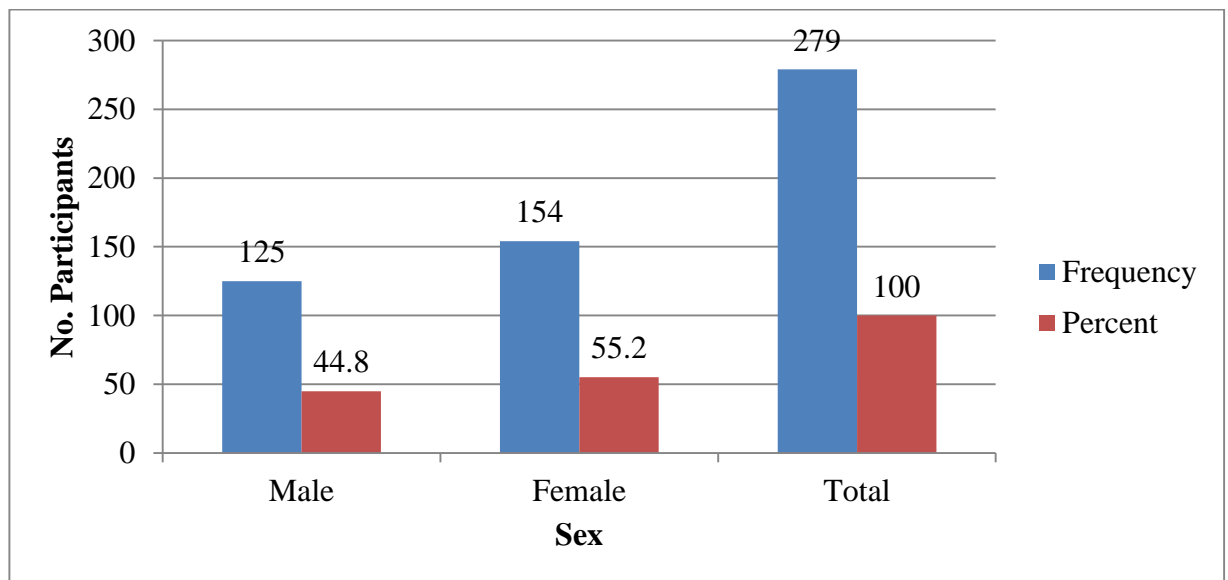


Figure 5. Distribution of Respondents by Gender

The result shown in Figure 5 of respondents by gender in this study reveals that out of the 279 participants, 44.8% (125) were male, while 55.2% (154) were female. This gender breakdown indicates a relatively balanced representation of male and female respondents, with a slight majority of female participants. The inclusion of both male and female respondents in the study is important as it allows for a more comprehensive understanding of the research topic. By incorporating diverse perspectives from both genders, the study can capture a broader range of experiences, opinions, and insights. It is worth noting that the higher representation of female respondents may reflect the gender composition of the target population, such as the pre-primary teaching profession or the educational leadership roles of principals. This gender distribution can

influence the study's findings by providing a greater emphasis on the experiences and perspectives of female participants. This analysis suggests that while the current gender distribution shows better balance than many systems, targeted efforts to support both male and female teachers with gender-responsive pedagogies could further enhance quality. The findings underscore the importance of considering gender dynamics in pre-primary teacher deployment and professional development programs.

4.2.2. Distribution of Respondents by Age

Figure 6 presents the findings of the study regarding the age distribution of the respondents, which was deemed an important factor for analysis. Participants were requested to indicate their age groups, and the results are summarized in the figure.

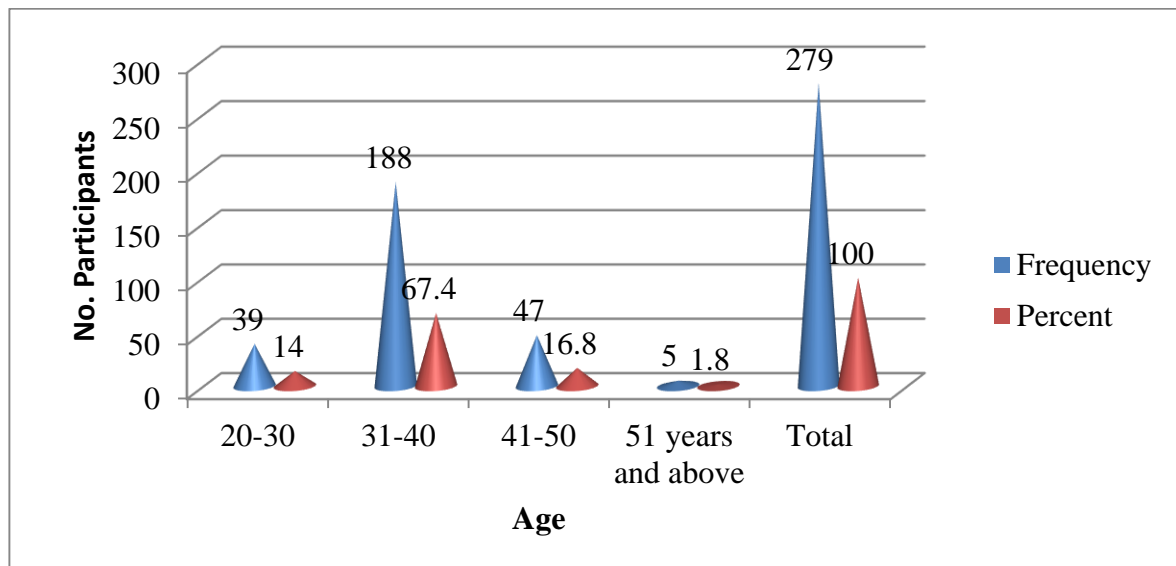


Figure 6. Distribution of Respondents by Age

The age distribution of participants in the study is presented in Figure 6. The respondents were divided into four age groups: 20-30, 31-40, 41-50, and 51 years and above.

The largest age group among the participants was 31-40, accounting for 67.4% (188) of the total respondents. This finding suggests that a significant portion of the study sample falls within the age range of early to mid-career professionals.

The second-largest age group was 41-50, constituting 16.8% (47) of the participants. These individuals can be considered experienced professionals who have likely accumulated substantial knowledge and expertise in their respective roles.

The age group of 20-30 represented 14% (39) of the respondents. This group likely consists of younger professionals who are relatively new to their careers or have recently entered the pre-primary education field. Their perspectives and experiences may differ from those of their older counterparts, providing valuable insights into the challenges and opportunities faced by early-career professionals.

A small proportion of respondents, 1.8% (5), belonged to the age group of 51 years and above. These individuals can be considered as senior professionals who have accumulated extensive experience and may hold leadership positions within the pre-primary education sector. Their perspectives can contribute valuable insights based on their extensive involvement and longevity in the field.

The findings of the study's age distribution highlight the range of experiences and perspectives represented by the participants. By considering the diverse age groups, the study can capture a broader understanding of the research topic and its implications across different stages of professional development. Researchers should take into account the potential influence of age on the study's findings and interpretations, as different age groups may contribute unique perspectives and experiences.

4.2.3. Distribution of Respondents by Educational Qualification

The respondents' educational backgrounds were analyzed, with the results displayed in Figure 7.

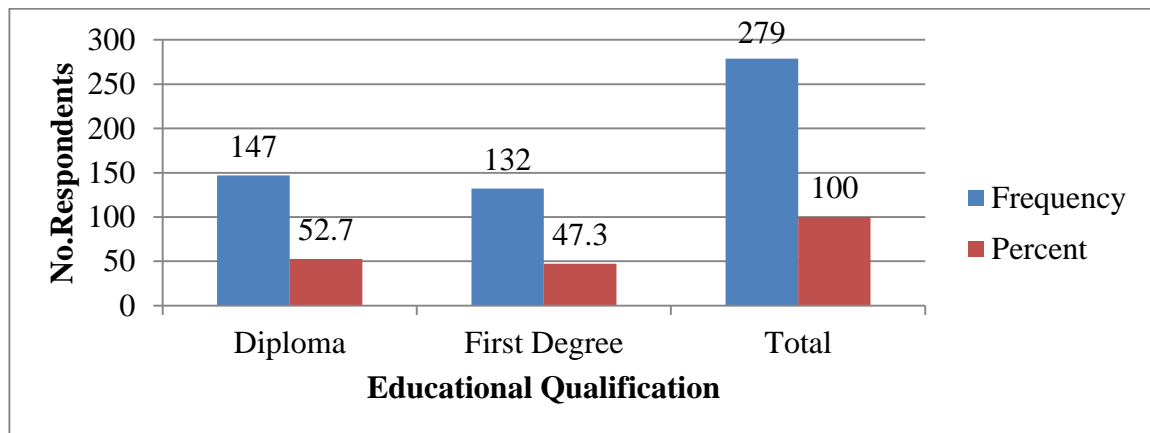


Figure 7. Educational Qualifications of Respondents

The analysis of respondents' educational backgrounds reveals critical insights about teacher preparedness for early childhood education. As shown in Figure 7, the qualification distribution indicates that 52.7% (n=147) of respondents are diploma holders, while 47.3% (n=132) hold bachelor's degrees. However, a deeper examination uncovers a significant systemic challenge: the majority of these qualifications are focused on primary education rather than specialized in early childhood development. This aligns with global findings that subject-specialized primary teachers often lack developmentally appropriate practices for 3-6-year-olds (NAEYC, 2020).

The educational qualifications of the respondents are crucial variables that impact their perspectives, knowledge, and skills related to pre-primary education. Research indicates that teachers' educational backgrounds can significantly influence student learning outcomes (Darling-Hammond, 2000). The predominance of diploma holders may reflect an urgent need for qualified educators, but it also raises important questions about the depth of pedagogical training received.

The high percentage of diploma holders prompts scrutiny regarding whether this level of qualification is sufficient for effective teaching at the pre-primary level. While diploma programs provide foundational knowledge, the complexities of early childhood education may require more advanced pedagogical skills. The absence of robust subject matter expertise at this foundational stage could hinder the quality of education provided, as first-degree holders often possess a more comprehensive understanding of educational theories and practices.

At the pre-primary level, subject matter expertise is essential, but it should be coupled with an understanding of child development and effective teaching methodologies. The appropriate qualifications for pre-primary teachers may involve a combination of early childhood education and practical training, ensuring that educators are well-equipped to support young learners' developmental needs.

Overall, the findings highlight the prevalence of diploma holders among the respondents, reflecting the educational landscape in the Gambella Region. While these qualifications are significant, they also point to potential challenges in ensuring high-quality pre-primary education. The implications of having a largely diploma-qualified teaching staff, many of whom lack specific training in early childhood education, must be addressed to enhance the quality of educational outcomes for young learners.

4.2.4. Distribution of Respondents by Teaching Experience of Pre-primary School Teacher

The respondents' teaching experience as pre-primary teachers was examined, with the results presented in Table 3.

Table 3. Distribution of Pre-primary Teachers by Years of Teaching Experience

| Years of experience | Frequency | Percent |
|---------------------|------------|------------|
| 1-5 | 146 | 78.4 |
| 6-10 | 28 | 15 |
| 11-15 | 9 | 5 |
| 16-20 | 3 | 1.6 |
| 21 and above | 0 | 0 |
| Total | 186 | 100 |

The data in Table 3 reveals a significant trend in the teaching experience of pre-primary teachers, and the majority of pre-primary teachers (78.4%) have 1 to 5 years of teaching experience. This suggests that the workforce is relatively new, which may indicate a fresh influx of educators into the pre-primary education sector. The high percentage of early-career teachers could reflect recent educational reforms or initiatives aimed at expanding pre-primary education.

However, only 15% of teachers fall within the 6 to 10 years of experience range, while a mere 5% have 11 to 15 years of experience. This disparity raises concerns about the depth of experiential knowledge in the sector, since mid-career teachers often play a critical role in mentoring and stabilizing teaching practices. Furthermore, the scarcity of expert educators with none exceeding 21 years of experience and only 1.6% having 16 to 20 years exacerbates this issue, as seasoned teachers typically contribute to institutional memory and pedagogical continuity.

Given these findings, the current distribution underscores a pressing need for targeted professional development programs. Since the majority of teachers are early-career educators, ongoing training and mentorship are essential not only to enhance their skills but also to safeguard educational quality for young learners. Moreover, the low representation of experienced teachers suggests systemic challenges in retention and career advancement. For instance, factors such as job satisfaction, professional growth opportunities, and organizational support may influence long-term engagement in the field. Therefore, while the influx of new teachers brings energy and

potential for innovation, the lack of experienced educators highlights the importance of strengthening support systems. To address this, policymakers must prioritize retention strategies, mentorship frameworks, and tailored training programs.

4.2.5. Distribution of Respondents by Experience as Pre-Primary Principal

The respondents' experience as pre-primary/primary school principals was investigated, with the results shown in Table 4.

Table 4. Distribution of Respondents by Experience as Pre-Primary School Principal

| Years | Frequency | Percent |
|--------------|-----------|---------|
| 1-5 | 51 | 55 |
| 6-10 | 30 | 32 |
| 11-15 | 11 | 12 |
| 16-20 | 2 | 1 |
| 21 and above | 0 | |
| Total | 94 | 100.0 |

The data in Table 4 reveals insightful trends regarding the experience levels of pre-primary and primary school principals among the respondents.

The largest group of respondents, comprising 51 out of 94, has between 1 to 5 years of experience. This indicates a significant presence of newcomers in the principalship role, suggesting that fresh perspectives are currently shaping leadership in pre-primary education. This influx of less experienced leaders may bring innovative ideas but could also necessitate strong support systems to guide them effectively.

A notable portion of respondents, 30 individuals, fall into the 6 to 10 years experience bracket. This group represents a blend of enthusiasm and emerging expertise, striking a balance that could enhance the effectiveness of school leadership. Their experience may provide valuable insights while still being open to new approaches. Only 11 respondents have 11 to 15 years of experience, indicating a decline in representation as leaders gain more tenure. This trend may suggest that principals who achieve this level of experience often transition out of the role or into different educational positions, reflecting potential challenges in job satisfaction or career progression.

With just 2 respondents in the 16 to 20 years category, it is evident that few principals remain in their roles for extended periods beyond 15 years. This could point to issues related to job retention or a natural progression towards retirement, raising questions about the sustainability of leadership in this sector. The absence of respondents with over 21 years of experience highlights a significant gap in long-term leadership. This lack of representation may have implications for institutional continuity and the retention of critical knowledge within educational settings.

4.2.6. Responses of Respondents to Training in Pre-primary Education

The respondents' training in pre-primary education was assessed, with the results displayed in Figure 8.

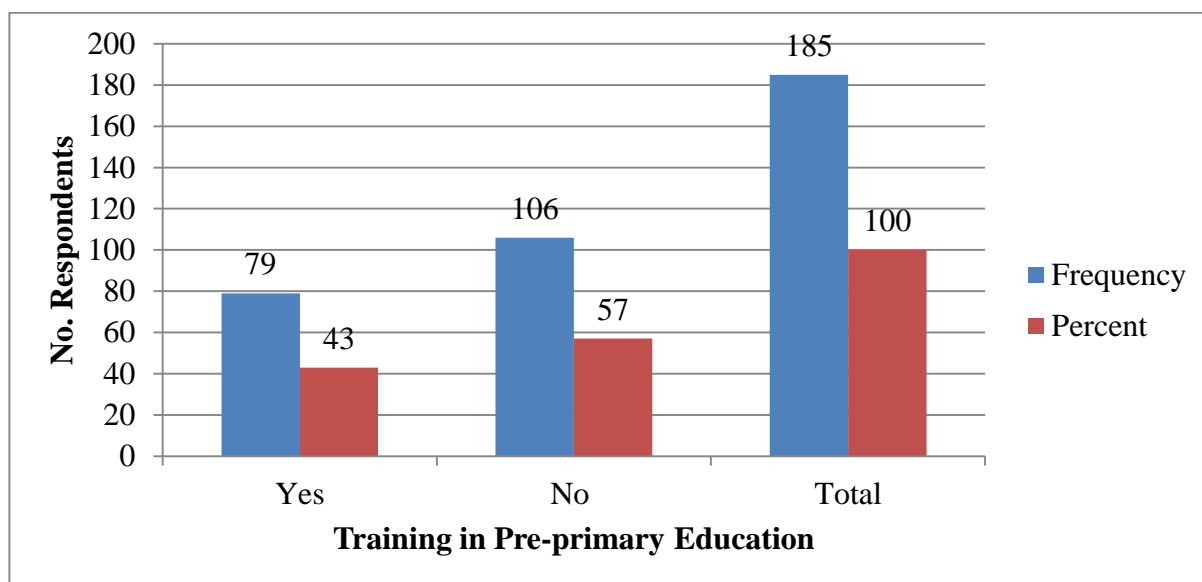


Figure 8. Responses of Respondents to Training in Pre-primary Education

Figure 8 presents the responses of respondents regarding their training in pre-primary education. The majority of respondents, 57% (106 respondents), indicated that they had not received training in pre-primary education. Conversely, 43% (79 respondents) reported that they had received training in this area. The findings suggest that a significant proportion of respondents lacked formal training in pre-primary education. This is a concerning trend, as pre-primary education is a critical phase in a child's educational journey, and educators without specialized training in this area may not be adequately equipped to provide optimal support to young learners.

The absence of training in pre-primary education may have implications for the quality of education provided to young children. The disparity in training levels between respondents may have

implications for the study's findings, as those with training in pre-primary education may have provided more informed responses to questions related to early childhood education. Furthermore, the lack of training in this area may be a contributing factor to the challenges and gaps identified in the study.

4.2.7. Responses of Respondents on Duration of the Training in Pre-primary Education

The duration of the respondents' training in pre-primary education was explored, with the results presented in Table 5.

Table 5. Distribution of Respondents on Duration of the Training in Pre-primary Education

| Duration of the training | Frequency | Percent |
|--------------------------|-----------|---------|
| One month | 63 | 80 |
| Three months | 4 | 5 |
| Six months | | |
| One year | | |
| Greater than one year | 12 | 15 |
| Total | 79 | 100.0 |

Table 5 summarizes the responses regarding the duration of training received by pre-primary education teachers. The analysis shows that 80% (63 respondents) indicated their training lasted only one month. While this suggests that many pre-primary school teachers have received some training, the shortness of this instruction raises concerns about its effectiveness in equipping them for the complexities of teaching young children.

Additionally, only 5% (4 respondents) reported that their training lasted three months, and notably, no respondents indicated any training of six months or one year. This absence of longer training options highlights a significant gap in the education system's capacity to provide comprehensive professional development for pre-primary educators.

The predominance of one-month training suggests that educators may have received only a brief introduction to key concepts in early childhood education. Such short training periods may inadequately cover vital areas such as child development theories, effective pedagogical strategies, and curriculum design, which are crucial for delivering high-quality education to young children.

A notable 15% (12 respondents) reported training durations greater than one year. This group likely received more comprehensive training, equipping them with deeper knowledge and skills relevant to pre-primary education. Their longer exposure may positively influence their teaching practices and effectiveness in the classroom. The findings suggest that the majority of educators may lack the necessary depth of training to effectively address the unique needs of pre-primary learners. The short duration of training could contribute to gaps in knowledge and pedagogical skills, potentially affecting the quality of education that children receive.

The duration of training likely influences the responses provided by educators in the study. Those with more extensive training may offer more insightful and informed perspectives on early childhood education, while those with shorter training periods might struggle to apply best practices and theoretical knowledge in their teaching.

The analysis of the duration of training in pre-primary education highlights significant concerns regarding the preparedness of educators in this field. While many have received some training, the predominance of short-duration programs suggests a potential inadequacy in equipping teachers with the necessary skills and knowledge. Addressing this gap through the development of comprehensive training programs is vital for ensuring high-quality pre-primary education and improving the overall effectiveness of educators. This is essential for fostering better learning experiences and outcomes for young children.

4.2.8. Responses of Respondents on Training in Education Leadership

The respondents' training in education leadership was examined, with the results shown in Table 6.

Table 6. Responses of Respondents on Training in Education Leadership

| Training in Education Leadership | Frequency | Percent |
|-----------------------------------|-----------|---------|
| Short-term training | 8 | 9 |
| Professional development courses | 2 | 2 |
| Diploma in Educational Leadership | 4 | 4 |
| Degree in educational leadership | 80 | 85 |
| Total | 94 | 100.0 |

Table 6 presents the responses of respondents regarding their training in education leadership. The analysis of this table reveals the following insights: The majority of respondents, 85% (80 respondents), reported that they held a degree in educational leadership. This is a significant

proportion, indicating that most of the respondents have a formal education in leadership, which is a critical component of effective school administration.

A smaller proportion of respondents, 4% (4 respondents), reported that they held a diploma in educational leadership. This suggests that some respondents may have pursued a shorter or more specialized program in educational leadership. Only 2% (2 respondents) reported that they had participated in professional development courses in educational leadership, while 9% (8 respondents) reported that they had received short-term training in this area.

The findings suggest that the majority of respondents have a strong foundation in educational leadership, which is essential for effective school administration. The high proportion of respondents with a degree in educational leadership indicates that they have had a comprehensive education in leadership, which is likely to have equipped them with the necessary skills and knowledge to manage schools effectively. The presence of respondents with diplomas in educational leadership and those who have participated in professional development courses and short-term training programs suggests that there are multiple pathways to acquiring leadership skills and knowledge. However, the dominance of degree holders in educational leadership suggests that formal education is the primary route to acquiring leadership expertise.

The training in education leadership has implications for the study's findings, as respondents with formal education in leadership may have provided more informed responses to questions related to school administration and leadership. Furthermore, the lack of training in education leadership may be a contributing factor to the challenges and gaps identified in the study.

4.3. Basic Tests for Statistical Assumptions

This section provides an examination of various tests conducted to assess the assumptions of linear and multiple regressions. The purpose of these tests was to ensure that the fundamental requirements for the parameters were met, including normality, linearity, multicollinearity, and homoscedasticity.

4.3.1 Normality Tests

Normality testing is a critical step in validating assumptions for parametric statistical methods, including regression, ANOVA, and t-tests, which presume that data derive from a normally

distributed population. This study employed the Shapiro-Wilk (SW) test to evaluate normality, selected for its superior statistical power, particularly for complete samples.

With a sample size of 285, this study aligns with recommendations for applying the SW test, which is deemed reliable for samples exceeding $n = 200$. The SW test generated a statistic (W) ranging from 0 to 1, where values approaching 1 indicate stronger adherence to normality. The computed W statistics for all variables indicated no significant deviation from normality, with W values remaining close to 1. Graphical assessments, including P-P plots and residual analyses, further validated the normality assumption. While perfect normality is rare, the convergence of SW test results and visual diagnostics supports the suitability of parametric analyses for this dataset.

4.3.2 Test of Linearity

The assumption of linearity between the independent and dependent variables was examined using scatter plots. The analysis revealed a linear relationship between the independent variables and the quality of service provision in pre-primary schools. Significant correlation coefficients indicated a linear relationship, justifying the use of linear regression.

4.3.3 Tests for Multicollinearity

Multicollinearity can arise when predictor variables are highly correlated. In this study, correlation coefficients and variance inflation factors (VIFs) were examined for multicollinearity issues. The results showed no significant multicollinearity problems, as tolerance values and VIF values remained within acceptable ranges.

4.3.4 Homoscedasticity Test

The homogeneity test indicated the presence of homoscedasticity, confirming that the variance of errors is constant across all levels of the independent variables. The correlation matrix demonstrated significant correlations among the independent variables and the dependent variable, supporting the assumption of homoscedasticity.

4.4. Data Presentation and Analysis

This section outlines the data presentation and analysis methods employed in this study, focusing on a convergent design framework. The analysis began with the quantitative component, where statistical techniques were applied to interpret numerical data collected from surveys. This

quantitative analysis identified patterns, correlations, and significant factors influencing the quality of service provision of pre-primary education in Gambella Regional State.

Following the quantitative analysis, qualitative data collected through interviews, focus group discussions, observations, and document reviews were analyzed. Thematic coding was employed to identify key themes and insights from these qualitative sources, providing a deeper understanding of the contextual factors affecting pre-primary education quality.

Finally, the integration of quantitative and qualitative results facilitated triangulation, enabling a comprehensive interpretation of the data. By comparing and contrasting findings from both analyses, the study presented a holistic view of the determinants of quality service provision in pre-primary education. This integrative approach strengthened the validity of the results and enriched the understanding of how various factors interact to influence educational outcomes for children in the region.

4.4.1 Quantitative Data Analysis

The overall existing practice of pre-primary Education provides a comprehensive assessment of the prevailing practices in pre-primary education. It encompasses a detailed analysis of the following areas: existing practices of pre-primary schools, pre-primary school leadership, and the practices involved in the attachments of pre-primary schools to primary schools. The first purpose of this study was to examine the extent to which pre-primary schools are equipped with the necessary trained workforce, learning materials, and overall indoor/outdoor environments. The objective of this study was to assess the current practices of pre-primary education, including leadership and monitoring practices within pre-primary schools. Furthermore, the study sought to explore the attachments of pre-primary education with primary schools and assess the overall status of quality service provision.

4.4.1.1. Existing Practices of Pre-Primary Education

Data collected on the existing practice of pre-primary education in the Gambella Regional State, particularly from points of existing practices of pre-primary schools, were descriptively analyzed in quantitative forms. This analysis helps to identify effective practices that contribute to positive educational outcomes for pre-primary education.

Table 7. Current Implementation Practices in Pre-primary Schools

| No. | Practice Item | N | M | SD |
|-----|------------------------------------------------|-----|-------------|-------------|
| 1 | The school has implementation guidelines | 279 | 2.7 | 1.21 |
| 2 | Provides age-appropriate materials | 279 | 2.31 | 2.16 |
| 3 | The curriculum includes interactive activities | 279 | 2.21 | 0.99 |
| 4 | Complies with the MoE teacher-student ratio | 279 | 2.02 | 0.97 |
| 5 | Adequate classroom size | 279 | 1.77 | 1.01 |
| 6 | Classrooms are well-ventilated | 279 | 1.74 | 0.95 |
| 7 | Age-appropriate furniture | 279 | 1.68 | 0.94 |
| | Composite average | | 2.36 | 1.34 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

The data presented in Table 7, placed above, offers valuable insights into the mean ratings and standard deviations of items 1-7. These findings shed light on the prevailing perceptions and levels of consensus among respondents regarding various aspects of current practices in pre-primary schools. Notably, the mean ratings for all items fall below the threshold of 2.50, except for item one, indicating widespread dissatisfaction with the existing practices of pre-primary education.

The overall mean score for current implementation practices in pre-primary schools in the Gambella Regional State is 2.10, indicating a general dissatisfaction with existing practices. This aggregated mean provides a clear summary of respondents' perceptions regarding various aspects of pre-primary education.

Analyzing the aggregated data is important for several reasons. First, it offers a holistic overview of the effectiveness of pre-primary education practices. A mean below the critical threshold of 2.50 signals systemic issues that need to be addressed. Second, it is relevant to the research questions that focus on identifying effective practices contributing to positive educational outcomes. A low aggregated mean indicates that current practices are insufficient and highlights the need for further examination of specific areas affecting educational quality.

The findings from the aggregated data reveal several key insights Regarding guidelines for implementation, the mean score is 2.70, suggesting some acknowledgment of existing guidelines,

but this is not enough to ensure consistent and effective practices. Regarding age-appropriate materials, a mean of 2.31 indicates a significant gap in the availability of suitable resources that are crucial for effective teaching and learning. In terms of interactive curriculum activities, the mean score of 2.21 suggests a lack of engaging activities in the curriculum, which can hinder children's active participation and development.

The teacher-student ratio has a mean of 2.02, revealing concerns about the ability of teachers to provide individualized attention, which is essential for early childhood education. Classroom size and ventilation are also problematic, with mean ratings of 1.77 and 1.74 respectively, reflecting serious deficiencies in the physical learning environment that impact children's comfort and health. Finally, the mean score for age-appropriate furniture is 1.68, highlighting the need for furniture that supports the physical development of young learners. This overview allows for targeted interventions that align with the research questions, emphasizing the need to enhance the quality of pre-primary education to promote better educational outcomes for young children.

4.4.1.2. Leadership Practices of Preprimary Schools

Table 8. Existing Leadership Practices of Preprimary Schools

| No | Item Description | N | M | SD |
|----|------------------------------------------------------------------------------------------------------|------------|-------------|-------------|
| 1 | The school leaders regularly monitor teaching and learning in the pre-primary school. | 279 | 2.10 | 1.12 |
| 2 | The school leaders inform the goals of the pre-primary school to the staff. | 279 | 2.03 | 1.11 |
| 3 | The school leaders actively involve stakeholders in decision-making. | 279 | 1.97 | 1.17 |
| 4 | The school leaders ask for support from different bodies to meet the needs of pre-primary education. | 279 | 2.06 | 1.20 |
| | Average mean | 279 | 2.10 | 1.15 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

The data presented in Table 8 reveals that the aggregated mean score of 2.10 (on a Likert 1–5 scale) suggests that leadership practices in pre-primary schools are generally weak or only moderately

present. Since an average score below the midpoint would indicate balanced leadership engagement, the current score falls below expectations, implying that school leaders are not consistently demonstrating strong leadership in key areas.

The fact that all individual item means (ranging from 1.97 to 2.10) are similarly low reinforces that no single leadership practice stands out as a strength. The close clustering of means (all near 2.0) suggests that no single issue is drastically worse than others; rather, leadership is uniformly lacking across multiple dimensions. This could indicate systemic challenges, such as insufficient training, lack of accountability, or weak policy frameworks supporting pre-primary leadership.

The findings also highlight the importance of providing specialized training and development opportunities for principals and other school leaders in pre-primary education. This training can focus on developing the necessary knowledge and skills to create a nurturing and stimulating learning environment for young children. Additionally, creating separate administrative structures for pre-primary schools can help ensure that they receive the necessary attention and resources to meet the unique needs of young children.

4.4.1.3. Attachment of Preprimary School to Primary School

Table 9. Attachment of Preprimary School to Primary School

| No | Item Description | N | Mean | Std. D |
|----|----------------------------------------------------------------------------------------------------------|------------|-------------|-------------|
| 1 | The integration of pre-primary schools with primary schools creates challenges in teaching and learning. | 279 | 3.73 | 1.10 |
| 2 | The attachment of pre-primary schools to primary schools influences pre-primary education quality. | 279 | 3.84 | 0.94 |
| 3 | The integration of pre-primary schools with primary schools presents leadership challenges. | 279 | 3.25 | 0.97 |
| 4 | Pre-primary schools should be established separately from primary schools. | 279 | 3.37 | 1.46 |
| 5 | The attachment of pre-primary schools to primary schools facilitates smoother transitions for children. | 279 | 1.97 | 1.11 |
| | Average mean | 279 | 3.23 | 1.15 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

Table 9 presents data on the attachment of pre-primary schools to primary schools, revealing insights into respondents' perceptions regarding this relationship. The average mean score across all items is 3.23, indicating great level of agreement with the statements provided.

The item concerning the problems associated with the attachment of pre-primary to primary schools received a mean score of 3.73. This suggests that respondents generally perceive significant issues impacting the teaching and learning processes for children within this attachment framework. The statement that the attachment influences pre-primary schools garnered a mean score of 3.84. This high score indicates a strong belief among respondents that the attachment has a considerable influence on the functioning of pre-primary education.

The mean score for challenges related to leadership due to the attachment was 3.25. This score reflects a recognition of leadership difficulties arising from the integration of pre-primary education into primary school systems. Respondents expressed their agreement with the statement suggesting that it is beneficial to establish pre-primary schools separately from primary schools, as indicated by a mean score of 3.37. This highlights a perspective that separation may be advantageous for educational outcomes.

Conversely, the item stating that the attachment enhances the transition process for children received a low mean score of 1.97. This suggests a prevalent belief that the current attachment does not facilitate a smooth transition for children moving from pre-primary to primary education.

Overall, the data indicate mixed perceptions regarding the attachment of pre-primary schools to primary schools. While there is acknowledgment of problems and influences associated with this relationship, respondents also express a desire for separate establishments to improve educational quality and transition processes. The average mean score of 3.23 reflects these nuanced views and underscores the need for further investigation into how these attachments affect pre-primary education outcomes.

4.4.1.4. Status of Quality Service Provision in Preprimary Schools of Gambella Regional State

The data collected for the dependent variable goes through rigorous descriptive analysis. A data collection was employed, by questionnaires. The opinions of the respondents regarding the current state of quality service provision in pre-primary schools of Gambella Regional State were explicitly solicited through the questionnaires. The mean scores of each opinion were then compared to a pre-determined cutoff mean of 2.50, and composite mean scores were calculated for interpretation. The criterion of 2.50 was established as a neutral value, where any mean rating above this value indicates that the respondents agreed with the issue or statement, and any rating below this value indicates that the respondents disagreed.

Table 10. Status of Quality Service Provision in Pre-Primary Schools

| No. | Item Description | N | M | SD |
|-----|----------------------------------------------------|------------|-------------|-------------|
| 1 | Improvement in children's reading skills | 279 | 2.29 | 1.32 |
| 2 | Improvement in recognizing alphabet letters | 279 | 2.25 | 1.20 |
| 3 | Children's interest in learning/attendance | 279 | 2.25 | 1.17 |
| 4 | Improvement in average class performance | 279 | 2.25 | 1.07 |
| 5 | Stakeholder satisfaction with school services | 279 | 2.01 | 1.09 |
| 6 | Improvement in student retention | 279 | 1.96 | 1.04 |
| 7 | Curriculum inclusivity | 279 | 1.91 | 1.05 |
| 8 | Engagement of students with diverse learning needs | 279 | 2.21 | 1.20 |
| | Average mean | 279 | 2.14 | 1.14 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

The data presented in Table 10 provides valuable insights into the mean ratings and standard deviations for items 1-8, shedding light on the perceptions of respondents regarding various aspects

of quality service provision in pre-primary schools. The average mean score of 2.14 across eight key indicators, falling notably below the 2.50 benchmark for satisfactory performance. This overall score suggests systemic weaknesses in quality service provision in pre-primary schools of Gambella Regional State. However, it is important to consider the presence of observational data that can complement the subjective reporting used in the study, providing a more nuanced understanding of quality service provision in pre-primary schools

The scores for literacy-related indicators, 2.29 for reading skills and 2.25 for alphabet recognition, still indicate inadequate performance, highlighting fundamental gaps in early literacy instruction. While these scores are slightly better than those in other areas, they likely reflect respondents' perceptions rather than measured competencies. The observational data collected provides insights into classroom interactions and instructional methods, which can help verify actual learning gains and identify specific areas needing improvement.

Similarly, the scores for children's interest in learning and average class performance, both at 2.25, suggest that current educational approaches fail to consistently engage young learners or produce satisfactory academic outcomes. The observational data allow for a closer examination of teaching quality and curriculum effectiveness, helping to determine whether these low scores stem from the instructional methods, curriculum design, or other environmental factors.

Particularly concerning are the low scores in critical areas: stakeholder satisfaction mean score of 2.01 indicates eroding confidence in the education system, while a score of 1.96 for child retention suggests that schools struggle to maintain enrollment. Additionally, the mean score of 1.91 for curriculum inclusivity reveals a failure to meet the diverse needs of learners. Although the slightly better score for engaging diverse learners the mean score of 2.21 highlights some efforts, it still falls short of adequacy, indicating inconsistent implementation of inclusive practices.

The consistent pattern of low scores across all indicators, despite the limitations of relying on subjective reporting, strongly suggests that Gambella's pre-primary education system requires comprehensive reform to meet basic quality service provision standards. The incorporation of observational data not only addresses a key limitation of the study but also enriches the analysis, providing actionable insights for future assessments. Moving forward, evaluations must combine perception surveys with direct learning measurements and observational data to obtain a more accurate and holistic picture of educational quality.

4.4.1.6. Teacher-related Factors in Quality Service Provision in Pre-primary Schools

In the previous sections, an attempt was made to report the results related to output that is vital in ensuring the quality of education in pre-primary schools. In this section, an attempt was made to present data on the issues relating to teacher-related factors in preprimary education. Data obtained from questionnaire responses of pre-primary teachers and principals are presented below.

The respondents were asked to express their level of agreement or disagreement on a Likert scale ranging from 1 to 5, where 1 represented "Strongly Disagree," 2 represented "Disagree," 3 represented "Neutral," 4 represented "Agree," and 5 represented "Strongly Agree." The mean scores and standard deviations of each opinion were compared with the cutoff mean of 2.50 and the respective composite mean scores for interpretation, as presented in Table 4.16. The cutoff mean of 2.50 was considered as a hypothesized mean against which the mean ratings of all were assessed for their significance. This means that if the mean ratings of the respondents were higher than the cutoff mean of 2.50, then it can be assumed that respondents agreed with the particular issue item and vice versa.

Table 11. Teacher-Related Factors in Quality Service Provision in Pre-Primary School

| No | Item Description | N | M | SD |
|----|----------------------------------------------------------------------------------------------------------------|------------|-------------|-------------|
| 1 | The teachers in the pre-primary school have an understanding of early childhood learning. | 279 | 1.91 | 1.06 |
| 2 | Teachers have appropriate qualifications in pre-primary education. | 279 | 1.93 | 1.05 |
| 3 | Teachers have experience in providing quality services to children. | 279 | 1.89 | .976 |
| 4 | Teachers address the individual learning needs of children. | 279 | 1.99 | 1.12 |
| 5 | Teachers use play-based methods that are suitable for children's cognitive, social, and emotional development. | 279 | 2.04 | 1.10 |
| 6 | Teachers are managing their time to ensure learning for children. | 279 | 1.83 | .99 |
| 7 | Teachers are managing resources to ensure learning for children. | 279 | 1.88 | 1.10 |
| 8 | The teachers in the pre-primary school use developmentally appropriate teaching methods. | 279 | 1.86 | .90 |
| 9 | The teachers in the pre-primary school provide individualized support to each child's learning needs. | 279 | 2.08 | 1.11 |
| 10 | Teachers communicate with parents to support children's learning. | 279 | 1.99 | 1.12 |
| 11 | Teachers have access to professional development opportunities. | 279 | 1.79 | 1.14 |
| | Average mean | 279 | 1.92 | 1.06 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

Table 11 presents the results related to teacher-related factors in the provision of quality service in pre-primary schools. The mean ratings and standard deviations provide insights into the perceptions of the respondents regarding various aspects of teachers' roles and competencies in delivering quality education to young learners. The findings reveal significant concerns about teacher capacity in delivering quality pre-primary education, with all measured dimensions scoring below satisfactory levels (average mean = 1.92 on what appears to be a 5-point scale). This consistently low performance across all eleven indicators suggests systemic challenges in the teaching workforce that directly influence quality service provision in pre-primary schools.

Teachers demonstrate concerning limitations in core competencies, with particularly weak scores in understanding early childhood learning the mean score of 1.91 and possessing appropriate qualifications the mean score of 1.93. The lowest score appears in professional development access the mean score of 1.79, indicating a critical lack of ongoing training opportunities that likely perpetuates other competency gaps. These foundational shortcomings manifest in classroom practices, as seen in the poor ratings for use of developmentally appropriate methods the mean score of 1.86 and play-based approaches the mean score of 2.04.

Instructional delivery suffers from multiple weaknesses, with teachers struggling to address individual learning needs the mean score of 1.99 and provide individualized support the mean score of 2.08. While time management scores slightly better the mean score of 1.83, the overall picture suggests teachers lack both the skills and resources the mean score of 1.88 to create effective learning environments. The uniformly low scores across all measured constructs revealed challenges of pre-primary instructional quality. Particularly alarming is the combination of weak initial qualifications, limited professional development, and inadequate application of child-centered pedagogies.

The analysis highlights a concerning landscape of teacher competencies in pre-primary education, with an overall mean score reflecting significant deficiencies across multiple constructs. The combination of weak initial qualifications, limited access to professional development, and inadequate application of child-centered pedagogies poses serious challenges to instructional quality. Addressing these issues through targeted training, improved resource allocation, and policy

enhancements is crucial for fostering a more effective pre-primary education system that can meet the needs of young learners.

4.4.1.6.1. Inferential analysis of Teacher Related Factors and Quality Service Provision

This study examines the relationship between teacher’s related factors, and quality service provision in government pre-primary schools in Gambella Regional State, Ethiopia, using correlation and linear regression analysis.

The relationship between teachers' related factors and the level of quality service provision was determined by the Pearson Correlation coefficient. According to the analysis, +1 signaled a positive perfect correlation, 0.001 - 0.250 a weak correlation, 0.251 - 0.500 semi but strong correlation, 0.501 - 0.750 strong correlation, and lastly 0.751 - 1.000 very strong correlation.

Table 12. Correlation between Teacher-Related Factors and Quality Service Provision

| Correlations | | | |
|--------------------------------------------------------------|---------------------|--------------------|------------------------------|
| | | Quality Service DV | Teachers Related Factors IDV |
| Quality Service DV | Pearson Correlation | 1 | .751** |
| | Sig. (2-tailed) | | .000 |
| | N | 279 | 279 |
| Teachers Related Factors IDV | Pearson Correlation | .751** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 279 | 279 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

In Table 12, the output indicates that teacher-related factors had a strong positive significant relationship with the level of quality service provision in government pre-primary schools in Gambella Regional State. The Pearson correlation coefficient between the quality of service provision and teacher-related factors is ($r=0.751^{**}$), indicating a strong positive correlation. This suggests that there is a meaningful relationship between these variables.

The utilization of a simple linear regression model was employed to examine the influence of teacher-related factors on the provision of quality services in government pre-primary schools of Gambella Regional State. The study objective was to determine how teacher-related factors influence the provision of quality service in government pre-primary schools.

The indicators used to measure teacher-related factors included: teachers' understanding of early childhood learning, teachers' appropriate qualifications in preprimary education, teachers' experience in providing quality services to children, teachers' ability to address individual learning needs of children, teachers' use of play-based methods, teachers' engagement in effective communication with parents to support children's learning, and teachers' access to professional development opportunities.

The indicators for the provision of quality service in pre-primary schools were improvement in reading skills, improvement in recognizing alphabet letters, interest in learning, improvements in class performance, expression of satisfaction of stakeholders, and improvements in retention of children in the pre-primary school. A linear regression model was used to analyze how teacher-related factors affect the quality of services provided in government pre-primary schools located in the Gambella Regional State:

$$y = a + b_2X_2 + e$$

Where: y - Level of Quality Service Provision in Preprimary School

X₂ – Teacher-related factors

b₂ - Regression Coefficient

a- Regression constant

ε - Error term

Table 13. Model Summary for Teacher-Related Factors and Quality Service Provision

| Model Summary | | | | |
|----------------------------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .751 ^a | .564 | .563 | .55302 |
| a. Predictors: (Constant), Teachers' related factors IDV | | | | |

The findings in Table 13 reveal a correlation between teachers' related factors and the Performance Level of Quality Service Provision in primary schools, as indicated by an R-value of 0.751. This correlation suggests a strong influence of stakeholder capacity building on the effectiveness of the

literacy and numeracy educational program. The R-squared value of 0.564 indicates that approximately 56.4% of the variability in the program's performance can be attributed to the teacher-related factors included in the model. However, it's important to acknowledge that there are likely other factors beyond those considered in this analysis that contribute to the remaining 44.6% of the variation. Further investigation is required to identify and incorporate these additional factors for a more comprehensive understanding.

Table 14. ANOVA for Teacher-related Factors and Quality Service Provision

| ANOVA ^a | | | | | | |
|---------------------------------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 109.792 | 1 | 109.792 | 358.990 | .000 ^b |
| | Residual | 84.716 | 277 | .306 | | |
| | Total | 194.508 | 278 | | | |
| a. Dependent Variable: Quality service DV | | | | | | |
| b. Predictors: (Constant), Teachers Related Factors IDV | | | | | | |

Table 14 displays the results of the ANOVA analysis, which aimed to assess the fitness of the regression model in explaining the relationship between teacher-related factors and the performance level of quality service provision in pre-primary schools.

The overall F-statistic obtained from the analysis was 358.990, and the associated p-value was 0.000, which is less than the conventional threshold of 0.05. This indicates a statistically significant relationship between teacher-related factors and performance level. Therefore, we can conclude that the regression model provides a good fit for the data. Moreover, when comparing the critical value obtained for this model with the F-value, we find that the critical value was less than the F-value. This suggests that the model's goodness of fit was achieved, further supporting the strength of the relationship between teacher-related factors and the performance level of quality service provision.

Table 15. Coefficients for Teacher-related Factors and Quality Service Provision

| Coefficients | | | | | | | |
|--------------|------------------------------|-----------------------------|------------|---------------------------|--------|------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | |
| | | B | Std. Error | Beta | | | |
| 1 | (Constant) | .514 | .089 | | 5.744 | | .000 |
| | Teachers Related Factors IDV | .815 | .043 | .751 | 18.947 | | .000 |

Model: ($\beta = 0.815$, $t = 18.947$, $p = 0.000 < 0.05$)

Predictor Variable: Teacher-related factors

Dependent Variable: Performance Level of Quality Service Provision in Preprimary School

The results in Table 15 show that the teacher-related factor has a statistically significant influence on quality service provision in pre-primary school: ($\beta = 0.815$, $t = 18.947$, $p = 0.000 < 0.05$). Using the statistical findings, the regression model can be substituted as follows:

$$Y = \beta_0 + \beta_2 X_2 + \epsilon;$$

$$y = 0.514 + 0.815 X_2 + 0.043$$

Where:

y - Level of Quality Service Provision in Preprimary School

X₂ – Teacher-related factors

ϵ - Error term

The model coefficients presented in Table 15 provide insights into the relationship between teacher-related factors and quality service provision in pre-primary schools.

The intercept, or constant, is not significant, indicating that when teacher-related factors are zero, the performance level of quality service provision is also zero. However, the coefficient for the teacher-related factors ($\beta = 0.815$) is statistically significant, with a t-value of 18.947 and a p-value

of 0.000, which is less than the conventional threshold of 0.05. This suggests that for every one-unit increase in teacher-related factors, increases quality service provision by 0.815 units while holding all other factors constant.

The standardized coefficient ($\beta = 0.751$) indicates that the teacher-related factors have a strong positive influence on the performance level of quality service provision. This suggests that improvements in teacher-related factors, are strongly associated with quality service provision in pre-primary schools which enhance performance of the literacy and numeracy educational program.

Furthermore, the high t-value and low p-value indicate that the relationship between teacher-related factors and quality service provision is statistically significant and robust. This provides strong evidence that teacher-related factors are a crucial determinant of quality service provision in pre-primary schools. The findings suggest that policymakers and educators should prioritize investments in teacher-related factors, such as stakeholder capacity building, to improve the quality of service provision in pre-primary schools.

4.4.1.7. Parental Engagements in Quality Service Provision in Pre-Primary School

This section provides a descriptive and correlational analysis of parental engagement in the provision of quality services in pre-primary schools. The involvement of parents in the quality service provision of pre-primary education is of great importance as it enables them to participate in a meaningful way. However, the study revealed that undertaking parental engagement and understanding its influence on the provision of quality services in pre-primary schools is a complex task. Therefore, the study sought the opinions of participants regarding various statements related to parental participation.

The respondents were asked to express their level of agreement or disagreement on a Likert scale ranging from 1 to 5, where 1 represented "Strongly Disagree," 2 represented "Disagree," 3 represented "Neutral," 4 represented "Agree," and 5 represented "Strongly Agree." The mean scores and standard deviations of each opinion were compared with the cutoff mean of 2.50 and the respective composite mean scores for interpretation, as presented in Table 16.

Table 16. Parental Engagement in Quality Service Provision in Pre-Primary School

| No | Item Description | N | M | SD |
|----|---------------------------------------------------------------------------------------------|------------|------------|-------------|
| 1 | Parents actively support pre-primary school activities. | 279 | 2.15 | 1.04 |
| 2 | Parents engage in school-based community activities. | 279 | 2.31 | .99 |
| 3 | Parents contribute financially to the pre-primary school. | 279 | 2.35 | 1.10 |
| 4 | Parents make material contributions to pre-primary school. | 279 | 2.25 | 1.06 |
| 5 | Parents play an active role in decision-making processes regarding their child's education. | 279 | 2.20 | 1.07 |
| 6 | Parents actively monitor their child's regular attendance at school. | 279 | 2.13 | 1.00 |
| 7 | Parents monitor the homework of their children. | 279 | 2.00 | .96 |
| 8 | Parents proactively seek information about the school's activities. | 279 | 2.01 | 1.03 |
| 9 | Parents maintain regular communication with teachers to discuss their child's progress. | 279 | 2.35 | 1.10 |
| 10 | Parents actively participate in parent-teacher meetings. | 279 | 2.25 | 1.06 |
| | Average mean | 279 | 2.2 | 1.04 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; M = mean; SD = standard deviation.

The finding from the data presented in Table 16 provides insights into the mean ratings and standard deviations for items 1-10. In this, all mean ratings fall below the threshold of 2.50, indicating disagreement among respondents regarding several aspects related to parental engagement in the quality service provision of pre-primary schools.

Firstly, respondents expressed disagreement concerning parental support for pre-primary school activities. The ratings signify a lack of consensus among respondents regarding the extent of parental support for these activities. Likewise, respondents indicated disagreement concerning parental engagement in school-based community activities, suggesting a dearth of parental involvement in such endeavors. Moreover, respondents disagreed regarding parental financial contributions to pre-primary schools, underscoring a lack of financial support from parents in the realm of pre-primary education. Additionally, respondents expressed disagreement regarding the provision of material contributions by parents to pre-primary schools, indicating a deficiency in

parental engagement regarding material contributions.

Respondents also expressed disagreement regarding parental participation in decision-making processes about their child's education. The ratings suggest that parents are not actively involved in these crucial decision-making processes. Furthermore, respondents disagreed that parents actively monitor their child's regular attendance at school, pointing to a lack of proactive involvement on the part of parents in monitoring their child's attendance. Similarly, respondents indicated disagreement regarding parental monitoring of their children's homework, indicating insufficient parental oversight in this realm.

The analysis also highlights concerns related to parents proactively seeking information about the school's activities, in which the respondents expressed their disagreement. The mean rating for this item, at 2.01, suggests a prevailing tendency towards disagreement, highlighting a lack of proactive behavior among parents in seeking information about school activities. Concerning parental communication with teachers to discuss their child's progress, respondents also expressed disagreement.

The mean score of 2.35 for this item indicates an overall tendency towards disagreement, signifying a lack of effective communication between parents and teachers. Lastly, regarding the active participation of parents in parent-teacher meetings, the results indicate a general tendency towards disagreement, with an average mean of 2.2 and a standard deviation of 1.04, further supporting the finding of respondents disagreeing on various aspects related to parental participation in the provision of quality services within pre-primary schools.

Based on the aforementioned findings, it is evident that many of the strategies devised to enhance the status of government pre-primary school services have not been effectively implemented. The organization and operation of pre-primary education programs require parental participation for substantial investment. Although the government of Ethiopia has made efforts to expand pre-primary education nationwide, insufficient attention has been given to parental education programs for comprehensive support for children at pre-primary schools. In the framework of ESDP VI, it is mentioned that the construction of classrooms should be carried out with the support of communities (Federal Democratic Republic of Ethiopia, Ministry of Education (MoE), 2021). However, the specific entity responsible for this activity is not specified in the policy document,

potentially leading to implementation confusion and impeding program progress. These findings suggest a general lack of parental involvement and engagement in various aspects of pre-primary education.

4.4.1.7.1. Inferential analysis of Parental Engagement and Quality Service Provision

This study examines the relationship between parental engagement and quality service provision in government pre-primary schools in Gambella Regional State, Ethiopia, using correlation and linear regression analysis.

The relationship between parental engagement and the Level of quality service provision was determined by the Pearson Correlation coefficient. According to the analysis, +1 signaled a positive perfect correlation, 0.001 - 0.250 a weak correlation, 0.251 - 0.500 semi but strong correlation, 0.501 - 0.750 strong correlation, and lastly 0.751 - 1.000 very strong correlation.

Table 17. Correlation between Parental Engagement and Level of Quality Service Provision

| Variables | Quality Service Provision DV | Parental Engagement IDV |
|--------------------------------------------------------------|------------------------------|-------------------------|
| Pearson Correlation | 1 | .336** |
| Sig. (2-tailed) | | .000 |
| N | 279 | 279 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | |

In Table 17, the output indicates that parental Engagement had a positive and significant relationship with the level of quality service provision in government pre-primary schools in Gambella Regional State ($r=0.336^{**}$). In practical terms, this means that when parents are actively involved and engaged in their children's pre-primary education, there tends to be a higher level of quality service provision in the government pre-primary schools in Gambella Regional State.

The study objective was to determine how parental engagement influences the provision of quality service in government pre-primary schools in Gambella Regional State. The indicators for parental engagement included parents actively supporting the pre-primary school, parents contributing financially to the pre-primary school, parents actively monitoring their child's regular attendance at school, parents monitoring the homework of their children, and parents maintaining regular communication with teachers to discuss their child's progress.

The indicators for the provision of quality service in pre-primary schools were improvement in reading skills, improvement in recognizing alphabet letters, interest in learning, improvements in class performance, expression of satisfaction of stakeholders, and improvements in retention of children in the pre-primary school. The utilization of a linear regression model was employed to examine the influence of parental engagement on the provision of quality services in government pre-primary schools situated in the Gambella Regional State:

$$y = a + b_2X_2 + e$$

Where: y - Level of Quality Service Provision in Preprimary School

X₂ – Parental engagement

b₂ - Regression Coefficient

a- Regression constant

ε - Error term

Table 18. Level of Quality service provision in pre-primary school

| Model Summary | | | | |
|----------------------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .336 ^a | .113 | .110 | .78929 |
| a. Predictors: (Constant), Parental Engagement IDV | | | | |

The findings in Table 18 reveal a correlation between parental engagement and the performance level of quality service provision in pre-primary school, as indicated by an R-value of 0.336. This correlation suggests a strong influence of parental engagement on the effectiveness of the quality service provision in pre-primary schools. The R-squared value of 0.113 indicates that approximately 11.3 % of the variability in quality service can be attributed to the parental engagement included in the model. However, it's important to acknowledge that there are likely other factors beyond those considered in this analysis that contribute to the remaining 88.7% of the variation. Further investigation is required to identify and incorporate these additional factors for a more comprehensive understanding.

Table 19. ANOVA for Parental Engagement and Quality Service Provision in Preprimary School

| ANOVA ^a | | | | | | |
|--------------------------------------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 21.944 | 1 | 21.944 | 35.225 | .000 ^b |
| | Residual | 172.564 | 277 | .623 | | |
| | Total | 194.508 | 278 | | | |
| a. Dependent Variable: Quality Service Provision | | | | | | |
| b. Predictors: (Constant), Parental Engagement | | | | | | |

Table 19 displays the results of the ANOVA analysis, which aimed to assess the fitness of the regression model in explaining the relationship between parental engagement and the performance level of quality service provision in preprimary schools.

The overall F-statistic obtained from the analysis was 35.225, and the associated p-value was 0.000, which is less than the conventional threshold of 0.05. This indicates a statistically significant relationship between parental engagement and quality service provision in pre-primary schools. Therefore, we can conclude that the regression model provides a good fit for the data. Moreover, when comparing the critical value obtained for this model with the F-value, we find that the critical value was less than the F-value. This suggests that the model's goodness of fit was achieved, further supporting the strength of the relationship between parental engagement and the performance level of quality service provision.

Table 20. Coefficients for Parental Engagement and Quality Service Provision in Preprimary School

| Coefficients | | | | | | | |
|--------------|---------------------|-----------------------------|------------|---------------------------|-------|------|--------------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | |
| | | B | Std. Error | Beta | | | |
| 1 | (Constant) | 1.224 | .153 | | 7.980 | | .000 |
| | Parental Engagement | | .066 | | 5.935 | | .392a. Depen |
| | IDV | .392 | | | | | .000 |

Model: ($\beta = 0.392$, $t = 5.935$, $p = 0.000 < 0.05$)

Predictor Variable: Parental Engagement

Dependent Variable: Performance Level of Quality Service Provision in Preprimary School

The results in Table 20 show that parental engagement has a statistically significant influence on quality service provision in pre-primary school: ($\beta=0.392$, $t=5.935$, $p=0.000<0.05$). Using the statistical findings, the regression model can be substituted as follows:

$$Y = \beta_0 + \beta_2 X_2 + \varepsilon;$$

$$y = 1.224 + 0.392 X_2 + 0.066$$

Where:

y - Level of Quality Service Provision in Preprimary School

X₂ – Parental Engagement

ε - Error term

The model coefficients presented in Table 20 provide insights into the relationship between parental engagement and the provision of quality service in pre-primary schools.

The intercept, or constant, is not significant, indicating that when parental engagements are zero, the performance level of quality service provision is also zero. However, the coefficient for the parental engagement ($\beta = 0.392$) is statistically significant, with a t-value of 5.935 and a p-value of 0.000, which is less than the conventional threshold of 0.05. This suggests that for every one-unit increase in parental engagement, increases quality service provision by 0.392 units while holding all other factors constant.

Furthermore, the high t-value and low p-value indicate that the relationship between parental engagement and quality service provision is statistically significant. This provides strong evidence that parental engagement is a crucial determinant of quality service provision in pre-primary schools. Based on the analysis and results presented, it appears that this current study is in line with previous research that highlights the importance of parental engagement in determining the quality of service provision in educational settings, specifically in preprimary schools.

Parental involvement in school activities, parental-teacher partnerships, and parental support for early literacy development have all been found to contribute to children's cognitive and socio-emotional development, as well as their academic success. Therefore, it is crucial to promote parental engagement in education, particularly in early childhood education, to ensure positive educational outcomes for children.

4.4.1.8. Learning Resources and Facilities in Pre-Primary School of Gambella Regional State

This section provides a descriptive and inferential analysis of the role of learning resources and facilities in the provision of quality services in pre-primary schools. The role of learning resources and facilities in the quality service provision of pre-primary education is of great importance, as it enables pre-primary schools to provide meaningful service. However, the study revealed that undertaking learning resources and understanding their influence on the provision of quality services in pre-primary schools is a complex task. Therefore, the study sought the opinions of participants regarding various statements related to learning resources and facilities. The respondents were asked to express their level of agreement or disagreement on a Likert scale. Use a scale of 1 to 5, where 1 represents "Very low," 2 represents "Low," 3 represents "Average," 4 represents "High," and 5 represents "Very high." The mean scores and standard deviations of each opinion were compared with the cutoff mean of 2.50 and the respective composite mean scores for interpretation, as presented in Table 21.

Table 21. Descriptive Statistics for Learning Resources and Facilities in Pre-Primary Schools

| No. | Item Description | N | M | SD |
|-----|----------------------------------------------|------------|------------|-------------|
| 1 | Suitability of classrooms for all children | 279 | 1.6 | 0.82 |
| 2 | The presence of reading corners | 279 | 1.67 | 0.8 |
| 3 | Availability of age-appropriate books | 279 | 1.72 | 0.84 |
| 4 | Availability of alphabet tables | 279 | 1.63 | 0.72 |
| 5 | Use of locally produced learning materials | 279 | 1.74 | 0.84 |
| 6 | Age-appropriate tables and chairs | 279 | 1.69 | 0.86 |
| 7 | Availability of counting/numeracy charts | 279 | 1.81 | 0.95 |
| 8 | Availability of art materials | 279 | 1.74 | 0.93 |
| 9 | The presence of picture books and storybooks | 279 | 1.72 | 0.86 |
| 10 | Involvement in music activities | 279 | 2.16 | 1.23 |
| 11 | Availability of playgrounds | 279 | 1.58 | 0.8 |
| 12 | Accessibility of play materials | 279 | 1.59 | 0.7 |
| 13 | Conduciveness of toilets | 279 | 1.5 | 0.72 |
| 14 | Availability of tap water | 279 | 1.63 | 1.15 |
| 15 | Safe and child-friendly environment | 279 | 1.74 | 0.87 |
| | Average mean | 279 | 1.7 | 0.87 |

Note. All items were rated on a scale from 1 (Very low) to 5 (Very high). *N* = number of participants; *M* = mean; *SD* = standard deviation

The finding from the data presented in Table 21 provides insights into the mean ratings and standard deviations for items 1-15. These ratings indicate a lack of consensus among respondents regarding various aspects of learning resources and facilities in pre-primary schools. Particularly, all mean ratings fall below the threshold of 2.50.

When it comes to the suitability of classrooms for all children, there is a general sense of low agreement among respondents, as reflected by the mean rating of 1.60. This implies that the classrooms may not adequately cater to the diverse needs of students. Similarly, respondents expressed a low level of agreement regarding the presence of reading corners, availability of age-appropriate books, and alphabet tables, highlighting potential deficiencies in these foundational literacy resources.

Furthermore, the use of locally produced learning materials received a relatively low mean rating of 1.74, indicating that respondents disagreed with their availability. This suggests a need to ensure the availability of appropriate and locally relevant materials to support effective learning. The availability of age-appropriate tables and chairs for young children also received a below mean rating of 1.69, indicating potential shortcomings in providing suitable furniture for pre-primary students.

The analysis also highlights concerns related to play and recreational facilities. Respondents expressed low levels regarding the availability of playgrounds (mean rating of 1.58) and accessibility of play materials mean rating of 1.59. These findings suggest a need to improve the availability and quality of play spaces and resources for young children. In terms of basic amenities, respondents generally disagreed on the conduciveness of toilets mean rating of 1.50 and the availability of tap water mean rating of 1.63. These results indicate potential deficiencies in providing hygienic and safe facilities for pre-primary students.

Overall, the average mean score for all the items analyzed was 1.7, below the cut-off point of 2.50. This strengthens the findings in Table 21 of widespread disagreement regarding the quality of service provision in Gambella's pre-primary schools. These findings underscore the urgent need for comprehensive improvements in various aspects of pre-primary education within Gambella.

Enhancing the suitability of classrooms, ensuring the availability of age-appropriate resources, investing in play and recreational facilities, and addressing basic amenities are crucial steps to provide a safe, engaging, and inclusive learning environment for young children.

4.4.1.8.1 Inferential analysis of Learning Resources and Quality Service Provision in Pre-Primary School

This study examines the relationship between learning resources/facilities and the level of quality service provision was determined by the Pearson Correlation coefficient. According to the analysis, +1 signaled a positive perfect correlation, 0.001 - 0.250 a weak correlation, 0.251 - 0.500 semi-strong correlation, 0.501 - 0.750 strong correlation, and lastly 0.751 - 1.000 very strong correlation.

Table 22. Correlation between Learning Resource/Facility and Quality Service Provision

| Correlations | | | |
|--------------------------------|---------------------|--------------------|--------------------------------|
| | | Quality Service DV | Learning Resource/Facility IDV |
| Quality Service DV | Pearson Correlation | 1 | .593** |
| | Sig. (2-tailed) | | .000 |
| | N | 279 | 279 |
| Learning Resource/Facility IDV | Pearson Correlation | .593** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 279 | 279 |

** . Correlation is significant at the 0.01 level (2-tailed).

In Table 22, the output indicates that learning resources/facilities had a strong positive and significant relationship with the level of quality service provision in government pre-primary schools in Gambella Regional State. The Pearson correlation coefficient between the quality of service provision and learning resource/facility is ($r=0.593^{**}$), indicating a strong positive correlation. This suggests that there is a meaningful relationship between these variables.

The utilization of a linear regression model was employed to examine the influence of learning resources/facilities on the provision of quality services in government pre-primary schools situated in the Gambella Regional State. The study objective was to determine how learning resources/facilities influence the provision of quality service in government pre-primary schools in Gambella Regional State.

The indicators used to measure learning resources/facility included: The suitability of the classrooms, presence of reading corners, availability of age-appropriate books, availability of alphabet tables, use of locally produced learning materials, availability of age-appropriate tables and chairs that are suitable for young children, availability of counting and numeracy chart, presence of picture books, and storybooks, availability of playgrounds, accessibility of play materials, availability of tap water, and availability of safe and child-friendly environment.

The indicators for the provision of quality service in pre-primary schools were improvement in reading skills, improvement in recognizing alphabet letters, interest in learning, improvements in class performance, expression of satisfaction of stakeholders, and improvements in retention of children in the pre-primary school. A linear regression model was used to analyze how learning resources/facilities affect the quality of services provided in government pre-primary schools located in the Gambella Regional State:

$$y = a + b_2X_2 + e$$

Where: y - Level of Quality Service Provision in Preprimary School

X₂ – Learning Resource/Facility

b₂ - Regression Coefficient

a- Regression constant

ε - Error term

Table 23. Model Summaries for Learning Resource and Quality Service Provision in Pre-primary School

| Model Summary | | | | |
|--------------------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | | | | |
| 1 | .593 ^a | .352 | .349 | .67472 |
| a. Predictors: (Constant), Learning resource IDV | | | | |

The findings in Table 23 reveal a correlation between Learning resources and the performance of quality service provision in pre-primary school, as indicated by an R-value of 0.593. This correlation suggests a strong influence of learning resources on the effectiveness of the quality service provision in pre-primary schools.

The R-squared value of 0.352 indicates that approximately 35.2 % of the variability in quality service can be attributed to the learning facility included in the model. However, it's important to acknowledge that there are likely other factors beyond those considered in this analysis that contribute to the remaining 64.8% of the variation. Further investigation is required to identify and incorporate these additional factors for a more comprehensive understanding.

Table 24. ANOVA for Learning Resource and Quality Service Provision in Preprimary School

| ANOVA ^a | | | | | | |
|--------------------------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 68.404 | 1 | 68.404 | 150.258 | .000 ^b |
| | Residual | 126.103 | 277 | .455 | | |
| | Total | 194.508 | 278 | | | |
| a. Dependent Variable: Quality Service Provision | | | | | | |
| b. Predictors: (Constant), Parental Engagement | | | | | | |

Table 24 displays the results of the ANOVA analysis, which aimed to assess the fitness of the regression model in explaining the relationship between learning resources/facility and the performance level of quality service provision in pre-primary schools.

The overall F-statistic obtained from the analysis was 150.258, and the associated p-value was 0.000, which is less than the conventional threshold of 0.05. This indicates a statistically significant relationship between learning resources/facilities and quality service provision of pre-primary schools. Therefore, we can conclude that the regression model provides a good fit for the data. Moreover, when comparing the critical value obtained for this model with the F-value, we find that the critical value was less than the F-value. This suggests that the model's goodness of fit was achieved, further supporting the strength of the relationship between learning resources/facilities and the performance level of quality service provision.

Table 25. Model Coefficients for Learning Resource/Facility and Quality Service Provision in Preprimary School

| Coefficients | | | | | |
|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| 1 (Constant) | .394 | .144 | | 2.738 | .007 |
| Learning resource IDV | .993 | .081 | .593 | 12.258 | .000 |

Model: ($\beta = 0.993$, $t = 12.258$, $p = 0.000 < 0.05$)

Predictor Variable: Learning resource/facility

Dependent Variable: Performance Level of Quality Service Provision in Preprimary School

The results in Table 25 show that learning resources/facilities have a statistically significant influence on quality service provision in pre-primary school: ($\beta = 0.993$, $t = 12.258$, $p = 0.000 < 0.05$).

Using the statistical findings, the regression model can be substituted as follows:

$$Y = \beta_0 + \beta_2 X_2 + \varepsilon;$$

$$y = 0.394 + 0.993 X_2 + 0.081$$

Where:

y - Level of Quality Service Provision in Preprimary School

X₂ – Learning resource/facility

ε - Error term

The model coefficients presented in Table 25 provide insights into the relationship between learning resources and the provision of quality service in pre-primary schools.

The intercept, or constant, is not significant, indicating that when the learning resource is zero, the performance level of quality service provision is also zero. However, the coefficient for the learning resource/facility ($\beta = 0.993$) is statistically significant, with a t-value of 12.258 and a p-value of 0.000, which is less than the conventional threshold of 0.05. This suggests that for every one-unit increase in learning resource/facility, increases quality service provision by 0.993 units while holding all other factors constant.

Furthermore, the high t-value and low p-value indicate that the relationship between learning resources/facilities and quality service provision is statistically significant and robust. This provides strong evidence that learning resources/facilities are a crucial determinant of the performance level of quality service provision in pre-primary schools.

4.4.1.9. The Role of Supervision in Quality Service Provision in Preprimary School

This section provides a descriptive and inferential analysis of the role of supervision in the provision of quality services in pre-primary schools. The role of supervision in the quality service provision of pre-primary education is of great importance as it enables pre-primary schools to provide meaningful service provision. However, the study revealed that undertaking supervision and understanding its influence on the provision of quality services in pre-primary schools is a complex task. Therefore, the study sought the opinions of participants regarding various statements related to the supervision role.

The respondents were asked to express their level of agreement or disagreement on a Likert scale ranging from 1 to 5, where 1 represented "Strongly Disagree," 2 represented "Disagree," 3 represented "Neutral," 4 represented "Agree," and 5 represented "Strongly Agree." The mean scores and standard deviations of each opinion were compared with a cutoff mean of 2.50 and the respective composite mean scores for interpretation, as presented in Table 26.

Table 26. The Role of Supervision in Quality Service Provision in Pre-primary School

| No | Item Description | N | Mean | Std. D |
|-----------|--------------------------------------------------------------------------------------------------------------------|------------|-------------|---------------|
| 1 | In this pre-primary school, supervision is satisfactory in terms of ensuring a quality physical environment. | 279 | 1.91 | 1.03 |
| 2 | In this pre-primary school, supervision is satisfactory in terms of ensuring the quality of teaching and learning. | 279 | 2.19 | 1.07 |
| 3 | Supervision is satisfactory for ensuring appropriate teacher-learner interaction. | 279 | 2.17 | 0.98 |
| 4 | Education experts/supervisors/ provide clear guidance to teachers. | 279 | 2.15 | 1.18 |
| 5 | Supervision is effective in considering the diverse needs of pre-primary school learners. | 279 | 2.17 | 1.11 |
| 6 | Supervision supports the implementation of play-based learning approaches in this pre-primary school. | 279 | 2.28 | 1.09 |
| 7 | Supervision facilitates professional development opportunities for pre-primary school teachers. | 279 | 1.91 | 1.03 |
| 8 | Supervision ensures the provision of resources and materials in this pre-primary school. | 279 | 2.52 | 1.31 |
| 9 | Supervision ensures a strong relationship with parents in this pre-primary school. | 279 | 1.91 | 1.03 |
| 10 | Supervision promotes continuous improvement in pre-primary education. | 279 | 2.43 | 1.31 |
| | Average mean | 279 | 2.16 | 1.11 |

Note. All items were rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). N = number of participants; *M* = mean; *SD* = standard deviation.

The finding from the data presented in Table 26 provides insights into the mean ratings and standard deviations for items 1-10. These ratings indicate a lack of consensus among respondents regarding various aspects of the role of supervision in ensuring quality service provision in pre-primary schools. Notably, all mean ratings fall below the threshold of 2.50. The findings from this study suggest that there are significant areas for improvement in the supervision of pre-primary education programs. Across multiple dimensions, the respondents expressed a general lack of satisfaction with the effectiveness of current supervision practices.

One key area of concern is the quality of the physical environment in pre-primary schools. The low mean rating of 1.91 indicates that respondents believe supervision does not adequately ensure a favorable physical setting for young learners. This pointed to the need for increased attention and resources to create high-quality learning spaces that cater to the developmental needs of pre-

primary students. Similarly, respondents expressed dissatisfaction with the supervision of teaching and learning quality, with a mean rating of 2.19, falling below the 2.50 cutoff. This suggests potential deficiencies in the foundational aspects of educational delivery, warranting targeted interventions to strengthen supervision.

Closely related is the finding that respondents disagreed with the adequacy of supervision in facilitating appropriate teacher-learner interactions, as indicated by the mean rating of 2.17. This pointed to a potential disconnect between supervisory practices and the realities of classroom dynamics, highlighting the need for supervisors to develop a deeper understanding of effective teacher-student engagement strategies.

The provision of clear guidance to pre-primary teachers also emerged as an area requiring improvement, with a low mean rating of 2.15. Effective supervision should involve the delivery of tailored support and direction to teachers, which is crucial for ensuring high-quality educational experiences for young learners.

The findings also reveal significant challenges in the supervision of diversity and inclusion in pre-primary education. The low mean rating of 2.17 for the consideration of diverse learner needs suggests that supervisors may lack the necessary training, resources, and collaborative partnerships to address the unique requirements of each child effectively. Addressing this gap is essential for promoting equity and inclusive practices in pre-primary settings.

Furthermore, the data indicate concerns regarding the supervision of play-based learning approaches, with respondents expressing dissatisfaction with the availability of appropriate play spaces and resources, as reflected by the mean rating of 2.28. Strengthening the supervisory support for play-based pedagogy is crucial for fostering holistic child development and learning.

The data also points to a need for increased investment in the professional development of preprimary teachers, as respondents disagreed with the role of supervision in promoting such opportunities, with a mean rating of 1.91. Empowering teachers through continuous learning and growth is fundamental for maintaining high-quality pre-primary education.

While the data suggests that supervision plays a role in ensuring the provision of resources and materials, with a mean rating of 2.52, the rating is relatively close to the cutoff, indicating potential variability and room for improvement. Exploring the specific factors influencing the effectiveness

of resource allocation and management through supervision would be a valuable avenue for further investigation. Similarly, the low mean rating of 1.91 for the establishment of strong school-parent relationships through supervision highlights the need for enhanced communication, collaboration, and partnership-building between supervisors, preprimary schools, and families.

Lastly, the findings indicate that respondents slightly agree, with a mean rating of 2.43, that supervision promotes continuous improvement in pre-primary education. However, the rating's proximity to the cutoff suggests that there is still significant room for enhancing the supervisory practices that drive ongoing quality enhancement, such as through data-driven decision-making, feedback mechanisms, and professional development initiatives.

The average mean score of 2.16 with a standard deviation of 1.11 indicates that the overall perception of supervision in preprimary schools is low with considerable variation. This suggests that there is a need for improvement in certain areas of supervision. These findings underscore the urgent need for enhanced awareness, education, and coordination to improve monitoring and evaluation practices in pre-primary schools. Such improvements are essential to ensure the delivery of quality services to all learners. Therefore, the insight from the mean ratings indicates significant gaps in supervision within pre-primary education. Addressing these deficiencies is critical for ensuring that pre-primary education programs are both effective and equitable for every child.

4.4.1.9.1 Inferential analysis of the Role of Supervision and Quality Service Provision

This study examines the relationship between role of supervision, and quality service provision in government pre-primary schools in Gambella Regional State, Ethiopia, using correlation and linear regression analysis.

The relationship between the supervision role and the level of quality service provision was determined by the Pearson Correlation coefficient. According to the analysis, +1 signaled a positive perfect correlation, 0.001 - 0.250 a weak correlation, 0.251 - 0.500 semi but strong correlation, 0.501 - 0.750 strong correlation, and lastly 0.751 - 1.000 very strong correlation.

Table 27. Correlation between Teacher-Related Factors and Level of Quality Service Provision

| Correlations | | | |
|--------------------------------------------------------------|---------------------|--------------------|----------------------|
| | | Quality service DV | Supervision role IDV |
| Quality Service Provision DV | Pearson Correlation | 1 | .250** |
| | Sig. (2-tailed) | | .000 |
| | N | 279 | 279 |
| Supervision role IDV | Pearson Correlation | .250** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 279 | 279 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | |

In Table 27, the output indicates that the supervision role had a positive and significant relationship with the level of quality service provision in government pre-primary schools in Gambella Regional State. The correlation between "Quality Service Provision" and "Supervision Role" is 0.250, which is considered a moderately positive correlation. The p-value associated with this correlation is 0.000, indicating that the correlation is statistically significant. A linear regression model was used to analyze the influence of the supervision role on the provision of quality services in government pre-primary schools in Gambella Regional State.

The indicators used to measure supervision included the following: satisfaction with supervision's role in ensuring a quality physical environment, satisfaction with supervision's role in ensuring the quality of teaching and learning, satisfaction with supervision's role in promoting appropriate teacher-learner interaction, clear guidance provided by education experts/supervisors to teachers, consideration of diverse needs of preprimary school learners by supervision, support for the implementation of play-based learning approaches by supervision, facilitation of professional development opportunities for preprimary school teachers by supervision, ensuring the provision of resources and materials in preprimary schools, establishment of a strong relationship with parents through supervision, and promotion of continuous improvement in preprimary education through supervision.

The indicators for the provision of quality service in pre-primary schools were improvement in reading skills, improvement in recognizing alphabet letters, interest in learning, improvements in class performance, expression of satisfaction of stakeholders, and improvements in retention of children in the pre-primary school. A linear regression model was used to analyze how the

supervision role affects the quality of services provided in government pre-primary schools located in the Gambella Regional State:

$$y = a + b_2X_2 + e$$

Where: y - Level of Quality Service Provision in Preprimary School

X₂ – Supervision Role

b₂ - Regression Coefficient

a- Regression constant

ε - Error term

Table 28. Model Summary for Supervision Role and Quality Service Provision in Preprimary School

| Model Summary | | | | |
|-------------------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .250 ^a | .063 | .059 | .81127 |
| a. Predictors: (Constant), Supervision role IDV | | | | |

The findings in Table 28 reveal a correlation between the supervision role and the performance of quality service provision in pre-primary schools, as indicated by an R-value of 0.250. This correlation suggests a low influence of the supervision role on the effectiveness of the quality service provision in pre-primary schools. The R-squared value of 0.063 indicates that approximately 6.3% of the variability in quality service can be attributed to the supervision role included in the model. Therefore, based on this summary, the model does not appear to have a strong fit, as indicated by the low R-squared value. The adjusted R-squared value suggests that the inclusion of the predictor(s) may not significantly improve the model's explanatory power. Additionally, the standard error of the estimate indicates some level of variability between the observed and predicted values.

Table 29. ANOVA for Supervision Role and Quality Service Provision in Pre-primary School

| ANOVA ^a | | | | | | |
|-------------------------------------------------|------------|----------------|-----|-------------|--------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 12.198 | 1 | 12.198 | 18.533 | .000 ^b |
| | Residual | 182.310 | 277 | .658 | | |
| | Total | 194.508 | 278 | | | |
| a. Dependent Variable: Quality service DV | | | | | | |
| b. Predictors: (Constant), Supervision role IDV | | | | | | |

Table 29 displays the results of the ANOVA analysis, which aimed to assess the fitness of the regression model in explaining the relationship between the supervision role and the performance level of quality service provision in preprimary schools.

The overall F-statistic obtained from the analysis was 18.533, and the associated p-value was 0.000, which is less than the conventional threshold of 0.05. This indicates a statistically significant relationship between the supervision role and quality service provision of pre-primary schools. Therefore, we can conclude that the regression model provides a good fit for the data. Moreover, when comparing the critical value obtained for this model with the F-value, we find that the critical value was less than the F-value. This suggests that the model's goodness of fit was achieved, further supporting the strength of the relationship between teacher-related factors and the performance level of quality service provision.

Table 30. Model Coefficients for Supervision Role and Quality Service Provision in Preprimary School

| Coefficients | | | | | | |
|-------------------------------------------|----------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.493 | .147 | | 10.174 | .000 |
| | Supervision role IDV | .275 | .064 | .250 | 4.305 | .000 |
| a. Dependent Variable: Quality service DV | | | | | | |

Model: ($\beta= 0.275$, $t=4.305$, $p=0.000<0.05$)

Predictor Variable: Supervision role

Dependent Variable: Performance Level of Quality Service Provision in Preprimary School

The results in Table 30 show that the supervision role has a statistically significant influence on quality service provision in pre-primary school: ($\beta=0.275$, $t=4.305$, $p=0.000<0.05$). Using the statistical findings, the regression model can be substituted as follows:

$$Y = \beta_0 + \beta_2 X_2 + \varepsilon;$$

$$y = 1.493 + 0.275 X_2 + 0.064$$

Where:

y - Level of Quality Service Provision in Preprimary School

X₂ – Supervision role

ε - Error term

The model coefficients presented in Table 29 provide insights into the relationship between the supervision role and the provision of quality service in pre-primary schools.

The results of the model coefficients table suggest that the supervision role has a statistically significant influence on the performance level of quality service provision in pre-primary schools. The regression model indicates that for every one-unit increase in the supervision role increases quality service provision by 0.275 units while controlling for other factors. The t-value of 4.305 and p-value of 0.000 suggest that the relationship between the supervision role and the performance level of quality service provision is statistically significant.

The study suggested that effective supervision can enhance teacher confidence, improve instructional practices, and promote a more supportive and engaging learning environment. The findings of this study support the notion that supervision plays a critical role in shaping the quality of service provision in preprimary schools.

4.4.1.10. Multiple Regression Analysis for Combined Independent Variables and quality service provided in pre-primary school

The inferential analysis was performed by use of correlation and regression to show the relationship, strength, and direction of independent and dependent variables. It was based on the objective of the study on how combined independent variables determine quality service provision in pre-primary schools in Gambella Regional State. The combined variable was operationalized using teacher-related factors: learning resources and facilities, parental engagement, and supervision role, while the dependent variable was quality service provision in pre-primary schools.

Table 31. Correlation Analysis for independent variables and quality service provision in preprimary schools

| Correlations | | Quality Service Provision DV | Teachers Related Factors IDV | Learning Resource/Facility IDV | Parent Engagement IDV | Supervision Role IDV |
|---------------------|--------------------------------|------------------------------|------------------------------|--------------------------------|-----------------------|----------------------|
| Pearson Correlation | Quality Service Provision DV | 1.000 | .751 | .593 | .336 | .250 |
| | Teachers Related Factors IDV | .751 | 1.000 | .634 | .417 | .404 |
| | Learning Resource/Facility IDV | .593 | .634 | 1.000 | .246 | .326 |
| | Parent Engagement IDV | .336 | .417 | .246 | 1.000 | .317 |
| | Supervision Role IDV | .250 | .404 | .326 | .317 | 1.000 |

The relationship between combined independent variables (teachers' Related Factors, learning resource/facility, parent Engagement, supervision role, and provision of quality service in pre-primary school) was determined by the Pearson Correlation coefficient. Table 31 shows the results. The analysis was seek how does combination of these variables influences the provision of quality service in pre-primary schools. Therefore, these findings suggest that all the independent variables (Teachers Related Factors, Learning Resource/Facility, Parent Engagement, and Supervision Role) are positively correlated with the quality of service provision in pre-primary schools. However, it

is important to note that correlation does not establish causation, and other variables not included in this analysis may also influence quality service provision.

To further examine the relationships and determine the combined effect of these independent variables on the quality of service provision, a multiple regression analysis could be conducted. This would help understand how each independent variable contributes to the variation in the dependent variable while controlling for other factors.

Table 32. Model Summary for Independent Variables and Quality Service Provision in Pre-primary Schools

| Model Summary | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .771 ^a | .594 | .589 | .53656 |
| a. Predictors: (Constant), Supervision role IDV, Parental engagement IDV, Learning Resources/Facility IDV, Teachers Related Factors IDV | | | | |
| b. Dependent Variable: Quality service provision DV | | | | |

Based on the multiple regression analysis presented in Table 32, the following observations were made regarding the combined influence of the independent variables on the provision of quality service in pre-primary schools.

The combined independent variables, which include Teachers Related Factors, Learning Resource/Facility, Parent Engagement, and Supervision Role, have a significant influence on the provision of quality service in preprimary schools. The model summary indicates that the independent variables account for 59.4% of the variation in the provision of quality service (R Square = 0.594).

Teachers' Related Factors are the most prominent independent variable in the model, contributing significantly to the explanation of the dependent variable. The remaining independent variables, Learning Resource/Facility, Parent Engagement, and Supervision Role, also have a positive influence on the provision of quality service in preprimary schools.

However, it is important to note that correlation does not imply causation. The model summary provides a useful starting point for understanding the relationship between these factors and the provision of quality service in pre-primary schools, but further evaluation is needed to draw more robust conclusions. The provided data indicates that the combined independent variables, particularly Teachers Related Factors, have a significant influence on the provision of quality service in preprimary schools. However, further evaluation is necessary to draw more robust conclusions and establish causal relationships.

Table 33. ANOVA for Independent Variables and Quality Service Provision in Preprimary Schools

| ANOVA ^a | | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------|----------------|-----|-------------|---------|-------------------|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 115.623 | 4 | 28.906 | 100.402 | .000 ^b |
| | Residual | 78.885 | 274 | .288 | | |
| | Total | 194.508 | 278 | | | |
| a. Predictors: (Constant), Supervision role IDV, Parental engagement IDV, Learning Resources/Facility IDV, Teachers Related Factors IDV | | | | | | |
| b. Dependent Variable: Quality service provision DV | | | | | | |

The ANOVA Table 33 presents the results of the analysis of variance for the multiple regression models, which examines the relationship between the independent variables (Supervision Role, Parental Engagement, Learning Resources/Facility, and Teachers Related Factors) and the dependent variable (Quality Service Provision).

The model's overall significance is indicated by the F-statistic, which is 100.402, with a corresponding p-value of .000. This suggests that the regression model is statistically significant, meaning that the independent variables collectively explain a significant portion of the variance in the dependent variable.

The sum of squares for the regression model is 115.623, which represents the amount of variation in the dependent variable explained by the independent variables. The mean square for the regression model is 28.906, which is the average sum of squares for each independent variable.

The residual sum of squares is 78.885, which represents the amount of variation in the dependent variable not explained by the independent variables. The mean square for the residual is .288, which

indicates the average error in predicting the dependent variable. The total sum of squares is 194.508, which represents the total amount of variation in the dependent variable.

The significance of the F-statistic (.000) indicates that the independent variables do not explain a significant portion of the variance in the dependent variable, and can be rejected. This suggests that the independent variables collectively have a significant impact on the provision of quality service in pre-primary schools. These findings suggest that the combined independent variables, including Supervision Role IDV, Parental Engagement IDV, Learning Resources/Facility IDV, and Teachers Related Factors IDV, collectively contribute significantly to explaining the variation in the quality of service provision in pre-primary schools. The regression model provides a statistically significant fit to the data, but further investigation and analysis are required to determine the specific contributions of each independent variable and establish causal relationships.

Table 34. Coefficients for Independent Variables and Quality Service Provision in Preprimary Schools

| Coefficients | | | | | | |
|---------------------|---------------------------------|-----------------------------|------------|---------------------------|--------|------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .253 | .144 | | 1.753 | .081 |
| | Teachers Related Factors IDV | .691 | .059 | .636 | 11.746 | .000 |
| | Learning Resources/Facility IDV | .346 | .084 | .207 | 4.131 | .000 |
| | Parental engagement IDV | .256 | .050 | .148 | 3.125 | .011 |
| | Supervision role IDV | .198 | .047 | .130 | 1.084 | .018 |

The multiple regression analysis examines the relationship between several independent variables and the quality of service provision in pre-primary schools. The coefficients presented in the table provide insights into the strength and significance of these relationships.

The coefficient for teacher-related factors is 0.691, with a standardized beta of 0.636. This strong positive relationship is corroborated by a t-value of 11.746 and a significance level of 0.000. This indicates that improvements in teacher qualifications, training, and support are crucial for enhancing the quality of service provision in pre-primary schools.

The coefficient for learning resources and facilities is 0.346, with a standardized beta of 0.207. The t-value of 4.131 and significance level of 0.000 confirm a significant positive impact. This suggests that better learning resources and facilities contribute significantly to the overall quality of service in pre-primary education.

The coefficient for parental engagement is 0.256, with a standardized beta of 0.148. The t-value of 3.125 and a significance level of 0.011 indicate a significant positive influence on service quality. This finding highlights the importance of active parental involvement in supporting children's educational experiences.

The coefficient for the supervision role is 0.198, with a standardized beta of 0.130. The t-value of 1.084 and a significance level of 0.018 suggest a positive influence; however, the relatively low t-value indicates that the effect may not be as strong as other factors. This suggests that while supervision plays a role in quality service provision, its impact may vary and warrants further examination. The multiple regression analysis reveals that teacher-related factors and learning resources are the most significant predictors of quality service provision in pre-primary schools, emphasizing the need for targeted improvements in these areas. Parental engagement also plays a vital role, indicating that fostering strong partnerships between schools and families can enhance educational outcomes. While supervision has a positive effect, its comparatively lower significance suggests that this area may require additional focus to maximize its potential impact. Overall, these findings underscore the importance of a comprehensive approach to improving pre-primary education quality service provision, addressing both instructional and environmental factors.

4.4.1.11. Challenges Impeding the Provision of Quality Service

Table 35. Challenges in Providing Quality Service in Gambella Pre-Primary Schools

| No | Item Description | N | Mean | R |
|----|--------------------------------------------------------------------------------------------|-----|-------------|----|
| 1 | There is a shortage of qualified teachers in pre-primary schools. | 279 | 4.20 | 3 |
| 2 | There is a shortage of mother-tongue teachers in the schools. | 279 | 3.85 | 9 |
| 3 | There is a lack of professional training for teachers in pre-primary schools. | 278 | 4.05 | 7 |
| 4 | There are no age-appropriate learning materials and resources in pre-primary school. | 279 | 4.12 | 5 |
| 5 | There is a shortage of infrastructure and facilities in pre-primary schools. | 279 | 4.13 | 4 |
| 6 | There is no implementation guideline in pre-primary school. | 274 | 3.72 | 10 |
| 7 | There is no parental engagement and support in pre-primary school. | 278 | 4.06 | 6 |
| 8 | There is a lack of supervision from the education office in pre-primary schools. | 279 | 4.05 | 7 |
| 9 | There is a shortage of school budgets in pre-primary schools. | 279 | 4.42 | 1 |
| 10 | The school location is inconvenient. | 279 | 4.39 | 2 |
| 11 | There is limited awareness in the community about the importance of pre-primary education. | 278 | 3.72 | 10 |
| | Average mean | | 4.06 | |

Key. N = number of participants; M = mean; R = rank

The provision of quality services to children in government pre-primary schools in Gambella Regional State faces several significant challenges, as highlighted by the mean rank analysis. The analysis ranks these challenges based on the average scores assigned by respondents, shedding light on the most pressing issues that need to be addressed.

At the top of the list is the shortage of school budgets in pre-primary schools. This challenge receives the highest mean rank, indicating a severe lack of financial resources allocated to these schools. The limited budget can hinder the provision of quality services and restrict access to essential resources necessary for effective teaching and learning.

Another major challenge is the inconvenience of the school's location. Respondents note that the geographical positioning of pre-primary schools poses difficulties for parents and students,

potentially impacting accessibility and attendance rates. Addressing this challenge is crucial to ensure that pre-primary education is accessible to all children in the region.

The shortage of qualified teachers ranks high among the challenges faced by pre-primary schools. The lack of qualified educators can undermine the quality of teaching and learning experiences, emphasizing the need to recruit and retain well-trained teachers who can provide a strong educational foundation for young learners.

Inadequate infrastructure and facilities also pose a significant challenge. Insufficient physical infrastructure and limited resources hinder the creation of a conducive learning environment, impacting the overall educational experience for pre-primary school children.

The absence of age-appropriate learning materials and resources is another challenge. Respondents expressed concerns about the lack of materials tailored to the specific developmental needs of pre-primary school children, which can hinder effective teaching and learning practices.

Furthermore, the lack of supervision from the education office is identified as a challenge. Adequate supervision plays a vital role in ensuring the implementation of quality standards and providing support to pre-primary schools. Addressing this challenge is crucial to maintaining and improving the quality of services.

The absence of professional training opportunities for teachers is also recognized as a challenge. Professional development programs are essential for enhancing teaching skills and knowledge, enabling teachers to provide high-quality education to pre-primary school children.

Parental engagement and support are identified as areas needing improvement. Active involvement and support from parents are crucial for children's educational journeys. Enhancing parental engagement can contribute to a more holistic and effective learning environment.

The lack of clear implementation guidelines is another challenge faced by pre-primary schools. Well-defined guidelines provide a framework for consistent and effective practices in pre-primary education, and their absence can lead to inconsistencies and challenges in program implementation.

Lastly, limited community awareness about the importance of pre-primary education is recognized as a challenge. Raising awareness and understanding among the community can foster greater

support and investment in early childhood education, ultimately benefiting children's learning and development.

Addressing these challenges is crucial for improving the quality and effectiveness of pre-primary education in Gambella Regional State. By establishing a clear structure, developing implementation guidelines, advocating for increased budget allocation, fostering active collaboration among stakeholders, and reassessing the integration of pre-primary schools with primary schools, significant strides can be made to enhance the quality of pre-primary education and provide a solid foundation for children's lifelong learning and development.

4.4.2. Qualitative Analysis

4.4.2.1. Development of Themes and Categories

The identification of themes and categories was systematically aligned with the fundamental questions articulated in the study's objectives, as outlined in Chapter One. The data derived from interviews, focus group discussions, and observation checklists informed the development of these themes. The overarching aim of the study, in conjunction with the theoretical framework presented in Chapter Two, guided the formulation of themes and categories.

Table 36. Themes and Sub-Themes of Pre-Primary Education Practices

| Themes | Sub-Themes |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1. Overall Practices in Pre-Primary Education | 1.1 Existing Practices 1.2 Leadership Practices 1.3 Attachment to Primary Schools 1.4 Status of Quality Service Provision |
| 2. Teacher-Related Factors | 2.1 Teacher Selection and Training 2.2 Teacher Qualifications |
| 3. Learning Resources and Facilities | 3.1 Availability of Learning Materials 3.2 Classroom Conditions 3.3 Accessibility of Facilities |
| 4. Outdoor Play Materials and Facilities | 4.1 Availability of Play Resources 4.2 Safety and Suitability of Facilities |
| 5. Service Facilities | 5.1 Sanitation and Hygiene 5.2 Access to Water |
| 6. Parental Participation | 6.1 Parental Involvement in Education 6.2 Engagement in Decision-Making |
| 7. Supervision and Monitoring | 7.1 Current Practices of Supervision 7.2 Effectiveness of Supervision |
| 8. Challenges in Quality Service Provision | 8.1 Structural Challenges 8.2 Resource Limitations 8.3 Stakeholder Engagement Issues |

Note. This table presents the thematic organization of findings from the analysis of pre-primary education practices. The themes emerged from qualitative data analysis and represent key areas of investigation.

4.4.2.2. Existing Practices of Pre-Primary Education

The overall existing practice of pre-primary Education provides a comprehensive assessment of the prevailing practices in pre-primary education. It encompasses a detailed analysis of the following areas: existing practices of pre-primary schools, pre-primary school leadership, and the practices involved in the attachments of pre-primary schools to primary schools. The first purpose of this study was to examine the extent to which pre-primary schools are equipped with the necessary trained workforce, learning materials, and overall indoor/outdoor environments. The objective of this study was to assess the current practices of pre-primary education, including leadership and monitoring practices within pre-primary schools. Furthermore, the study sought to explore the attachments of pre-primary education with primary schools and assess the overall status of quality service provision.

4.4.2.2.1. Implementation of Pre-Primary Education

Under the subtheme above, while some respondents acknowledge the existence of guidelines, others express doubts or reservations. Insights from interviews offer additional perspectives on the challenges facing the effective implementation of pre-primary education in the Gambella Regional State. One interviewee describes the situation as follows:

"The absence of dedicated structures hampers the successful execution of this program. Expertise and resources are required at the regional education bureau and throughout all education levels, including the schools themselves. Currently, most schools only have one trained teacher, which falls short of the necessary staff to adequately meet the demands of pre-primary education" (REB2, 10/1/2024).

All interviewed personnel noted the absence of a dedicated organizational structure for pre-primary education within the Gambella Regional Education Bureau. Responsibilities for management and supervision are dispersed across various roles without a focused department. This lack of a dedicated body hampers effective management and oversight of pre-primary education, affecting the quality of service provision and resource allocation.

This evidence emphasizes the lack of a clear framework or guidance for effectively implementing pre-primary education in these schools. However, the significance of clear guidelines for ensuring consistency and quality in early childhood education has been emphasized in recent studies (Bredekamp, 2017; Hendrick, 2017). Therefore, the findings of this study highlight the urgent need for the development and implementation of comprehensive guidelines that address the multifaceted aspects of pre-primary education.

Such guidelines should encompass not only curriculum design but also staffing requirements, resource allocation, and support structures at the regional and school levels. Addressing these issues is crucial for improving the overall state of pre-primary education and promoting positive outcomes for young children in the Gambella Regional State.

Further examination of the interview data highlights the current state of pre-primary schools in the Gambella region, revealing a significant deficiency in age-appropriate teaching-learning materials.

This inadequacy negatively affects the well-being of the children and hampers their ability to thrive and learn effectively. Moreover, the situation is compounded by the fact that many early primary schools in the region either lack proper classrooms or conduct classes under trees. This substandard learning environment falls well below accepted standards and significantly undermines the quality of education provided (REB3, 18/1/2024).

The findings from the focus group discussions (FGDs) further support the notion that pre-primary education in Godere Woreda faces numerous challenges. These include a lack of teaching materials, inadequate classrooms, overcrowding, the absence of a dedicated department or professionals overseeing pre-primary education, and insufficient training and interest among teachers. Addressing these challenges is crucial for improving the quality and effectiveness of pre-primary education in Woreda.

Upon observation, the researcher noted that public preschools were often crowded with a high number of children, aggravating the issue of a shortage of trained teachers. This shortage of teachers further compounds the challenges faced by public preschools in meeting the desired teacher-student ratio. It is important to note that research has consistently shown that a low teacher-student ratio can have a positive impact on children's learning outcomes and social development (Perlman et al., 2017).

The idea from one regional education bureau interview indicated that, in the Gambella Regional Education Office, there is a notable lack of consistent procedures when it comes to the recruitment and training of pre-primary teachers. This inconsistency is concerning, as it hinders the development of a skilled and qualified teaching workforce in the region. An example of this inconsistency is evident in the training provided to pre-primary teachers in 2018. Approximately 218 teachers received short-term training lasting only 30 days. While this training may offer some basic knowledge, it is insufficient to fully prepare teachers for the unique demands of pre-primary education (REB3, 18/1/2024).

The significance of maintaining an appropriate teacher-student ratio in pre-primary schools cannot be overstated. A lower ratio allows teachers to provide individualized attention, support, and guidance to each child, fostering meaningful interactions and promoting optimal learning experiences. With fewer students to attend to, teachers can better identify and address the unique needs and challenges of each child, facilitating their overall development. In light of these findings, it is essential to address the issue of the teacher-student ratio in pre-primary schools.

Upon conducting interviews and analyzing the data, it was observed that the availability of learning materials and resources in pre-primary education can vary depending on the specific area and circumstances. In some cases, teaching materials for students are created using locally available resources. This approach allows teachers to prepare and teach using materials that are convenient and accessible within the zone. As one of my interviewees from the Zonal Education Department puts it,

The primary challenge faced by the schools is the shortage of classrooms, which hampers their ability to adequately accommodate pre-primary students. However, schools must prioritize the provision of suitable learning spaces for pre-primary children, even if it involves segregating their classrooms from those of primary school students. Regrettably, this aspect of separation between pre-primary and primary school classrooms has not been adequately addressed in the context of the Gambella region (ZED1, 28/1/2024).

Upon closer examination of the sample pre-primary schools, it was observed that the available classrooms lacked sufficient ventilation and did not feature designated interest corners, teaching materials, or equipment. The experts from the Woreda education office, during the focus group discussions, confidently acknowledged the insufficient number of pre-primary schools to

accommodate the children in the surrounding areas as the primary cause of this problem. The demand for enrollment in government schools, driven by the accessibility and affordability of free educational services, further aggravated the issue of overcrowded classrooms.

Through group discussions and interviews with experts from the Woreda education office and parent-teacher association leaders, the main causes of these problems were identified. It was found that the classrooms provided for pre-primary schools were originally built for primary school purposes, resulting in inappropriate classroom sizes and a lack of suitable learning environments. It is important to note that the learning environment, often referred to as the "third teacher" in Reggio Emilia schools, plays a crucial role in the education and development of children (Zeynep İnan, 2021). Therefore, the deficiencies observed in various aspects of pre-primary schools, particularly in government pre-primary schools in the Gambella Regional State, have a direct influence on the quality of education and the overall learning experience for young children.

It is crucial to address these issues to ensure the provision of high-quality pre-primary education. This involves developing clear implementation guidelines, ensuring the availability of age-appropriate teaching-learning materials, improving the design and content of the curriculum to enhance children's interaction, allocating resources to meet the standard teacher-student ratio, constructing or modifying classrooms to provide adequate space and ventilation, and providing suitable furniture that caters to the needs of young children. By addressing these deficiencies, educational stakeholders can create an environment that fosters optimal learning experiences and promotes the overall development and well-being of young children.

4.4.2.2.2. Practices of Preprimary Schools Leadership

The qualitative data collected from focus group discussions (FGDs) with experts from the Woredas Education Office and interviews with Regional Education Bureau and Parent-Teacher Association (PTA) leaders highlight critical concerns regarding leadership practices in preprimary schools. The findings suggest that the integration of preprimary schools with primary schools and the lack of specialized training among school leaders significantly hinder the effectiveness of pre-primary education in the region.

A recurring theme from participants was that most preprimary schools are led by primary school principals who lack training in early childhood pedagogy. This mismatch in leadership expertise affects decision-making and instructional supervision.

"Most preprimary schools are attached to primary schools, and the principals are trained for primary education, not for pre-primary schools. They don't understand the unique needs of young children." (FGD Participant, Woredas Education Office)

"The principals evaluate preprimary teachers the same way they assess primary teachers. But teaching methods for young children are different play-based learning is not prioritized." (Interview, Regional Education Bureau Official)

Despite the expectation that school leaders actively involve stakeholders, participants reported limited engagement of parents and community members in preprimary school governance.

"Parents are only called for meetings when there is a problem, like fee collection. They are not consulted on curriculum or classroom activities." (PTA Leader Interview)

This indicates a gap in participatory leadership, where key stakeholders parents, are excluded from meaningful decision-making. While school leaders seek external support, participants noted that efforts are often uncoordinated and insufficient.

"There is no dedicated budget for preprimary. Funds are mixed with primary school expenses, so pre-primary education needs are overlooked." (PTA Leader)

This reflects systemic challenges where leadership lacks both the expertise and structural support to effectively advocate for preprimary education. The qualitative findings reveal that the current leadership model where preprimary schools are merged with primary schools and led by untrained principals undermines the quality of early childhood education.

4.4.2.2.3. Attachment of Preprimary School to Primary School

Results of interviews with key informants showed that the attachments of pre-primary schools to primary schools influenced the teaching and learning of children. Participants consistently reported inadequate physical infrastructure for early learners:

The qualitative data reveals alarming deficiencies in the provision of quality early childhood education across Gambella region. Multiple stakeholders consistently reported substandard learning environments that fail to meet basic requirements for effective preprimary education.

Key informants described profoundly inadequate educational settings:

"Instead of vibrant, child-friendly learning spaces, our youngest students endure lessons under trees or in overcrowded, makeshift classrooms designed for older children. These conditions violate every principle of quality early childhood education" (REB4, 14/2/2024).

The situation is exacerbated by severe resource shortages:

"Preprimary classes lack even the most fundamental learning materials - no age-appropriate books, educational toys, or writing tools. Children attempt to learn literacy skills without proper resources, creating foundational gaps that persist throughout their education" (WEDO3, 17/1/2024).

Structural challenges compound these problems:

"By attaching preprimary to primary schools already struggling with infrastructure deficits, we've created a cascading system of educational disadvantage. The youngest learners bear the brunt of these systemic failures" (REB5, 26/2/2024).

Thematic analysis of interviews and focus group discussions with education stakeholders reveals significant systemic challenges arising from the current practice of attaching preprimary schools to primary institutions. Three dominant themes emerge from the data, supported by direct participant quotations.

Participants consistently reported severe shortages in appropriate learning environments and materials for preprimary learners:

"The reality on ground shows our preprimary children learning under trees just like their primary counterparts. How can we expect quality pre-primary schools when four-year-olds share compound with grade eight students?" (REB4, 14/2/2024)

A Woreda education officer elaborated:

"While enrollment increased after attaching preprimary classes to all primary schools, the facilities remained unchanged. We now have 60 children sharing one makeshift classroom meant for 30 pupils." (WEDO3, 17/1/2024)

The absence of dedicated management structures for preprimary education emerged as a critical concern:

"Primary school principals already struggle with multiple responsibilities. Adding preprimary supervision means early child education gets only leftover attention." (REB2, 10/1/2024)

Stakeholders highlighted fundamental mismatches between primary and preprimary educational approaches:

"Young children need to learn through play, but in attached schools they're forced to sit still like primary students. This removes their natural curiosity." (WEO4, 2024)

A regional official noted:

"The attachment policy assumes smooth transition, but in practice it means imposing primary methods too early. We're seeing increased dropout rates by grade two as result." (REB5, 26/2/2024)

Participants unanimously advocated for institutional separation:

"Standalone preprimary schools with trained pre-primary school leaders would allow proper focus on early childhood needs rather than being addition in primary schools." (FGD consensus, Woreda officials). This perspective aligns with Froebelian principles, as one official referenced: "Like Froebel's kindergarten concept, we need 'children's gardens' - not primary school annexes. The current setup contradicts all ECE best practices." (REB3, 17/1/2024)

The findings suggest that the attachment policy, while expanding access, has compromised quality through physical infrastructure unsuitable for early learners, leadership structures lacking ECE expertise, and pedagogical approaches developmentally inappropriate

As one participant summarized:

"We must choose between convenience and quality. The current attached system serves administrative needs but fails children's needs." (REB5, 26/2/2024)

This analysis reveals a clear disconnect between policy intentions and implementation realities, urging reconsideration of structural arrangements for optimal early childhood development outcomes.

4.4.2.4. Status of Quality Service Provision in Pre-primary Schools of Gambella Regional State

The data collected for the dependent variable using qualitative approaches. A multi-method data collection strategy was employed, gathering data from various sources, including focus group discussions (FGDs), observations, and document analyses.

Moreover, upon conducting interviews and focus group discussions (FGDs) for a comprehensive understanding of quality service provision in Gambella Regional State, Ethiopia under the theme of the status of quality service provision in preprimary schools, it was found that there are significant challenges in the quality of service provision in government pre-primary schools in the Gambella region.

One of the primary challenges observed was the shortage of classrooms, which hampers the ability of schools to accommodate pre-primary students adequately. As one of the interviewees from the Zonal Education department stated, "The primary challenge faced by the schools is the shortage of classrooms, which hampers their ability to adequately accommodate pre-primary students. However, schools must prioritize the provision of suitable learning spaces for pre-primary children, even if it involves segregating their classrooms from those of primary school students. Regrettably, this aspect of separation between pre-primary and primary school classrooms has not been adequately addressed in the context of the Gambella region" (ZED1, 28/1/2024).

Furthermore, research has consistently shown that the provision of quality services in pre-primary schools can have a positive impact on children's learning outcomes (Perlman et al., 2017). However, the findings from the interviews and FGDs revealed a significant deficiency in age-appropriate teaching-learning materials, which negatively affects the well-being of the children and hampers their ability to thrive and learn effectively. Moreover, many early primary schools in the region either lack proper classrooms or conduct classes under a tree, which falls well below accepted standards and significantly undermines the quality of education provided.

Additionally, the data from the interviews highlighted a notable lack of consistent procedures when it comes to the recruitment and training of pre-primary teachers, which is concerning as it hampers the development of a skilled and qualified teaching workforce in the region. For instance, approximately 218 teachers received short-term training lasting only 30 days in 2018, which is insufficient to fully prepare teachers for the unique demands of pre-primary education (REB3, 18/1/2024).

The findings from the FGDs further support the notion that pre-primary education in Godere Woreda faces numerous challenges. These include a lack of teaching materials, inadequate classrooms, overcrowding, the absence of a dedicated department or professionals overseeing pre-primary education, and insufficient training and interest among teachers. Addressing these challenges is crucial for improving the quality and effectiveness of pre-primary education in Woreda.

The insights shared by the interviewed parent-teacher association leaders shed light on specific issues faced by these schools. For instance, the lack of dedicated classrooms for pre-primary education was highlighted, with existing classrooms designed and constructed for primary school use. This situation often leads to overcrowded classrooms, making it challenging to effectively manage a large number of children. The accounts of the PTA leaders underscore the urgent need for adequate infrastructure and resources to accommodate pre-primary education requirements.

The challenges associated with inadequate classrooms were further illustrated by the example of a pre-primary school that had to enroll children in a substandard and unhygienic classroom due to the lack of available spaces. This unfavorable learning environment resulted in children leaving the school midway through the academic year, negatively impacting their educational continuity. The experiences shared by the PTA leaders emphasize the pressing need for sufficient and appropriate classrooms for pre-primary education, ensuring that children have access to safe and conducive learning spaces.

The observations made regarding the implementation of the Education Sector Development Program VI (ESDP VI) document are also significant. The document highlights the construction of pre-primary classrooms using community resources as one of the strategies. However, the study findings indicate that this strategy has not been effectively implemented.

Therefore, the government must review and revise the policy strategies to address any existing barriers and prioritize the construction of pre-primary school facilities. Allocating dedicated budgetary resources to this endeavor is recommended to ensure the fulfillment of essential program requirements. This step is essential to achieving the desired outcomes of pre-primary education effectively.

The findings present a clear quality crisis requiring urgent, multisectoral intervention to prevent permanent damage to Gambella's human capital development. As one stakeholder concluded: "We cannot claim to provide education when our youngest children learn in conditions that actively hinder development" (ZED1, 28/1/2024).

4.4.2.5. Teacher-Related Factors in the Provision of Quality Service in Preprimary Schools

In this section, an attempt was made to present data on the issues relating to teacher-related factors in pre-primary education. Data obtained from various sources, including interview FGD observation information and document analyses are presented below. Consequently, there is a clear need for continuous professional development and training opportunities to enhance teachers' knowledge of early childhood learning principles.

4.4.2.5.1. Teacher Selection and Training

Analysis of the interview data reveals significant challenges regarding the selection and training of pre-primary teachers in the Gambella Regional State. A representative from the regional education bureau provided insights into the current situation, stating:

The Gambella Regional Education Bureau lacks consistent procedures for recruiting and training pre-primary teachers. This inconsistency poses a significant obstacle to the development of a skilled and qualified teaching workforce in our region. For instance, in 2018, approximately 218 teachers received a short-term training program lasting only 30 days. Although this training may provide some foundational knowledge, it falls short in adequately preparing teachers for the unique demands of pre-primary education." (REB3, 18/1/2024).

It becomes evident that the Gambella Regional Education Bureau faces challenges in ensuring consistent and comprehensive procedures for the recruitment and training of pre-primary teachers. This highlights a specific instance where a short-term training program of limited duration was

insufficient to adequately equip teachers with the necessary skills and knowledge required for effective pre-primary education. In a focus group discussion, participants from the Woreda Education office shared insights into the current qualification practices in pre-primary schools within the region:

The findings from interviews and focus group discussions conducted with key informant groups in the region and the Woreda indicated that there was a shortage of teachers trained in specific pre-primary education in the region. These results align with the quantitative data collected. The key informants highlighted several important points, including that the teachers in the pre-primary school lack understanding about early childhood learning. Furthermore, they do not possess the appropriate qualifications in pre-primary education, and they lack experience in providing quality services to children. According to an interviewee from the Zonal Education Department:

"There is a shortage of teachers available to teach at the pre-primary level in our Zone. Since there are no teachers specifically trained for pre-primary education, the practice has been to select teachers from those already teaching at the 1st level. However, this approach creates a situation where the number of teachers is insufficient to meet the demand in pre-primary schools. Ideally, each pre-primary class requires both a main teacher and an assistant to provide effective instruction and support to the students. However, in the current circumstances, the allocation of an assistant teacher is lacking. Consequently, if the main teacher is unable to attend work due to unforeseen circumstances, the teaching and learning activities are disrupted due to the absence of a replacement or support (ZED3, 2024)."

Similar challenges exist in the Mejang Zone and the Nuwer Zone, as highlighted by education experts during the interviews. In Mejang Zone (ZED4, 23/2/2024), the availability of teachers for pre-primary schools is deemed inadequate. Furthermore, an interviewee from the Nuwer Zone (ZED1, 29/1/2024) emphasizes that the absence of qualified pre-primary teachers and the lack of assistant teachers significantly contribute to disruptions in teaching and learning activities.

These findings collectively indicate that the current number of qualified pre-primary school teachers falls short of meeting the demand in pre-primary schools. Addressing this issue is crucial to ensure that pre-primary students receive the education and support they require. Efforts should

be made to increase the recruitment and training of qualified pre-primary teachers, as well as the allocation of assistant teachers.

ESDP VI, as stated in the report by the Federal Democratic Republic of Ethiopia, Ministry of Education (MoE) in 2021, had set a goal of having two licensed teachers with a pre-primary diploma in each school. This meant that if a school had two teachers, both of them should possess a pre-primary diploma. However, this objective was not achieved in the observed pre-primary schools, largely due to the challenge of a lack of trained pre-primary school teachers. According to the biographies of the respondent pre-primary school teachers, a majority of them, specifically 57% (106 respondents), revealed that they had not received any training in pre-primary education. In contrast, 43% (79 respondents) reported having received short-term training.

This finding contradicts numerous literature in the field of child development. Existing literature on pre-primary education emphasizes that preschool teachers should possess knowledge of child development to effectively cater to the individual needs of children at different ages. Additionally, they should undergo pedagogical training to facilitate children's learning and be equipped with pediatric first aid training to assist in case of accidents during playtime (Morrison, 2004; NAEYC, 2009; Wortham, 2006). However, these essential aspects were not realistically incorporated into the study programs. Hence, it becomes imperative for the government to take on the responsibility of expediting the knowledge and skills development of teachers. This is crucial to enhance the quality of pre-primary education service provision.

4.4.2.5.2. Teacher Qualifications

"In terms of teacher qualifications in pre-primary schools, the current practice in our region involves selecting female teachers who are already teaching various subjects at primary schools. Due to the absence of teachers specifically trained for pre-primary education, this selection process allows for the utilization of existing teaching staff. Once selected, these teachers receive short training sessions provided by the Education Bureau. After completing the training, the teachers are sent back to the school they came from to begin teaching at the pre-primary level." (FGD4, 6/2/2024).

The interviewee from the REB attributes the problem of qualified pre-primary school teachers, especially those belonging to the Opo and Komo nations, as well as other ethnic groups, to a

significant issue in Gambella Regional State. There is still a huge gap in terms of qualified pre-primary school teachers in general and mother tongue teachers of pre-primary schools in particular who are currently working in our region. Especially, the teachers from Opo and Komo nations in the region have a gap in terms of educated manpower from these ethnic groups, and the conditions of bringing the teachers from pre-primary school to primary school while improving their level of education through on-the-job training made the shortage of qualified pre-primary school teachers worse (REB3, 18/1/2024).

To gain more in-depth information about the influence of pre-primary teachers' capacity on the delivery of quality services, the researcher conducted interviews with leaders of the Parents' Teacher Association (PTA). The interview guide aimed to understand the extent of parental involvement in ensuring that the teachers responsible for their children's education are qualified and possess relevant experience.

The responses from the PTA leaders revealed that the majority of parents were not actively involved in ensuring that the teachers handling their children were qualified. Parents expressed the belief that someone else, such as the school administration, was responsible for overseeing teacher qualifications, leading to a lack of personal concern. One PTA leader stated, "Parents lack interest in the teachers' qualifications as long as the teacher is available; other details matter less." These conversations indicated that most parents did not actively participate in verifying the qualifications of pre-primary school teachers.

Additionally, the researcher sought information on the capacity of pre-primary teachers from Woreda education officers. The officers were asked about the teachers' qualifications, experience, awareness of educational policies, and their ability to effectively implement these policies to ensure quality service delivery. The majority of the respondents reported that their teachers did not possess the minimum qualification of a certificate course in early childhood education. Some respondents also highlighted that the county government engaged pre-primary teachers without the necessary qualifications, and they, as education officers, had limited influence over the hiring process. This situation raises concerns about the potential gaps in delivering quality services in pre-primary schools when teachers lack the required qualifications and the involvement of education offices is compromised.

4.4.2.6. Parental Engagements in the Provision of Quality Service in Pre-Primary School

This section provides an analysis of parental engagement in the provision of quality services in pre-primary schools. The involvement of parents in the quality service provision of pre-primary education is of great importance as it enables them to participate in a meaningful way.

Based on the aforementioned findings, it is evident that many of the strategies devised to enhance the status of government pre-primary school services have not been effectively implemented. The organization and operation of pre-primary education programs require parental participation for substantial investment. Although the government of Ethiopia has made efforts to expand pre-primary education nationwide, insufficient attention has been given to parental education programs for comprehensive support for children at pre-primary schools. In the framework of ESDP VI, it is mentioned that the construction of classrooms should be carried out with the support of communities (Federal Democratic Republic of Ethiopia, Ministry of Education (MoE), 2021). However, the specific entity responsible for this activity is not specified in the policy document, potentially leading to implementation confusion and impeding program progress.

4.4.2.6.1. Parental Involvement in Education

Respondents expressed disagreement concerning parental support for pre-primary school activities, parental engagement in school-based community activities, parental financial contributions, and parental provision of material contributions. Additionally, respondents disagreed on parental participation in decision-making processes, parental monitoring of child attendance and homework, proactive information-seeking about school activities, parent-teacher communication, and active participation in parent-teacher meetings. These findings suggest a general lack of parental involvement and engagement in various aspects of pre-primary education.

The qualitative findings from interviews and focus group discussions (FGDs) with PTA leaders, REB education experts, and Woreda education office education experts reveal notable insights into parental engagement for quality service provision in pre-primary schools. PTA leaders emphasized the need for more structured and frequent meetings between parents and the school. One PTA leader suggested that "The school management should hold meetings with parents every two or three months. These meetings would provide an opportunity for parents to share their views and needs, while the school could inform parents about their plans and expectations."

However, at one research site, communication between parents and the school was found to be lacking. Parents reported limited or no communication with teachers regarding their child's progress, with one PTA leader stating that they had never received any calls or information from the school since enrolling their child. Parents also mentioned that they were not asked for their phone number, suggesting disconnect between parents and teachers.

Interviews with REB officers and Zonal education departments revealed that parental engagement practices in pre-primary schools were rare and inconsistent. One respondent mentioned that there is a lack of a dedicated department or specialists focused specifically on pre-primary education at both the Zone and Woreda levels. This organizational structure may limit the attention and resources provided to pre-primary education, potentially compromising its overall quality and effectiveness.

4.4.2.6.2. Engagement in Decision-Making

A respondent from the Gambella Regional State Education Bureau highlighted that the department responsible for pre-primary education has not been properly integrated into the existing structure, resulting in overlapping responsibilities and a lack of focused attention. This indicates that the practice intended to ensure adherence to policy guidelines is occasional and inconsistent.

Respondents from the FGD expressed concerns about the lack of parental participation in pre-primary education. One participant stated, "Parents do not show much interest in their child's pre-primary education, and this affects the delivery of quality services." This indicates that, while there is a recognized need for increased parental engagement in pre-primary education, the current implementation of strategies to enhance parental participation is inconsistent and inadequate. The lack of structured meetings, communication between parents and teachers, and dedicated resources for pre-primary education may contribute to the challenges in ensuring the delivery of quality services in pre-primary schools. This finding aligns with the descriptive findings, where the majority of respondents noted that parental participation is only done occasionally, despite their importance in enhancing the delivery of quality services.

To this end, the findings underscore the need for concerted efforts to improve parental engagement in pre-primary schools. Adequate investment in resources, inclusive practices, parental education, and health programs is integral to the successful implementation of pre-primary education

initiatives. Clear delineation of responsibilities and effective communication between stakeholders is essential for the seamless execution of policies and programs aimed at enhancing the quality of pre-primary education services.

4.4.2.7. Learning Resources and Facilities in Pre-Primary Schools of Gambella Regional State

This section provides an analysis of the role of learning resources and facilities in the provision of quality services in pre-primary schools. The role of learning resources and facilities in the quality service provision of pre-primary education is of great importance, as it enables pre-primary schools to provide meaningful service.

4.4.2.7.1. Availability of Learning Materials

The findings of observations conducted in pre-primary schools indicated gaps regarding the provision and accessibility of learning resources and facilities. The observed pre-primary schools face significant challenges regarding the provision of basic water, sanitation, and hygiene (WASH) facilities. These schools lack child-sized sanitation facilities such as sinks and toilets, and the available toilets are unclean, posing a risk of communicable diseases. Moreover, the water pipes in these schools are non-functional. These challenges, along with the lack of classrooms, large class sizes, and insufficient desks, are closely interconnected and can only be addressed if the government prioritizes the construction and equipping of pre-primary schools. To achieve this, policymakers should consider revising strategies and placing greater emphasis on the design and construction processes.

Numerous developmental theorists, including Piaget, Vygotsky, Erikson, and Gardner, recognize the significance of play as a means for optimal learning in children (Frost, Wortham, & Reifel, 2012; Johnson, Christie, & Yawkey, 1999). Piaget believed that play provides a context for cognitive development, with children actively engaging in exploring and making sense of their environment. Vygotsky emphasized the social and emotional aspects of play, suggesting that it is an essential context for children to develop social skills and self-regulation. Erikson viewed play as a critical factor in the development of a child's sense of self and identity, while Gardner believed that play is essential for the development of creativity and imagination.

Play contributes to children's holistic development, fostering cognitive skills such as creative thinking, problem-solving, and memory through activities like construction play with blocks and puzzles. It also enhances psychosocial development by promoting social skills, self-concept, empathy, social behaviors, impulse control, and conflict resolution through dramatic play and role play. Additionally, outdoor play activities such as running, jumping, and somersaults contribute to physical development by strengthening the body and enhancing flexibility (Frost, Wortham, & Reifel, 2012; Johnson, Christie, & Yawkey, 1999).

4.4.2.7.2. Classroom Conditions

Empirical research has also supported the significance of play in children's learning and development. Play has been shown to promote language development, improve memory and attention, enhance problem-solving and critical thinking skills, and foster social and emotional competence.

However, the observed schools suffer from a shortage of indoor and outdoor play materials that facilitate children's learning. The observations reveal a lack of indoor learning materials that assist in alphabet learning, particularly in PPS 6 and 8, while other observed schools lack any learning materials altogether. Teachers in some schools resort to a behaviorist approach, using chalkboards and repetitive letter recitation to teach the alphabet, which is not recommended for early childhood learning. Although alphabet learning materials are somewhat available in the remaining schools, other indoor play materials such as blocks, puzzles, dolls, and socio-dramatic toys that enhance cognitive and social development remain scarce.

Furthermore, inadequate playgrounds and outdoor play materials pose significant challenges in most of the observed pre-primary schools. The observations confirm the lack of proper playgrounds due to the attachment of pre-primary schools to primary schools. Consequently, pre-primary children are forced to play in dusty and unsanitary areas. This finding contradicts the constructivist perspective, which emphasizes that children construct knowledge through object exploration and manipulation (Erikson, cited in Wortham, 2006). Therefore, it is crucial to provide children with access to basic learning environments, including safe playgrounds, spacious classrooms, age-appropriate play, and learning materials, as well as trained teachers and staff. While pre-primary

education can benefit from community support, interviews reveal a lack of community involvement in these programs.

4.4.2.7.3. Accessibility of Facilities

The findings from interviews and focus group discussions with key informants in the region and Woreda, as well as observations conducted in pre-primary schools, align with these quantitative data. The respondents noted that there are significant concerns regarding the availability and accessibility of learning resources and facilities in pre-primary schools. The respondents noted the suitability of classrooms, learning resources, and facilities as very low indicating a need for improvement in this area. These findings underscore the urgent need for comprehensive improvements in various aspects of pre-primary education within Gambella. Enhancing the suitability of classrooms, ensuring the availability of age-appropriate resources, investing in play and recreational facilities, and addressing basic amenities are crucial steps to provide a safe, engaging, and inclusive learning environment for young children.

4.4.2.7.6. Availability of Play Resources

Outdoor play resources vary widely among the schools. Some institutions provide ample play materials that promote physical and social development, while others face shortages that limit children's opportunities for experiential learning. Adequate outdoor resources are crucial for promoting holistic growth through play, an important aspect of early childhood education.

The analysis also indicated a consistent shortage of outdoor play materials, which are essential for children's physical and social development. Many schools reported insufficient play equipment relative to the number of students, limiting opportunities for outdoor play and experiential learning. The lack of adequate outdoor resources can hinder the development of critical social skills and physical health in young children.

4.4.2.7.7. Sanitation and Toilets

Sanitation conditions and toilet facilities differ across the schools. While some institutions have convenient toilets for all children, others lack separate facilities for girls and boys, raising concerns about privacy and safety. Poor sanitation conditions in several schools pose health risks and can deter regular attendance.

Inadequate sanitation facilities create significant barriers to regular attendance and participation in school activities. Children may feel uncomfortable or unsafe in environments lacking proper sanitation, which can discourage them from attending school consistently. A clean and safe environment is crucial for fostering a positive educational experience, and addressing these infrastructural shortcomings is essential for promoting better health and attendance.

4.4.2.7.8. Availability of Water

Access to drinking water is another significant concern observed across multiple schools. While some institutions provide adequate water resources, others report shortages, affecting hygiene and overall student well-being. Schools with reliable access to clean water contribute positively to children's health and learning environments.

4.4.2.8. The Role of Supervision in Quality Service Provision in Pre-primary Schools

This section provides an analysis of the role of supervision in the provision of quality services in pre-primary schools. The role of supervision in the quality service provision of pre-primary education is of great importance as it enables pre-primary schools to provide meaningful service provision.

4.4.2.8.1. Current Practices of Supervision

The researcher conducted interviews with PTA leaders, REB education experts, and Woreda education office education experts to gather comprehensive information regarding the monitoring and evaluation practices in pre-primary schools. The interview guide for parents' representatives included two questions aimed at obtaining insights into monitoring and evaluation. The first question sought to establish whether parents were involved in ensuring that the school environment was appropriate and conducive for various activities. The responses from PTA leaders indicated that the majority of parents were not actively engaged in monitoring and evaluation activities unless specifically called upon by the teacher.

One parent representative (PTAL5) stated that: "Parents in the pre-primary school generally did not participate in monitoring and evaluation activities unless specifically requested by the teacher, such as ensuring the suitability of the playground for various play activities." Further probing revealed that parents believed it was the responsibility of the teacher to ensure a conducive school environment for their children. However, a small number of respondents reported being involved

in certain monitoring and evaluation activities, such as checking the hygiene of children's toilets and the safety of the playground. Additionally, one parent representative mentioned that they were never involved in monitoring and evaluation activities. Based on the responses from PTA leaders, it is evident that only a few parents actively engage in monitoring and evaluation activities to ensure the delivery of quality services in pre-primary schools. However, it is encouraging to note that the majority of parents can be involved if they are properly informed and empowered by the school. Furthermore, the presence of parents who are completely unaware of these practices indicates a need for improved awareness and education among parents; as such, involvement is instrumental in enhancing the quality of service provision in pre-primary schools.

4.4.2.8.2. Effectiveness of Supervision

The researcher also interviewed REB officers and Zonal education departments, focusing on how monitoring and evaluation practices are conducted by REB officers in pre-primary schools. The interview question explored the frequency of monitoring, dissemination, and utilization of evaluation reports. The responses revealed that monitoring and evaluation practices were rare and, in some cases, non-existent in government pre-primary schools.

Regarding the frequency of monitoring and evaluation and the dissemination of evaluation reports, various respondents highlighted the following issues. One of the respondents (ZED4) had the following to say:

Officials from the education departments visit schools during monitoring visits to assess various aspects of the pre-primary education program. These assessments may include the implementation of curriculum guidelines, the availability and use of teaching and learning materials, the overall learning environment, and adherence to educational standards. However, a significant issue identified was the lack of a dedicated department or specialists focused specifically on pre-primary education at both the Zone and Woreda levels. This organizational structure posed limitations in terms of providing adequate attention and resources to pre-primary education, potentially compromising its overall quality and effectiveness.”

This narrative presented an almost ideal practice in monitoring and evaluation of pre-primary schools for enhanced service provision. However, it was followed by a contrasting and distressing reality. One of the respondents highlighted as follows:

The current structure of the Gambella Regional State Education Bureau lacked a dedicated position or formalized structure for effectively managing pre-primary education. Currently, the responsibility of overseeing pre-primary education falls within the purview of various professionals from the regional level down to the Woreda education office.

Unfortunately, the department responsible for pre-primary education has not been properly integrated into the existing structure, resulting in overlapping responsibilities and a lack of focused attention (REB3, 18/1/2024).

This indicates that the practice intended to ensure adherence to policy guidelines is occasional and inconsistent. These sentiments were widely shared among the respondents. Similarly, the respondent from FGD expressed concerns about the lack of monitoring and support for pre-primary education.

“The pre-primary schools in the Gambella Region, as well as primary and secondary schools, lack effective monitoring and follow-up practices from the Regional Education Bureau. The lack of inclusive and focused monitoring and support for pre-primary education in the Gambella Regional Education Office is a significant concern that needs to be addressed. Robust monitoring and support systems are essential to ensure the effective implementation and improvement of pre-primary education.”

They emphasized the necessity of strong monitoring and support systems to ensure effective implementation and improvement of pre-primary education. The question focused on how the identified monitoring and evaluation practices influenced quality service delivery, particularly in terms of ensuring quality education. All respondents reported that these practices contributed to continuous improvement in the physical, social, instructional, nutritional, and health aspects of the learning environment. Unfortunately, the respondents reported that monitoring and evaluation exercises were rarely conducted by the regional education bureau, zonal education department, and woreda education office officers, confirming the scarcity of such practices. Consequently, monitoring and evaluation in pre-primary schools is inconsistently implemented.

Regional education bureau officers identified several challenges that impede the regular monitoring and evaluation of pre-primary schools. A primary concern is the inadequate facilitation of these institutions within their jurisdiction. Additionally, there is a notable lack of coordination and

dedicated resources for monitoring and evaluation activities. The absence of a specific department or structure tasked with overseeing pre-primary education further exacerbates the irregularity of these practices.

Interviews with PTA leaders, REB education experts, and Woreda education office officials further revealed that monitoring and evaluation practices in pre-primary schools are inconsistent and often insufficient. Addressing these deficiencies is critical for ensuring that pre-primary education programs are both effective and equitable for every child.

4.4.2.9. Challenges Impeding the Provision of Quality Service in Pre-Primary Schools of Gambella Regional State

Upon analyzing the challenges related to the quality of pre-primary education in Gambella Regional State, several common issues were raised by participants in interviews conducted with the regional education bureau, zonal education departments, and woreda education offices. The challenges identified can be categorized into various themes:

4.4.2.9.1. Structural Challenges

Absence of a clear structure for pre-primary education: A common concern expressed by participants was the lack of a well-defined structure and framework for pre-primary education. This absence can lead to inconsistencies in curriculum implementation, teaching methodologies, and overall program quality. To address this challenge, it is crucial to establish a structured framework that outlines clear objectives, a standardized curriculum, and appropriate personnel for pre-primary education.

Lack of implementation guidelines: Participants highlighted the need for guidelines that delineate the responsibilities of all stakeholders involved in pre-primary education. The absence of such guidelines can result in confusion and ineffective coordination. Developing and disseminating implementation guidelines is essential to ensure that all stakeholders understand their roles and responsibilities, leading to improved coordination and the provision of quality pre-primary education.

4.4.2.9.2. Resource Limitations

Insufficient budget allocation: Limited financial resources allocated to pre-primary education were identified as a significant challenge. Inadequate funding hampers the provision of quality services,

including the recruitment and training of qualified teachers, improving infrastructure and learning materials, and implementing effective monitoring and evaluation mechanisms. Advocating for increased budget allocation to pre-primary education is crucial to address this challenge.

4.4.2.9.3. Stakeholder Engagement

Effective collaboration among education authorities, communities, parents, and other relevant stakeholders is crucial for the success of pre-primary education programs. Participants emphasized the importance of engaging all stakeholders in regular discussions, decision-making processes, and joint initiatives. This collaborative approach can lead to better outcomes and sustainable improvements in pre-primary education.

Practice of attaching pre-primary schools to primary schools was seen as problematic, particularly for young children who may not be developmentally ready for a formal school setting. Participants suggested assessing the appropriateness of such arrangements and considering alternative models that prioritize the specific needs and developmental stages of pre-primary children.

The qualitative findings from interviews conducted at various levels of the education system, including the regional education bureau, zonal education departments, and woreda education offices, consistently highlighted these challenges. The absence of trained teachers, the lack of a dedicated department or professionals for pre-primary education, inadequate teaching materials, insufficient infrastructure, and an unsuitable learning environment for young children were among the key problems identified.

Addressing these challenges is crucial for improving the quality and effectiveness of pre-primary education in Gambella Regional State. By establishing a clear structure, developing implementation guidelines, advocating for increased budget allocation, fostering active collaboration among stakeholders, and reassessing the integration of pre-primary schools with primary schools, significant strides can be made to enhance the quality of pre-primary education and provide a solid foundation for children's lifelong learning and development.

4.4.3. Integration of Quantitative and Qualitative Findings

This study employed a convergent parallel mixed-methods design, integrating quantitative and qualitative data to achieve a comprehensive understanding of the quality of pre-primary education services in Gambella Regional State. Quantitative data were collected through surveys involving

279 respondents, while qualitative insights were derived from 16 interviews, 4 focus group discussions (FGDs), and 8 school observations. This convergent mixed-methods approach facilitated a robust examination of the state of pre-primary education, enabling systematic integration of findings from both datasets.

The interplay between quantitative and qualitative data reveals not only the challenges within the system but also elucidates the underlying reasons for their persistence and manifestation in practice. The subsequent sections synthesize the key convergent and divergent findings of this research.

4.4.3.1. Existing Practices of Pre-Primary Education

The study assesses the existing practices of pre-primary education in Gambella Regional State through a convergent design. Both quantitative and qualitative data reveal critical insights into the effectiveness of current practices and highlight areas requiring improvement.

Quantitative findings from surveys indicate mean ratings below the threshold of 2.50 for most aspects of pre-primary education practices, reflecting general dissatisfaction among respondents. Key findings include: **Guidelines for Implementation:** A mean rating of 2.70 suggests some acknowledgment of existing guidelines, but also indicates skepticism among many respondents. **Teaching-Learning Materials:** A low mean rating of 2.31 reveals a lack of age-appropriate materials, which are crucial for effective learning. **Teacher-Student Ratio:** A mean rating of 2.02 highlights significant concerns regarding overcrowded classrooms and insufficient trained staff, impacting personalized attention for young learners.

Qualitative data from interviews and focus group discussions provide context to these quantitative findings: Interviewees emphasize the necessity for dedicated structures and resources at the regional education bureau to effectively support pre-primary education. One participant noted the challenges posed by having only one trained teacher per school, aligning with quantitative findings regarding teacher shortages. Responses reveal that many classrooms are inadequate, with some classes held outdoors under trees, corroborating quantitative data indicating a lack of proper facilities.

The integration of both data types reveals a comprehensive picture of the challenges in pre-primary education: Both quantitative and qualitative data reflect a consensus on the inadequacy of current practices, with respondents expressing dissatisfaction across multiple areas, including curriculum

effectiveness, teacher qualifications, and resource availability. The need for clear and structured implementation guidelines is vital to ensure consistency across pre-primary education practices, while addressing the lack of age-appropriate teaching materials and enhancing classroom facilities should be prioritized to create conducive learning environments.

4.4.3.2. School Leadership

The examination of school leadership in pre-primary education reveals critical insights through an integrated analysis of both quantitative and qualitative data, highlighting the complexities and challenges faced by educational leaders in Gambella Regional State.

Quantitative findings indicate significant areas for improvement in school leadership practices, with mean ratings reflecting dissatisfaction across various dimensions. For instance, the average scores for leadership effectiveness and support for teachers were notably low, suggesting that leaders are not providing the necessary guidance or resources to foster a positive educational environment. The data also revealed a lack of consensus among respondents regarding the clarity of leadership roles and responsibilities, with many feeling unsupported in their efforts to implement effective teaching strategies.

Qualitative data from interviews with school leaders, teachers, and education officials provide deeper context to these quantitative findings. Many participants expressed concerns about the lack of clear communication from leadership regarding expectations and objectives. They noted, "We often feel lost because we don't have clear guidance on what is expected of us." This sentiment reflects a broader issue of ambiguity that hinders effective collaboration and progress within schools.

Furthermore, interviews highlighted the importance of professional development opportunities for school leaders. Several respondents indicated that ongoing training and support were lacking, which could enhance their ability to lead effectively. A school leader remarked, "Without proper training, it's challenging to implement best practices and support our teachers adequately." This underscores the need for investment in leadership development as a means of improving overall school performance.

The integration of these findings reveals a comprehensive understanding of the challenges and opportunities within school leadership in pre-primary education. The quantitative data highlight

specific shortcomings, such as low ratings for leadership effectiveness and support, while qualitative insights provide a deeper understanding of the experiences and frustrations of educators on the ground.

For example, the low average scores regarding leadership support correlate with qualitative feedback emphasizing the need for clearer communication and guidance. The absence of professional development opportunities, as noted in the qualitative data, aligns with quantitative findings suggesting that school leaders may lack the skills necessary to foster a supportive learning environment.

Together, these insights indicate that effective school leadership is essential for enhancing the quality of pre-primary education. Addressing identified deficiencies such as improving communication, providing professional development, and clarifying roles will be critical in empowering school leaders to create an environment conducive to learning.

4.4.3.3. Attachment to Primary Schools

The exploration of the attachment of pre-primary schools to primary schools reveals significant challenges and concerns through an integrated analysis of both quantitative and qualitative data.

Quantitative findings indicate a strong consensus among respondents that the attachment to primary schools influences the quality of pre-primary education, suggesting that the intended benefits of this attachment are not being realized.

Qualitative data from focus group discussions provide further context to these quantitative findings. Participants described the "insufficient environments" present in attached pre-primary settings, highlighting issues such as inadequate facilities. Observations verified these concerns, revealing that many pre-primary classrooms were simply assigned in primary school rooms, often equipped with furniture that was too large for young children. A zonal official noted, "We tell schools to separate the little ones, but with 60 students per class, they end up in storage rooms." This lack of appropriate physical space reinforces the idea that the current attachment model is ill-suited for the developmental needs of young learners.

The convergence of quantitative and qualitative data underscores the physical and pedagogical incompatibility of the current system. The high level of agreement in the quantitative findings

(mean = 3.73) that attachment to primary schools harms educational quality is illustrated by qualitative observations. For instance, all of the pre-primary classrooms visited were found to be unsuitable for their intended purpose, as they were originally designed for older students.

Interestingly, the low quantitative agreement (mean = 1.97) that attachment aids in the transition from pre-primary to primary education suggests that this arrangement may not fulfill its intended purpose. Parent-teacher association leaders' interviews illuminate this issue, with one stating, "Numerous children cry daily in that noisy, crowded place." This testimony highlights the emotional and psychological toll such environments can take on young children, further questioning the efficacy of the attachment model.

The integration of quantitative and qualitative data reveals a compelling narrative about the challenges associated with attaching pre-primary schools to primary schools. While quantitative ratings indicate a strong perception that this arrangement harms educational quality, qualitative insights provide a deeper understanding of the physical and emotional implications for young learners. Addressing these issues is crucial for creating effective and supportive learning environments that cater to the developmental needs of children in pre-primary education.

4.4.3.4. Teacher-Related Factors

The examination of teacher-related factors through both quantitative surveys and qualitative interviews and focus group discussions reveals a profound crisis in the pre-primary education sector of Gambella. This integrated analysis uncovers three critical dimensions of the teacher quality crisis:

Qualifications Crisis: The alarming quantitative finding that 57% of teachers lack any formal pre-primary training (mean qualification rating = 1.93) gains deeper significance when contextualized by qualitative insights. The regional education bureau's acknowledgment of "30-day training" for primary school teachers reassigned to pre-primary schools explains the prevalence of inappropriate pedagogical practices observed in classrooms. As one zonal officer pointedly remarked, "We take primary teachers trained in subject matter and assign them to pre-primary schools; how can they possibly know what 4-6 year-olds need?" This practice starkly contradicts Ethiopia's own Education Sector Development Program VI (ESDP VI) targets for diploma-qualified pre-primary

teachers, leading to what interviewees have termed "qualification teachers," wherein the appearance of training does not equate to substantive competency development.

Pedagogical Deficiency: The low ratings for the use of play-based methods (mean = 2.04) and developmental appropriateness (mean = 1.86) reflect not only skill deficiencies among teachers but also systemic contradictions. Classroom observations indicated that while teachers genuinely attempted to engage in child-centered activities, they were hindered by fundamental supports:

Time Management: The mean rating of 1.83 for time management correlates with focus group accounts of teachers managing over 60 students alone.

Resource Availability: With 91% of classrooms lacking adequate materials (mean = 1.74), interviews revealed a cyclical problem: untrained teachers struggle to creatively utilize available local materials, leading them to default to chalkboard drills.

Physical Space: The mean rating of 1.60 for classroom suitability reflects the challenges teachers face trying to implement circle-time activities in overcrowded rooms of 65 children. "How can you do 'free play' when children can't even stretch their arms?"

Structural Neglect: Pre-primary education remains an administrative afterthought, as evidenced by the lack of dedicated budgets, career pathways, or early childhood education-specific supervision systems. Qualification limitations create an illusion of compliance while failing to address profound competency gaps, particularly in multilingual and play-based pedagogy. Resource defeatism leads teachers to internalize material scarcity as an immutable condition, discouraging pedagogical innovation even when simple local materials could be creatively utilized.

The convergence of these findings underscores the urgency of addressing teacher capacity gaps as central to overall quality deficits. The quantitative finding that teachers explain 56.4% of quality variance becomes particularly pressing when paired with training records showing that 57% of teachers received no pre-primary preparation. This concerning convergence reveals that the very teachers tasked with laying the foundations for lifelong learning are themselves institutionally neglected.

Addressing these intertwined challenges is crucial for enhancing the quality of pre-primary education in Gambella, ensuring that young learners receive the foundational skills necessary for their future academic journeys.

4.4.3.5. Parental Engagement

The analysis of parental engagement in pre-primary education reveals significant insights through both quantitative and qualitative data, highlighting a concerning trend of passive involvement among parents. The quantitative data indicate mean ratings ranging from 1.99 to 2.35, reflecting weak communication and involvement from parents in their children's education. These scores suggest that parents are not actively engaged in essential activities such as monitoring attendance, communicating with teachers, or participating in school events. The overall low ratings point to a systemic issue where parental involvement is minimal, which could adversely affect the quality of educational services provided in pre-primary schools.

Qualitative findings further illuminate the reasons behind these quantitative trends. Interviews with Parent-Teacher Association (PTA) leaders reveal a pervasive sentiment among parents who "lack interest" in school activities unless prompted by the school. This lack of proactive engagement highlights disconnect between parents and educational institutions. Additionally, comments from education officials indicate that schools rarely take the initiative to reach out to parents, reinforcing the cyclical nature of this disengagement.

The convergence of quantitative and qualitative data presents a comprehensive picture of the challenges facing parental engagement. Both datasets reveal a pattern of passive engagement norms within the community. While the surveys indicate weak communication, with a mean score of 2.35, the qualitative data expose a deeper recurrent issue. A PTA leader noted that schools do not initiate contact with parents because "parents don't come when called." This suggests a lack of trust or motivation on the part of parents to engage with the school, exacerbated by the school's reluctance to reach out. Conversely, parents express withdrawal from involvement due to the perception that "no one explains how to help our children." This lack of guidance creates a barrier to effective engagement, as parents feel uncertain about their role in supporting their children's education.

The consequences of this mutual disengagement are tangible. Focus group discussions revealed that most schools lack even basic mechanisms for parental input, such as suggestion boxes. This

absence of structured engagement opportunities underscores the need for a more proactive approach from both schools and parents. The findings highlight a troubling cycle of disengagement between parents and schools in the pre-primary education system. While quantitative data reflect weak communication and involvement, qualitative insights provide context for these trends, revealing the reciprocal nature of disengagement. To address these challenges, schools must take the initiative in fostering communication and support mechanisms that empower parents and enhance their involvement in their children's education.

4.4.3.6. Learning Resources and Facilities

The analysis of learning resources and facilities in pre-primary schools reveals critical deficiencies that significantly impact the quality of education. Quantitative data indicate that all facility-related items received mean scores below the threshold of 2.50, highlighting a substantial level of dissatisfaction among respondents. Of particular concern are the scores for toilets and playgrounds, which received the lowest ratings of 1.50 and 1.58, respectively. These figures signal severe inadequacies in the facilities essential for creating a safe and conducive learning environment.

Qualitative observations further illuminate the dire state of these facilities. Reports from classroom observations documented “dusty play areas” and failures in water, sanitation, and hygiene (WASH) provisions. Experts pointed to significant gaps in policy implementation, as outlined by the Ministry of Education (MoE, 2021).

One striking observation noted that the outdoor play area was merely a dirt patch located near latrines, lacking shade or proper equipment. This not only reflects poor infrastructure but also raises serious concerns about the safety and well-being of children.

The convergence of quantitative and qualitative data paints a comprehensive picture of the physical environment's deficiencies, which are both severe and widespread. The miserable facility ratings, particularly for playgrounds with a mean score of 1.58, gain additional depth through observational notes. The conditions described reveal more than just a lack of play equipment; they signify a fundamental neglect of children's developmental needs.

These conditions represent violations of Maslow's hierarchy of needs. When basic safety and hygiene needs remain unmet, it becomes increasingly challenging for children to thrive academically. Therefore, the findings highlight alarming inadequacies in the learning resources

and facilities available in pre-primary schools. The quantitative data reveal a critical lack of essential infrastructure, while qualitative insights provide context that underscores the urgency of addressing these issues. Improving the physical environment is not just about meeting regulatory standards; it is a crucial step toward ensuring that all children have the opportunity to engage in meaningful learning experiences in a safe and nurturing environment.

4.4.3.7. Supervision Role

The analysis of supervision role in pre-primary schools reveals significant gaps in the effectiveness of current practices, as illustrated by both quantitative ratings and qualitative insights. Quantitative data show that all mean ratings for aspects of supervision fall below the critical threshold of 2.50, indicating widespread dissatisfaction among respondents. Notably, the mean rating for the quality of the physical environment suggests that supervision does not adequately ensure a favorable setting for young learners. This is echoed in the low scores for teaching quality and teacher-learner interactions, highlighting deficiencies in supervisory practices that could enhance educational delivery. Furthermore, concerns were raised about the supervision of play-based learning approaches.

Qualitative data gathered from interviews with PTA leaders, REB education experts, and woreda education officials provide deeper context to the quantitative findings. Interviews with REB officers and zonal education departments further highlighted significant challenges in monitoring and evaluation practices. Respondents reported that such practices are rare and often inconsistent, with one official stating, “A significant issue identified was the lack of a dedicated department or specialists focused specifically on pre-primary education.” This lack of dedicated oversight leads to insufficient attention and resources for pre-primary education, adversely affecting its quality and effectiveness.

Additionally, concerns about inadequate facilitation for monitoring and evaluation activities were echoed by several respondents. The absence of a structured approach to supervision results in overlapping responsibilities and a lack of focused attention on pre-primary education.

The integration of quantitative and qualitative data reveals a comprehensive picture of the challenges in supervision within pre-primary education. The quantitative ratings highlight specific areas of concern, such as low scores for the quality of the physical environment and teaching

practices. Qualitative insights provide context, illustrating the human experiences and institutional barriers that contribute to these deficiencies. For instance, the low mean rating for teacher guidance aligns with qualitative feedback indicating that parents and teachers feel disconnected from the monitoring processes. The quantitative finding regarding inadequate supervision of play-based learning is supported by qualitative evidence highlighting the lack of appropriate play spaces and resources.

Together, these findings underscore the urgent need for systemic improvements in supervision practices. Addressing the deficiencies identified in both datasets, such as enhancing parental engagement, establishing clear guidelines, and ensuring dedicated oversight for pre-primary education, is critical for fostering an effective and equitable learning environment for all children. This integrated approach emphasizes that improvements in supervision are essential for ensuring quality service provision in pre-primary schools, ultimately contributing to better educational outcomes for young learners.

4.4.3.8. Challenges

The analysis of challenges impeding the provision of quality services in government pre-primary schools in Gambella Regional State reveals a complex network of interrelated issues. Both quantitative and qualitative data highlight critical obstacles, allowing for a comprehensive understanding of the situation.

Quantitative data rank the challenges faced by pre-primary schools, with the shortage of school budgets emerging as the most significant issue. This finding underscores the severe lack of financial resources allocated to pre-primary education, directly impacting the quality of services provided. Other notable challenges include inconvenient school locations, a shortage of qualified teachers, inadequate infrastructure, and the absence of age-appropriate learning materials. The data also indicate limited supervision from education offices and a lack of professional training opportunities for teachers. Parental engagement is another area identified as needing improvement, alongside the absence of clear implementation guidelines and limited community awareness regarding the importance of pre-primary education.

Complementing the quantitative findings, qualitative interviews with stakeholders from the regional education bureau, zonal education departments, and woreda education offices reveal

deeper insights into these challenges. Participants consistently express concerns about the absence of a clear structure for pre-primary education, which leads to inconsistencies in curriculum implementation and teaching methodologies. The lack of implementation guidelines was also highlighted, emphasizing the need for comprehensive frameworks delineating the responsibilities of all stakeholders involved in pre-primary education.

Inadequate budget allocation was reiterated as a significant barrier, with participants noting that insufficient funding hampers the recruitment and training of qualified teachers, improvement of infrastructure, and provision of appropriate learning materials. Additionally, the need for active collaboration among stakeholders emerged as a crucial factor for success. Participants stressed the importance of engaging education authorities, communities, and parents in regular discussions and decision-making processes to foster better outcomes.

Another key qualitative insight pertains to the integration of pre-primary schools with primary schools, which participants identified as problematic. Many suggested that this arrangement may not be developmentally appropriate for young children, indicating a need to reassess these structures to better meet the needs of pre-primary learners.

The integration of these quantitative and qualitative findings illustrates how systemic challenges interact and reinforce one another. The quantitative data show clear patterns of budget shortages and inadequate infrastructure, while qualitative insights provide context, revealing the human experiences and institutional constraints behind these figures.

For example, the ranking of inadequate infrastructure aligns with qualitative observations detailing the lack of age-appropriate learning materials and insufficient teaching environments. Similarly, the quantitative data on the shortage of teachers complements qualitative concerns about the absence of trained professionals dedicated to pre-primary education.

In summary, the integrated analysis of both quantitative and qualitative data offers a comprehensive understanding of the complexities within Gambella's pre-primary education system. The findings highlight that challenges are interconnected and necessitate holistic solutions. By addressing the systemic barriers identified through this dual approach, stakeholders can enhance the quality of pre-primary education, ensuring that young learners acquire the foundational skills essential for their future academic success. This synthesis underscores the significance of combining different

data types to capture the multifaceted nature of educational challenges and inform effective interventions.

4.5. Discussion of the Findings

This study adopted a mixed-methods research design, using both quantitative and qualitative approaches to investigate the practice and its elements of quality service provision in pre-primary schools within the Gambella Regional State. The inquiry was guided by the research objectives established at the start of the investigation.

The study involved a diverse group of participants, providing a comprehensive view of the landscape of pre-primary education. A total of 190 pre-primary teachers and 95 school principals were engaged, reflecting a substantial representation of those directly involved in pre-primary education.

The research utilized a questionnaire as a primary tool for data collection, distributing a total of 285 questionnaires. A notable 279 were completed, resulting in a remarkable response rate of 97.8%. This high level of engagement indicates a strong interest among educators in contributing to discussions about pre-primary education practices and determinants of quality service provision in preprimary schools of Gambella Regional State.

In addition to the questionnaires, the research included focus group discussions, which comprised four groups with a total of 28 participants. These groups consisted of Woreda Education Office Heads and experts, enriching the qualitative aspect of the study by incorporating insights from those with administrative and oversight responsibilities in pre-primary education.

Furthermore, 16 in-depth interviews were conducted with key stakeholders, including five leaders from the Regional Education Bureau, three from the Zonal Education Department, and eight Parent-Teacher Association leaders. These interviews provided a valuable opportunity to gather detailed perspectives on the challenges and opportunities within the pre-primary education system.

Overall, the total number of respondents reached 329, representing a broad spectrum of voices in the field of pre-primary education. This diverse demographic profile not only enhances the reliability of the findings but also underscores the collaborative effort to understand and improve the quality of pre-primary education. The combination of quantitative and qualitative methods

ensures a well-rounded analysis, making the insights gained from this study particularly relevant for future educational policies and practices.

The demographic profile of respondents provides a detailed understanding of the backgrounds of those involved in the study, shedding light on various factors that could influence their perspectives on pre-primary education.

The gender distribution among participants was notably balanced, with male respondents comprising 44.8% and female respondents making up 55.2%. This slight majority of female participants reflects the broader trend in education, where women often dominate the early childhood sector. Their perspectives are crucial, as they often bring unique insights and experiences to the table.

The age distribution reveals that a significant portion of the respondents, 67.4%, fell within the 31-40 years age range. This demographic represents early to mid-career professionals who are likely to be actively engaged in the evolving landscape of pre-primary education. Their relative youth in the field suggests a potential for enthusiasm and adaptability to new teaching methodologies and educational reforms.

In terms of educational qualifications, the data indicate that 52.7% of the respondents held diploma qualifications, while 47.3% had first degrees. This distribution suggests a mix of foundational and advanced training, which could affect their teaching practices and understanding of pre-primary education principles. The presence of diploma holders may highlight the need for ongoing professional development to enhance educational standards.

The professional background of the respondents is particularly notable, with 78.4% possessing teaching experience in pre-primary schools spanning one to five years. This distribution suggests a relatively early-career workforce, potentially indicating a recent influx of educators into the early childhood education sector.

Additionally, a significant proportion of respondents (57%) reported having received no formal training in pre-primary education. This absence of specialized preparation may adversely impact both their instructional efficacy and self-assurance in delivering high-quality early childhood education. Among those who had undergone training, 80% indicated that the duration was limited

to just one month. Such brief training programs are unlikely to provide educators with the depth of pedagogical knowledge and practical skills necessary for effective teaching in early childhood settings.

Overall, the demographic profile of respondents illustrates a diverse group of educators with varying levels of experience and educational backgrounds. While their significant teaching experience is an asset, the lack of extensive training in pre-primary education raises concerns about the quality of education being provided. Addressing these gaps through professional development and targeted training programs will be essential for enhancing the effectiveness of pre-primary education and ensuring that all learners receive a high-quality foundation for their educational journey. Consequently, the discussion below is grounded in the findings from the data analysis presented in the previous chapters, systematically addressing each research question.

4.5.1. Existing Practices in Quality Service Provision in Pre-Primary school of Gambella Regional State

The first research question of the study was about the existing practices and status of quality service provision of pre-primary education in Gambella Regional State. This section focuses on the major findings concerning the practice of pre-primary education in government preprimary schools the current leadership practice of preprimary schools the attachments of preprimary schools to primary school practices and status of quality service provision in preprimary schools of Gambella Regional State.

A critical barrier to quality pre-primary education lies in the absence of standardized implementation guidelines, leading to inconsistent pedagogical approaches across the region. This regulatory gap fosters reliance on ad hoc teaching strategies and aggravates resource inadequacies, as noted in stakeholder interviews. Such inconsistencies with global literature underscore the necessity of robust policy frameworks to ensure equitable early childhood education (ECE) delivery (Aina & Bipath, 2022; OECD, 2012). The scarcity of age-appropriate learning materials further compounds these issues, reflecting systemic under-resourcing that impedes cognitive and socio-emotional development a challenge well-documented in low-resource educational contexts (Kaizar & Alordiah, 2023). Without intentional investment in culturally relevant and developmentally suitable resources, the region risks perpetuating cycles of suboptimal learning outcomes.

The physical learning environment emerged as a significant impediment to quality service provision. Chronic overcrowding, inadequate ventilation, and inappropriate furniture were pervasive, creating environments detrimental to child engagement and well-being. These conditions, described qualitatively as restrictive, align with studies linking poor infrastructure to diminished cognitive gains and socio-emotional development in pre-primary schools settings (Alzahrani et al., 2019). Compounding these issues is the severe understaffing of classrooms, which limits opportunities for individualized instruction and interactive pedagogies. Such infrastructural and staffing deficits highlight a stark misalignment between policy aspirations and on-the-ground realities, necessitating urgent investment in classroom expansion and ergonomic design tailored to young learners' needs.

An additional challenge confronting pre-primary schools in Gambella Regional State was the lack of independent leadership specifically focused on overseeing pre-primary schools. Presently, this responsibility falls under primary school administrators who often lack expertise in early childhood education principles and face competing demands from their own institutions' unresolved issues, limiting their capacity to prioritize preschool needs (Tiruwork, 2019). This structural oversight has further compounded difficulties for preschools. For example, preschools are forced to function within administrative frameworks designed for older students, creating governance challenges (Tsegai, 2015). Policies and priorities tailored to primary education frequently mismatch the specific developmental and educational requirements of young learners. Consequently, preschools are constrained in their ability to independently decide on curriculum design, teaching methods, and resource distribution. They must also adhere to administrative systems that neglect critical elements of early childhood pedagogy, hindering the creativity and adaptability required to cultivate stimulating, age-appropriate learning environments. These findings underscore the imperative for institutionalized leadership frameworks that prioritize collaborative stakeholder engagement, a cornerstone of effective ECE governance emphasized in contemporary research (Day et al., 2020).

It appears that other factors have also jeopardized efforts to create a suitable learning environment in pre-primary schools.. A striking contradiction lies in the organizational integration of pre-primary schools within primary school systems, a policy seemingly designed to ease transitional readiness. However, evidence reveals this approach worries resources and dilutes developmental appropriateness. Qualitative reports of pre-primary classes conducted “under trees” due to

overcrowded primary facilities illustrate the paradox of integration, where shared spaces compromise both cohorts' learning environments. This misalignment challenges assumptions that the attachments of preprimary schools to primary schools inherently fosters continuity, instead reflecting a “borrowing” of infrastructure that undermines age-specific pedagogical needs a phenomenon observed in merged pre-primary education systems. The strong preference among stakeholders for standalone pre-primary schools resonances a growing consensus in pre-primary education works: distinct administrative and spatial designs are essential to meet young children's developmental requirements, as championed by early education theorists like Friedrich Froebel.

Disparities in quality service provisions are evident in conflicting assessments of children's foundational skills, including reading readiness, alphabet recognition, and engagement. Such discrepancies suggest that current practices inadequately support cognitive and learning development. Qualitative insights attribute these gaps to a fragmented curriculum and insufficient teacher training, which hinder responsiveness to diverse learner needs, a concern amplified in multilingual and multicultural contexts like Gambella.

These challenges align with studies emphasizing the centrality of teacher preparedness and curricular coherence in fostering equitable outcomes (Zickafoose et al., 2024). Without targeted professional development and context-sensitive curricular frameworks, the region's pre-primary system risks failing its most vulnerable learners. The interplay of systemic, infrastructural, and governance barriers in Gambella's pre-primary education underscores the need for holistic interventions. Prioritizing context-specific policy frameworks, coupled with investments in infrastructure, teacher training, and standalone pre-primary institutions, could realign implementation with policy intent.

4.5.2. Teachers Related Factors in Quality Service Provision in Pre-Primary Schools of Gambella Regional State

The findings of this study highlight the profound influence of teacher-related factors on the quality of service provision in pre-primary education in Gambella Regional State. While there was some disagreement among participants regarding the current influence of these factors, both quantitative and qualitative data revealed critical gaps in teacher preparedness, pedagogical knowledge, and classroom practices that hinder effective early childhood education.

Quantitative results indicated that many teachers lack a strong understanding of early childhood learning principles, struggle with developmentally appropriate practices, and face difficulties in implementing individualized instruction. These findings align with recent empirical studies, such as Suchodoletz et al. (2023b), who found that teachers' pedagogical knowledge directly influences instructional quality. Similarly, Manning et al. (2017) emphasized that early childhood educators require specialized training to foster cognitive and socio-emotional development effectively. This connection reinforces the argument that improving teachers' pedagogical knowledge and providing specialized training are essential for enhancing instructional quality in early childhood education.

Qualitative insights further reinforced these concerns, with stakeholders reporting systemic deficiencies in teacher training and workforce capacity. A parent-teacher association leader remarked, "Many teachers lack the training needed to support holistic child development," a sentiment echoed by a Woreda education expert who noted a "critical shortage of experienced pre-primary teachers." This shortage exacerbates existing challenges, as understaffed schools struggle to provide adequate individualized attention, a key determinant of early learning success (Scheeler et al., 2016).

The scarcity of trained pre-primary teachers in Gambella reflects broader systemic neglect, consistent with UNESCO's (2023) warnings about global teacher shortages disproportionately affecting marginalized regions. The Gambella case exemplifies how understaffing strains existing educators, limiting their ability to employ evidence-based practices. This aligns with Chen et al. (2020), who found that teacher shortages in low-resource settings lead to larger class sizes and reduced instructional quality.

Moreover, the study revealed that even among teachers who received training, 80% underwent programs lasting only one month far shorter than the sustained professional development recommended by scholars such as Pianta & Hofkens (2023). Such brief training is insufficient to cultivate the deep pedagogical knowledge and classroom management skills necessary for high-quality early childhood education (Tilbe & Xiaosong, 2024).

Another critical finding was the struggle teachers' face in managing time and utilizing resources effectively, which restricts their ability to provide personalized instruction. This corroborates Nasiopoulou et al. (2023), who demonstrated that efficient resource use significantly enhances

language and literacy outcomes in early childhood settings. A school leader in Gambella noted, “Teachers struggle to balance time and resources, affecting individualized attention,” highlighting a challenge also documented by *Gidari & Kakana (2021)* in similar contexts.

Additionally, weak parent-teacher communication emerged as a barrier to collaborative support, reinforcing *Pianta & Hofkens’ (2023)* argument that strong family engagement is essential for educational effectiveness. Some teachers, however, demonstrated proactive strategies such as building relationships with children, engaging parents, and sourcing local materials, suggesting that targeted professional development could enhance these competencies.

The Gambella case underscores a universal truth in early childhood education: teacher quality is inseparable from systemic equity. By prioritizing these measures, policymakers can transform pre-primary education in Gambella from a neglected tier into a cornerstone of lifelong learning, fulfilling *SDG 4.2’s* vision for inclusive, quality early childhood development (*UN, 2015*).

On the other hand, the linear regression analysis demonstrated that teacher-related factors accounted for 56.4% of the variance in quality service provision, aligning with prior studies that identify teacher qualifications, pedagogical knowledge, and classroom management as pivotal to early childhood education quality (*Chen et al., 2020; Manning et al., 2017; Pianta & Hofkens, 2023; Tilbe & Xiaosong, 2024; Von Suchodoletz et al., 2023b*). These findings emphasize the importance of investing in teachers and their professional development to enhance the quality of pre-primary education. Improving teachers' understanding of early childhood learning, ensuring appropriate qualifications and experience, promoting individualized teaching approaches, and fostering effective communication with parents are crucial for providing high-quality services to young children. This indicated that teacher-related factors are critical to enhancing quality service provision in pre-primary education.

4.5.3. Parental Engagement in Quality Service Provision in Pre-Primary Schools of Gambella Regional State

The findings of this study present an examination of parental engagement in pre-primary education within Gambella Regional State, Ethiopia, revealing systemic challenges that hinder effective family-school partnerships. Both quantitative and qualitative data converge to demonstrate that

parental involvement remains alarmingly low across multiple dimensions, with significant implications for the quality of early childhood education services. This discussion synthesizes these findings with recent empirical evidence to elucidate the underlying causes and consequences.

The study identified three key areas of parental disengagement: limited support for school activities, weak participation in decision-making and monitoring, and poor parent-teacher communication. These findings align with global research on barriers to parental involvement in low-resource contexts (Hornby & Blackwell, 2018; Kim & Sheridan, 2022).

The lack of financial and material contributions from parents mirrors findings by UNESCO (2023) in sub-Saharan Africa, where poverty and competing survival priorities limit families' capacity to engage with schools. In Gambella, this is exacerbated by the absence of clear policy directives in Ethiopia's ESDP VI (MoE, 2021) to mobilize parental participation, creating a vacuum in accountability.

Qualitative data revealed that many parents lack awareness of their role in early education, consistent with Jeynes' (2022) meta-analysis showing that marginalized communities often perceive pre-primary schools as "childcare" rather than foundational learning spaces. Empirical Support: In Tanzania, a community sensitization program increased parental meeting attendance by 58% (Ngware et al., 2021), underscoring the need for awareness campaigns in Gambella.

The regression analysis confirmed that parental engagement accounts for 11.3% of the variance in quality service provision ($R^2 = 0.113$, $\beta = 0.392$, $*p* < 0.001$). While this may seem modest, it aligns with studies emphasizing that parental involvement is a necessary but insufficient factor for quality its impact is mediated by institutional support (Pianta & Hamre, 2023).

The lack of parental monitoring of attendance and homework correlates with lower literacy gains, as demonstrated in Ghana (Wolf et al. 2023), where SMS reminders to parents improved child attendance by 22% and alphabet recognition by 15%. In Gambella Context: Only a few parents in FGDs reported checking homework, suggesting a critical gap in reinforcing learning at home.

The low mean score (2.35) for parent-teacher communication reflects a global challenge in low-resource settings. A study in Malawi (Kholowa & Mtika, 2024) found that teachers in understaffed schools prioritize classroom management over family engagement, mirroring Gambella's reported teacher shortages.

Qualitative interviews exposed systemic flaws in Ethiopia's pre-primary education framework: While ESDP VI mentions community involvement in school construction, it fails to specify how parents should engage (MoE, 2021). This ambiguity leads to inconsistent practices, as seen in Gambella's "occasional" parent-teacher meetings. Contrast with Best Practices: Rwanda's 2022 *Early Childhood Development Policy* mandates quarterly parent training workshops, resulting in 71% attendance rates (MINEDUC, 2023).

The absence of dedicated pre-primary departments at zonal levels in Gambella reflects a broader trend in sub-Saharan Africa. A 2023 World Bank report noted that only 17% of African nations have standalone budgets for pre-primary education, perpetuating resource gaps.

The Gambella case exemplifies a global paradox: parental engagement is universally acknowledged as vital for early education quality (SDG 4.2), yet it remains chronically undervalued in policy and practice. To this end, the findings highlight the significant influence of parental engagement on the provision of quality services in pre-primary schools. The results underscore the urgent need to implement strategies that promote parental involvement, enhance communication, and address systemic barriers. By prioritizing these efforts, stakeholders can contribute to a more effective and inclusive pre-primary education system, ultimately fostering better developmental outcomes for children in the region. A multifaceted approach that combines improved communication strategies and structured practices is crucial for creating a collaborative environment that supports both parental engagement and high-quality service delivery in Gambella Regional State.

4.5.4. Learning Resources and Facilities in Quality Service Provision in Pre-Primary Schools of Gambella Regional State

The findings from this study provide critical insights into the current state of pre-primary education in the Gambella Regional State of Ethiopia, specifically regarding the influence of learning resources and facilities on the quality of services provided. Both data reveal widespread dissatisfaction among stakeholders concerning various aspects of learning resources and facilities, while qualitative insights further reinforce these concerns. Moreover, the findings of this study shade a concerning picture of pre-primary education in Gambella Regional State, Ethiopia, where inadequate learning resources, insufficient play facilities, and poor sanitation conditions significantly hinder the quality of service provision of pre-primary education. These deficiencies

not only limit children's immediate learning experiences but also have long-term implications for their cognitive, social, and physical development.

The critical shortage of learning resources and its consequences: the study reveals a severe lack of foundational literacy resources, such as reading corners and age-appropriate books, which are essential for fostering early language and cognitive skills. With mean satisfaction ratings falling below 2.50, it is evident that stakeholders' parents, teachers, and administrators are deeply dissatisfied with the current state of learning materials in Gambella's pre-primary schools.

This finding aligns with recent empirical research underscoring the importance of well-equipped learning environments. For example, Siraj et al. (2019) demonstrated that access to high-quality reading materials significantly enhances language acquisition in young children. Similarly, Muthoni et al. (2022) found that preschools with well-stocked libraries and reading corners produced children with stronger literacy skills compared to those without such resources. The absence of these materials in Gambella contradicts Vygotsky's socio-constructivist theory (1978), which emphasizes that children learn best when they interact with stimulating educational materials. Without these resources, children in Gambella are at risk of falling behind in foundational literacy, perpetuating cycles of educational disadvantage. Qualitative observations confirm that many schools lack the necessary materials to support early literacy development, which is crucial for future academic success.

When compared to other regions, Gambella's situation mirrors broader challenges in Sub-Saharan Africa but appears more acute due to systemic neglect. Worku (2025) noted similar resource shortages in Bahir Dar, Ethiopia, though urban schools fared slightly better. Meanwhile, Raikes et al. (2023) highlighted how targeted interventions in Kenya, such as government and NGO partnerships to supply books, led to measurable improvements in early learning outcomes. These comparisons suggest that while resource scarcity is a regional issue, Gambella's case is particularly dire, necessitating urgent policy action.

The absence of play facilities and their developmental impact: another critical issue uncovered by the study is the near-total lack of play and recreational facilities in Gambella's pre-primary schools. Instead of safe, structured play areas, children are often confined to unsanitary outdoor spaces, which not only limit their physical activity but also hinder cognitive and socio-emotional growth.

This finding is supported by a wealth of research underscoring the importance of play in early childhood development. Yogman et al. (2018) found that both structured and unstructured play enhance executive function, problem-solving abilities, and emotional regulation in young children. UNICEF (2021) guidelines further advocate for play-based learning as a cornerstone of quality ECE, emphasizing that stimulating play environments foster creativity and social skills. The situation in Gambella starkly contrasts with Piaget's theory of cognitive development, which posits that play is essential for children to explore, experiment, and construct knowledge. Without these opportunities, children miss crucial developmental milestones that lay the foundation for future learning.

Comparative studies from other African nations reinforce the transformative potential of investing in play infrastructure. Barrett et al. (2019) documented how Rwanda's investments in playgrounds and play-based learning programs significantly improved school readiness. Similarly, Rajabalee & Rennie (2020) found that Mauritian preschools adopting play-based curricula outperformed those with rigid, academic-focused approaches in long-term educational outcomes. Gambella's failure to prioritize play infrastructure thus represents a missed opportunity to nurture well-rounded, resilient learners.

Poor sanitation and hygiene: perhaps one of the most alarming findings is the dire state of sanitation and hygiene in Gambella's pre-primary schools. Poorly maintained toilets, lack of clean water, and unsanitary play conditions pose serious health risks to children, increasing absenteeism due to illness and undermining their ability to focus and learn.

This issue is not unique to Gambella but reflects a broader challenge in low-resource educational settings. Worku (2025) reported similar problems in Bahir Dar, where inadequate sanitation led to frequent illness-related absences among preschoolers. Conversely, Savasci & Tomul (2013) found that schools in Turkey that improved their Water, Sanitation, and Hygiene (WASH) facilities saw marked increases in student attendance and concentration levels. These findings align with Maslow's hierarchy of needs, which asserts that basic physiological and safety needs must be met before higher-order learning can occur. When children lack access to clean water and safe toilets, their ability to engage in learning is fundamentally compromised.

Global benchmarks further highlight the severity of Gambella's shortcomings. UNICEF & WHO (2020) standards recommend at least one child-friendly toilet per 20 students and reliable access to clean water conditions that are far from being met in the region. Successful interventions in countries like Ghana and Senegal, as documented by the World Bank (2021), demonstrate that improving WASH infrastructure in schools leads to better health and educational outcomes. Gambella's failure to meet these basic standards underscores a systemic neglect of children's well-being in the education sector.

Qualitative evidence reinforces these concerns, stressing the urgent demand for clean, safe, and age-appropriate facilities. The absence of child-friendly sanitation infrastructure and reliable water sources underscores a failure to ensure safe learning environments, a fundamental requirement for early childhood well-being. Collectively, the evidence highlights an urgent imperative to upgrade learning resources and infrastructure to foster the comprehensive development of young learners, ensuring their safety, health, and academic success.

On the other hand, inferential analysis indicated a significant positive relationship between learning resources and facilities and the level of quality service provision. The regression analysis found that 35.2% of the variance in quality service provision can be explained by the availability of learning resources and facilities. This quantitative analysis suggests that improvements in learning resources are likely to enhance the overall quality of services provided in pre-primary schools. Qualitative feedback further supports this notion, indicating that stakeholders recognize the direct link between adequate resources and improved educational outcomes.

These findings align with previous studies that have identified a positive relationship between the availability of learning resources and facilities and the quality of early childhood education (Raikes et al., 2023; Rajabalee & Rennie, 2020; Savasci & Tomul, 2013). In light of these findings, comprehensive improvements are urgently needed across various facets of pre-primary education in Gambella. Enhancing the suitability of classrooms, ensuring the availability of age-appropriate resources, investing in play and recreational facilities, and addressing basic amenities are crucial steps to create a safe, engaging, and inclusive learning environment for young children. Learning resources and facilities are pivotal to delivering quality pre-primary education in Gambella. While their impact is substantial (35.2% variance), holistic improvements require synergizing

infrastructure upgrades, teacher support, and community involvement. Addressing these gaps aligns with SDG 4.2 and global commitments to equitable early childhood development.

4.5.5. The Role of Supervision in Quality Service Provision in Pre-Primary Schools

The findings from this study showed the significant role that supervision plays in delivering quality services in pre-primary schools within the Gambella Regional State. The convergence of qualitative and quantitative data highlights key issues and areas for improvement in supervisory practices. Notably, stakeholders expressed widespread dissatisfaction with current supervision methods, particularly regarding enhancements to the classroom environment, pedagogical support, and guidance on teacher-child interactions. These concerns were reinforced through qualitative interviews, where experts lamented the infrequency and disorganization of government-led monitoring initiatives. A Woreda education official distressingly stated, “Pre-primary programs receive irregular, poorly coordinated oversight, undermining their potential impact.”

A consistent theme emerging from the study was the pivotal role of effective supervision in enhancing teacher performance. A Regional Education Bureau expert emphasized, “Quality supervision directly strengthens instructional practices and child development outcomes.” However, the reality of supervisory practices in Gambella Regional State's pre-primary schools starkly contrasts with this ideal. Findings revealed a significant misalignment between current supervisory frameworks and recent empirical evidence. For example, Catalano et al. (2023) demonstrated that structured supervisory feedback improved teacher adoption of child-centered pedagogies by 23% in low-resource educational contexts. Similarly, Hossain's (2018) research on the effects of governance reforms on school supervision by analysis of six developing and emerging economies in cross-nationally comparative, evidence-based educational policymaking and reform highlighted that schools with consistent supervision achieved literacy outcomes 18% higher than those with irregular oversight. These studies collectively illustrate how robust supervision can address pedagogical shortcomings, particularly in regions like Gambella, where teacher training systems are fragmented and under-resourced. The disparity underscores an urgent need to realign supervisory strategies with evidence-based practices to foster meaningful improvements in both teaching quality and student achievement.

Further qualitative insights revealed systemic barriers hindering effective supervision, including insufficient training for supervisors and a lack of standardized evaluation tools. This observation

aligns with UNESCO's global report, which identified inadequate supervisor preparedness as a primary bottleneck in enhancing early childhood education quality across Sub-Saharan Africa (Hennelly & Ctori, 2023). In the absence of tailored protocols for pre-primary contexts, supervisors often resort to generic checklists that do not adequately address developmentally appropriate practices.

On the other hand, the quantitative findings revealed a moderate positive correlation between supervision practices and service quality ($r = 0.250$, $p < 0.05$). This suggests that enhanced supervisory frameworks could significantly drive measurable improvements in quality service provision in pre-primary schools. The findings of this study are consistent with existing literature that has established a positive relationship between effective supervision and educational quality in pre-primary settings. For example, Sumarni & Sudadi (2023) reported a moderate correlation ($r = 0.27$) between supervisory practices and service quality, reinforcing the notion that effective supervision is integral to enhancing educational outcomes. Robson (2022) suggested that supervision accounts for approximately 5% of the variability in service quality, indicating its limited yet essential influence. Moreover, Lee & Nelson (2021) pointed out that the effectiveness of supervision is often contingent upon additional factors, such as the availability of training and resource considerations, echoed by qualitative data that call for improved support systems for supervisors.

The multiple regression analysis conducted on the combined independent variables Teachers Related Factors, Learning Resources/Facilities, Parental Engagement, and Supervision Role provides valuable insights into their collective influence on the quality of service provision in pre-primary schools in Gambella Regional State.

The preliminary correlation analysis reveals strong positive relationships between all independent variables and the dependent variable, quality service provision. Specifically, the Pearson correlation coefficients indicate that Teachers Related Factors have the highest correlation with quality service (0.751), followed by Learning Resources/Facilities (0.593), Parental Engagement (0.336), and Supervision Role (0.250). These findings suggest that enhancing teacher qualifications, improving learning materials, fostering parental involvement, and strengthening supervision can collectively elevate the quality of pre-primary education. However, it is important

to acknowledge that correlation does not imply causation; hence, further research is necessary to establish definitive causal relationships.

The model summary indicates that the combined independent variables account for 59.4% of the variation in quality service provision, demonstrating a robust explanatory power. Among these variables, Teachers Related Factors emerged as the most significant predictor, with a coefficient of 0.691 and a t-value of 11.746, indicating that improvements in teacher training and support are crucial for enhancing service quality. This strong correlation underscores the need for targeted professional development initiatives aimed at equipping teachers with the necessary skills and knowledge to foster effective learning environments.

Learning Resources/Facilities also showed a significant positive impact on quality service provision, with a coefficient of 0.346. This finding aligns with existing literature that emphasizes the role of adequate materials and appropriate classroom environments in facilitating effective learning. It indicates that investments in physical infrastructure and educational resources are vital for improving educational outcomes.

Parental Engagement, with a coefficient of 0.256, highlights the importance of active involvement from families in their children's education. This finding is consistent with research suggesting that strong school-family partnerships can lead to better student performance and engagement. Strategies to enhance parental involvement, such as workshops and communication initiatives, could significantly benefit pre-primary education.

While the Supervision Role variable had a positive coefficient of 0.198, its comparatively lower significance (t-value of 1.084) suggests that its impact may not be as pronounced as the other variables. This invites further investigation into how supervisory practices can be optimized to maximize their effectiveness. Better-defined supervisory frameworks and regular training for supervisors may strengthen this area.

The ANOVA results indicate that the regression model is statistically significant (F-statistic of 100.402, p-value < 0.001), confirming that the independent variables collectively explain a significant portion of the variance in quality service provision. This statistical significance reinforces the necessity of addressing these independent variables in efforts to enhance pre-primary education quality.

The findings from the multiple regression analysis highlight the interconnectedness of teacher-related factors, learning resources, parental engagement, and supervision in determining the quality service provision in pre-primary schools. While all variables positively influence quality service provision the prominence of Teachers Related Factors and Learning Resources suggests that focused improvements in these areas are essential. Additionally, fostering parental engagement and refining supervisory practices will contribute to a more holistic approach to enhancing pre-primary education. This comprehensive understanding of the factors influencing service provision is critical for stakeholders aiming to implement effective interventions and policies that promote high-quality educational experiences for young learners

4.5.6. Challenges Hindering Quality Service Provision in Pre-Primary Schools of Gambella Regional State

The challenges impeding quality service provision in government pre-primary schools in Gambella Regional State, Ethiopia, reflect systemic and structural barriers that require urgent policy and practical interventions. Drawing on the ranked challenges and qualitative insights from stakeholders, this discussion synthesizes the findings within the broader context of pre-primary education in low-resource settings. Both quantitative and qualitative data sources converge to identify key challenges, including financial constraints, infrastructure limitations, teacher qualifications, learning materials, supervision, parental engagement, implementation guidelines, and community awareness.

Among the foremost challenges is the shortage of school budgets, which severely limits the capacity of pre-primary schools to provide essential services. This financial constraint impacts infrastructure development, the availability of teaching materials, and the professional development opportunities for educators. Research consistently highlights that adequate funding is foundational to quality education, as it directly influences resource availability and overall service delivery (Glewwe et al., 2021).

Following closely is the inconvenience of school locations, which complicates access to education for many children. Geographic barriers significantly affect attendance rates, especially in rural areas where families may struggle to transport children to distant facilities (Gabrysch et al., 2011). This situation underscores the necessity for strategic planning in the placement of schools to ensure accessibility for all children.

Another critical challenge is the shortage of qualified teachers. The lack of trained educators undermines the quality of instruction and learning experiences, as inadequately prepared teachers may not effectively support the developmental needs of young learners. Research has shown that teacher qualifications are directly linked to student achievement and overall educational quality (Kurtca, 2023). Additionally, the absence of professional training opportunities for teachers compounds this issue. There is an urgent need for targeted professional development programs that equip educators with the skills and knowledge necessary to foster effective teaching practices.

Inadequate infrastructure and facilities pose a significant barrier to creating conducive learning environments. Insufficient physical resources, such as classrooms and playgrounds, limit children's opportunities for exploration and social interaction, which are vital for holistic development. Research emphasizes that well-equipped learning environments correlate positively with enhanced educational outcomes (Miller & Davis, 2019).

Moreover, the lack of age-appropriate learning materials further exacerbates these challenges. Access to suitable educational resources is crucial for engaging young learners and supporting their cognitive development. The absence of such materials can lead to ineffective teaching practices and hinder children's readiness for future academic challenges.

The data also indicate a lack of supervision from the education office, which is critical for maintaining quality standards in pre-primary education. Effective supervision ensures that educational practices align with established guidelines and provides necessary support for teachers. Furthermore, the absence of clear implementation guidelines contributes to inconsistencies in educational delivery, complicating educators' ability to adhere to quality standards. Research highlights the importance of structured guidelines in promoting effective teaching and learning (Vindigni, 2024).

The challenges of parental engagement and community awareness are also significant. The lack of active participation from parents can limit children's educational experiences, underscoring the importance of engaging parents in the educational process to foster a supportive learning environment (Sobri et al., 2022). Additionally, limited community awareness about the importance of pre-primary education may hinder support for early childhood initiatives. Raising awareness about the benefits of pre-primary education is essential to fostering community investment and involvement.

The challenges identified in this study highlight the urgent need for a multifaceted approach to improve the quality of pre-primary education in Gambella Regional State. Establishing a clear structure for pre-primary education, developing comprehensive implementation guidelines, advocating for increased budget allocations, and fostering collaboration among stakeholders are critical steps toward enhancing educational outcomes.

Addressing teacher shortages through recruitment and professional development, improving infrastructure, and ensuring the availability of age-appropriate learning materials are essential for creating a supportive learning environment. By prioritizing these areas, policymakers and educators can work towards providing high-quality pre-primary education that fosters the holistic development of young children, ultimately laying a strong foundation for their lifelong learning and success.

4.6. Framework Development

This section presents the conceptualization and suggestion of a strategic intervention framework to enhance the quality of pre-primary education in Gambella Regional State, Ethiopia. The framework emerges from a rigorous research process that combines empirical evidence with theoretical foundations to address identified gaps in quality service provision in pre-primary school. The framework's development was informed by an extensive mixed-methods study employing a pragmatic philosophical approach. This approach included a combination of questionnaires, individual interviews, and focus group discussions, which facilitated a comprehensive understanding of the dynamics at play. Both quantitative and qualitative analyses were conducted meticulously, providing a holistic interpretation of the findings. This evidence-based approach ensures the model's relevance and applicability to Gambella's specific educational context while maintaining theoretical soundness and practical feasibility.

4.6.1. Importance of the Framework

The quality of pre-primary education in Gambella is influenced by a variety of interconnected factors, spanning individual, institutional, and systemic levels. Drawing on Bronfenbrenner's Ecological Systems Theory, the proposed model presents a multi-layered intervention framework. This framework not only addresses the determinants of quality service provision but also aligns with the local cultural, economic, and policy contexts.

The framework expands upon existing research, integrating practices specific to Gambella, such as teacher shortages, weak parental engagement, inadequate infrastructure, and gaps in policy implementation. Each layer of the ecological system microsystem, mesosystem, exosystem, macrosystem, and chronosystem is accurately addressed with evidence-based, actionable recommendations aimed at fostering sustainable improvements in early childhood education.

4.6.2. Theoretical Basis of the Framework

The proposed framework is grounded in two complementary theories: Bronfenbrenner's Ecological Systems Theory and Vygotsky's Social Constructivist Theory. Bronfenbrenner's Ecological Systems Theory emphasizes the multiple layers of influence on child development, including individual, familial, community, and societal factors (Bronfenbrenner, 1979).

This theory highlights the interconnectedness of various environmental systems microsystem (immediate settings like family and school), mesosystem (connections between microsystems), exosystem (external environments indirectly influencing development), macrosystem (cultural and policy contexts), and chronosystem (temporal changes) that collectively shape developmental outcomes (Bronfenbrenner & Morris, 2006). By utilizing this framework, the model provides insights into how these systemic levels interact to shape educational outcomes in Gambella. This perspective is critical for developing targeted recommendations, as it considers the complex interplay between individual, institutional, and societal influences on children's learning.

Vygotsky's Social Constructivist Theory complements this by focusing on the social interactions that facilitate learning and cognitive development (Vygotsky, 1978). Vygotsky posits that knowledge is constructed through social engagement, emphasizing the role of language, culture, and collaborative learning (Vygotsky, 1986). Key concepts such as the Zone of Proximal Development (ZPD), the gap between what a learner can do independently and what they can achieve with guidance and scaffolding, and the supportive strategies used by teachers or peers to bridge this gap illustrate how effective interactions enhance learning (Wood et al., 1976). By integrating this perspective, the model underscores the importance of active participation from educators (e.g., play-based scaffolding) and parents (e.g., co-construction of knowledge) in Gambella's pre-primary system.

Together, these theories provide a comprehensive framework for improving pre-primary education. While Bronfenbrenner's theory offers a structural understanding of contextual influences, Vygotsky's theory enriches this by focusing on the pedagogical processes that enable quality learning (Tudge et al., 2009). This dual lens ensures recommendations are both systemically targeted (addressing policy, resources, and community) and instructionally practical (promoting effective teaching strategies), addressing Gambella's multifaceted challenges in early childhood education.

4.6.1. Application in the Gambella Context

The framework for pre-primary education in Gambella has been thoughtfully tailored to address the region's unique challenges by synergizing Bronfenbrenner's ecological layers with Vygotsky's pedagogical principles. This integrated framework is grounded in the local cultural and socioeconomic realities of Gambella.

At the microsystem level, the focus is on the immediate surroundings that directly influence children, including families, teachers, peers, and classroom settings. Teacher Training is a crucial aspect, where educators learn to implement scaffolding techniques using locally available materials. For instance, teachers can utilize Anuak and Nuer folktales to create engaging literacy activities. Additionally, play-based learning that reflects Gambella's pastoralist lifestyle, such as counting games with cattle beads, can make learning more relatable and effective.

Parental Engagement is emphasized by recognizing parents as co-constructors of knowledge. Workshops can teach caregivers how to extend classroom learning into the home, encouraging activities like oral storytelling in local languages.

Learning Environments are designed with a focus on the Zone of Proximal Development (ZPD). Classrooms can include play zones, such as "market corners," that use local produce like maize and sorghum, fostering socio-dramatic play that mirrors children's everyday experiences.

The mesosystem involves the connections between families, schools, and communities. School-Community Collaboration is crucial, where local elders and tribal leaders can co-design culturally relevant curricula. For example, integrating traditional songs into math lessons not only preserves cultural heritage but also enhances engagement.

Parent-teacher "Dialogue Days" can facilitate alignment between classroom scaffolding strategies and home practices, fostering a cohesive learning environment. Peer learning is encouraged through mixed-age playgroups, which reflect Gambella's communal culture and allow for peer scaffolding, enhancing social interaction and learning.

At the exosystem level, the focus shifts to district-level policies, funding, and supervision. Resource Allocation is vital, providing low-cost, locally sourced learning tools such as clay for molding letters and woven mats for storytelling. These materials enable children to engage in learning activities that are developmentally appropriate. Supervision involves training district officers to evaluate the quality of scaffolding in classrooms. This includes observing teacher-child interactions in addition to compliance checks, ensuring that educational standards are met effectively.

The macrosystem encompasses national policies and societal norms that shape educational practices. Policy Localization is essential, advocating for adaptations to Ethiopia's Education Sector Development Program VI to emphasize play-based pedagogy and mother-tongue instruction in languages like Nuer and Anuak. Cultural Relevance is prioritized by revising teacher training modules to incorporate indigenous knowledge systems, such as nature-based learning inspired by Gambella's agro-pastoral traditions.

The chronosystem considers long-term changes and crises that affect education. Conflict-Sensitive Scaffolding is critical, training teachers in trauma-informed approaches for displaced children.

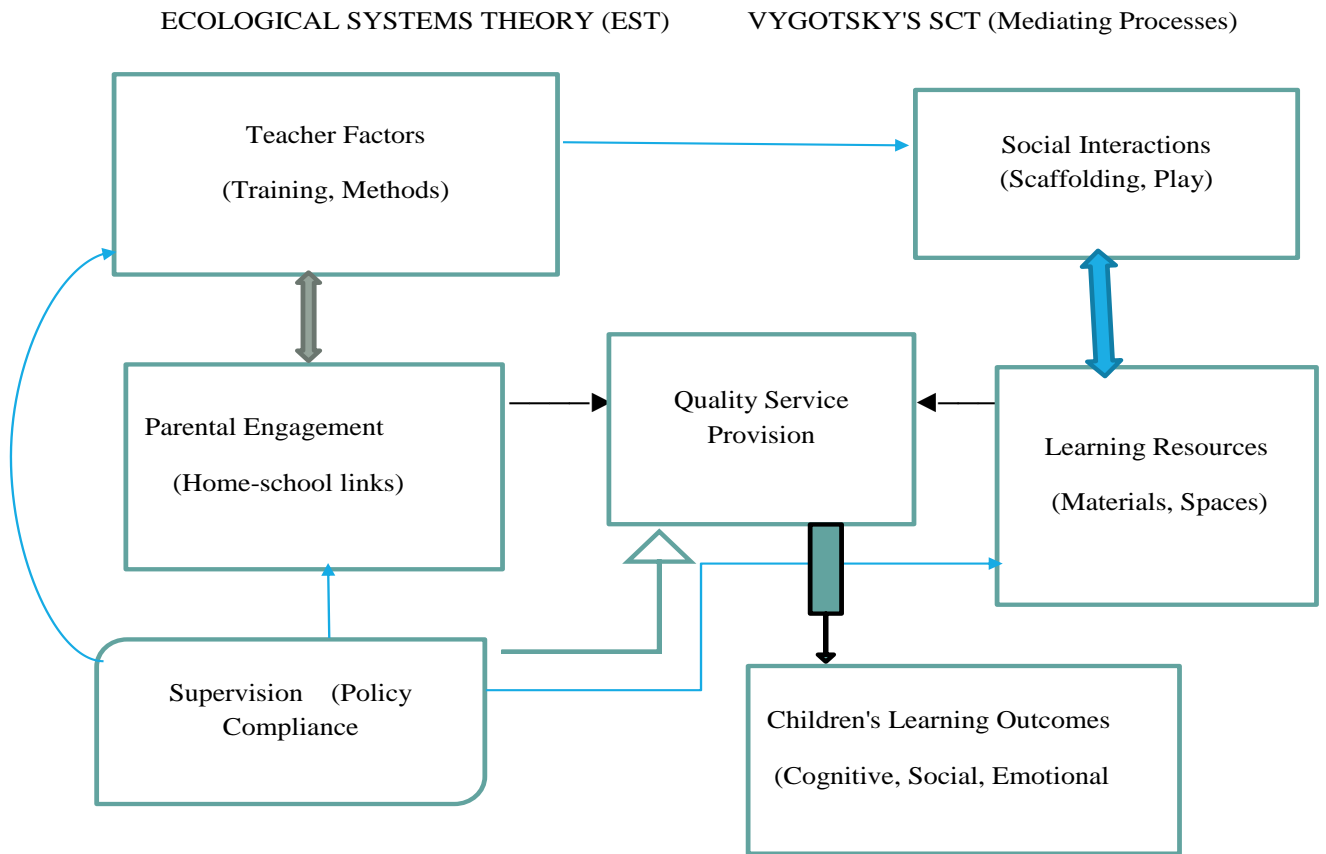


Figure 9. Framework for Quality Service Provision in Pre-primary Schools of Gambella

This model represents a prevailing integration of Bronfenbrenner's Ecological Systems Theory (EST) and Vygotsky's Social Constructivist Theory (SCT), creating a comprehensive framework aimed at enhancing pre-primary education. The visual representation clearly illustrates how structural factors on the left interact with learning processes on the right to produce quality educational provision at the center.

Structural Foundations (EST Perspective)

On the left side of the model, three critical ecological systems are identified:

- **Teacher Factors (Microsystem):** This component highlights the immediate classroom environment where trained educators implement developmentally appropriate teaching methods. The effectiveness of these methods is crucial for fostering child development.

- **Parental Engagement (Mesosystem):** This aspect emphasizes the vital connections between home and school environments. Strong collaboration between parents and teachers enhances children's learning experiences and supports their educational journeys.
- **Supervision (Exosystem):** Here, the focus is on the policy and monitoring systems that indirectly influence educational quality. Effective supervision ensures adherence to standards and practices that benefit children's learning.

Learning Processes (SCT Perspective)

On the right side, the model illustrates Vygotsky's mediating mechanisms that facilitate learning:

- **Social Interactions:** This element underscores the importance of scaffolded learning through play and guided activities, where children engage in meaningful interactions that promote cognitive development.
- **Learning Resources:** This component highlights how various materials and learning spaces serve as cultural tools, enriching the educational experience and supporting developmental goals.

The Dynamic Interaction

The arrows in the model depict the dynamic interactions between these components:

- Teacher training and effective methodologies (from EST) enable the implementation of scaffolding and play-based interactions (from SCT).
- Strong home-school links (from EST) create additional opportunities for socially constructed learning (from SCT), facilitating a collaborative educational environment.
- Quality resources (from EST) enhance the use of cultural tools within the Zone of Proximal Development (from SCT), allowing for tailored learning experiences.
- Supervision systems (from EST) ensure that these pedagogical processes are properly implemented, maintaining the integrity of both the ecological and social learning frameworks.

Quality Service Provision

At the center of the model lies the concept of Quality Service Provision, which emerges from this integrated system. Here, structural supports from multiple ecological levels converge with effective social learning processes to create developmentally appropriate and culturally relevant early education. Overall, the strength of this model lies in its dual focus on the "where" of systemic interventions and the "how" of effective learning processes. By providing a complete framework for improving the quality of pre-primary education, it addresses the multifaceted challenges faced in Gambella, ultimately fostering the holistic development and academic success of young learners.

Model Outcomes

The model's ultimate goal is to foster enhanced cognitive, social, and emotional development for children in Gambella. This outcome arises from dynamic interactions between ecological structures and pedagogical processes, creating a holistic educational experience.

4.6.2. Implementation Strategies

To effectively implement the Integrated Ecological-Social Constructivist Model in Gambella, a comprehensive strategy involving government, schools, and community roles is essential. Each sector has specific responsibilities and attributes that contribute to enhancing pre-primary education quality.

Government Responsibilities and Attributes

The regional government should prioritize policies that bolster the quality of pre-primary education. This includes establishing a regional early childhood education fund dedicated to supporting teacher training and classroom resources. Additionally, developing guidelines that focus on culturally responsive pedagogy will address the multilingual context of Gambella. The government can further facilitate alignment with local needs by hosting stakeholder workshops that involve tribal leaders, educators, and parents.

Creating clear standards for pre-primary classroom environments and teacher qualifications is crucial. The government should implement a robust monitoring system to assess the quality of play-based learning and develop protocols for integrating indigenous knowledge into approved curricula, ensuring that education is both relevant and effective.

To enhance teacher effectiveness, the government should fund certification programs that emphasize scaffolding techniques. Supporting partnerships with NGOs can provide trauma-informed teaching training, which is particularly important in vulnerable communities. Establishing mobile training units will ensure that training reaches pastoralist communities, addressing access issues.

School Responsibilities and Attributes

Schools must actively involve community members by forming advisory boards that include elders to review the cultural relevance of the curriculum. Adapting national educational frameworks to incorporate local languages, such as Nuer and Anuak, as well as traditional practices, is essential. Additionally, developing seasonal learning modules that align with agricultural cycles will make education more relevant to students' lives.

Creating low-cost play areas using locally sourced materials like clay, reeds, and natural objects fosters a rich learning environment. Implementing "culture corners," which feature traditional artifacts and storytelling spaces, promotes cultural engagement. Schools should also partner with health organizations to improve water, sanitation, and hygiene facilities, ensuring a safe learning environment. Organizing community storytelling sessions with elders will further enrich the educational experience, fostering a sense of community.

Community Responsibilities and Attributes

Community members, particularly tribal leaders, can contribute oral traditions that support literacy development. Artisans can collaborate to create learning materials that incorporate traditional crafts, while local farmers can demonstrate practical applications of math and science, making learning more tangible and relevant. Communities can actively participate by donating natural materials for play and learning activities. Collective maintenance of school facilities will enhance ownership and responsibility among community members. Additionally, establishing a network of volunteer interpreters will support multilingual classrooms, ensuring that all children can participate fully.

Elders play a vital role in promoting school enrollment through community meetings, encouraging families to prioritize education. Youth groups can organize educational festivals that celebrate learning and community values, while women's associations can lead initiatives focused on

nutrition education, further supporting child development. By engaging government, schools, and communities in these targeted actions, the Integrated Ecological-Social Constructivist Model offers a robust framework for improving pre-primary education in Gambella. This collaborative approach not only enhances the quality of education but also fosters a supportive environment for the holistic development of young learners, ensuring that their educational experiences are culturally relevant and meaningful. Through these interconnected pathways, the model illustrates how cognitive, social, and emotional development can be enhanced in Gambella's children. By leveraging ecological structures and effective pedagogical practices, this integrated approach creates a nurturing environment that supports the holistic development of young learners.

CHAPTER FIVE

5. SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter synthesizes the key findings of the study, offering a comprehensive analysis of their theoretical and practical implications. Begins with a summary of the research, revisiting the study's objectives, methodological approach, and principal outcomes. Subsequently, the chapter presents conclusions derived from the findings, situating them within the broader discourse on pre-primary education and evaluating their significance for policy and practice. Building on these conclusions, recommendations are proposed, targeting educators, policymakers, and stakeholders to enhance the quality service provision in pre-primary education of Gambella Regional State. Finally, the chapter identifies roads for future research, uncovered during the investigation and suggesting directions for further scholarly inquiry.

5. 1. Summary of Major Findings

This study presents a thorough assessment of the quality of service provision in pre-primary schools within the Gambella Regional State of Ethiopia. The research aimed to explore various dimensions of quality service provision, including the current practices in place, and the factors that influence the overall quality service provision in pre-primary schools of the Gambella regional State. A wide range of areas were investigated, such as physical infrastructure, accessibility of services, leadership practices, supervision protocols, the interplay between pre-primary and primary education, teacher-related factors, and availability of learning resources, facilities, parental engagement, and the challenges that impede quality service provision.

To accomplish the objectives of the study, data were collected from diverse sources. This included input from 190 pre-primary teachers, 95 principals, 44 participants from regional, zonal, and woreda levels, as well as leaders of Parent-Teacher Associations (PTAs). Employing a mixed-methods convergent parallel design, the study integrated both quantitative and qualitative methodologies to provide a comprehensive understanding of the research problems. Data collection methods consisted of structured surveys, in-depth interviews, focus group discussions (FGDs), and observational studies. This multifaceted approach facilitated the triangulation of data, thereby enhancing the validity and reliability of the findings derived from various sources.

One of the observations from the study was a slight majority of female participants (55.2%) among pre-primary teachers, with a predominance of female educators, a trend that reflects global patterns in early childhood education. About 65% of the teaching staff held diplomas or degrees, yet there was considerable variability in the duration of their training, ranging from as little as one month to a year. Alarmingly, many teachers lacked formal training specifically in pre-primary education.

The research revealed several deficiencies in current practices within the Gambella Regional State's pre-primary education system. Notably, there is a lack of structured oversight for pre-primary education across all educational sectors, coupled with the absence of independent leadership for pre-primary institutions. This situation, exacerbated by the lack of implementation guidelines for pre-primary education programs, has led to inconsistent delivery of quality services among various pre-primary schools in the region. Furthermore, the study identified significant gaps in leadership and supervision practices, highlighting inadequate monitoring, goal-setting, and stakeholder engagement as critical issues that require attention. Additionally, the integration of pre-primary schools with primary institutions was examined, and respondents generally expressed unfavorable views regarding this arrangement. They advocated for the establishment of separate pre-primary schools to more effectively address the unique developmental needs of young learners.

In the second research question, this study regarding teacher related factors in the provision of quality service in preprimary schools of Gambella Regional state the findings underscored significant gaps in teachers' understanding of early childhood learning principles, as well as a lack of qualifications and experience in the field. Teachers were found to be deficient in employing individualized and play-based teaching methods, and many struggled with effective time management and resource utilization. Moreover, communication and collaboration between teachers and parents were notably poor, further exacerbating challenges in service delivery. However, regression analysis revealed that teacher-related factors accounted for 56.4% of the variance in quality service provision, emphasizing the critical role that educators play in shaping educational outcomes.

Regarding parental engagement in the provision of quality service in the preprimary schools of Gambella Regional State the study found a lack of consensus among respondents regarding the extent of parental involvement in school activities, decision-making processes, and communication with teachers. Despite this ambiguity, parental engagement demonstrated a moderate positive

correlation ($r = 0.336$) with service quality, explaining 11.3% of the variance in educational outcomes. Parents expressed a strong desire for greater involvement in their children's education but cited communication gaps with schools as a significant barrier.

Based on the fourth basic research question, learning resources and facilities, dissatisfaction was prevalent among respondents concerning the suitability of classrooms, the availability of learning materials, and essential amenities such as playgrounds and toilets. The study indicated that 35.2% of the variance in service quality could be attributed to the availability of learning resources and facilities. Qualitative data further highlighted a severe shortage of necessary resources, underscoring the urgent need for improved infrastructure and educational materials. Classroom conditions were another critical area of concern. Overcrowded environments, poor ventilation, and unsuitable furniture were prevalent issues that hampered the learning experience. Many teachers expressed concerns regarding the availability of age-appropriate teaching materials and the lack of interactive activities, which are essential for fostering effective learning experiences.

The study found that supervision practices were largely ineffective, with respondents expressing dissatisfaction in areas such as monitoring teaching quality, enhancing teacher-student interactions, and ensuring a conducive physical environment for learning. Regression analysis indicated a low to moderate positive correlation ($r = 0.275$) between supervision and service quality, pointing to its importance yet limited impact on the overall educational experience.

The multiple regression analysis examined the influence of combined independent variables Teachers Related Factors, Learning Resources/Facilities, Parental Engagement, and Supervision Role on the quality of service provision in pre-primary schools in Gambella Regional State. The analysis revealed strong positive correlations between these variables and quality service, with Teachers Related Factors being the most significant predictor. The model accounted for 59.4% of the variation in service quality, highlighting the importance of targeted improvements in teacher training and resources. Parental engagement also emerged as a vital factor, while the impact of supervision, though positive, was comparatively weaker.

Finally, this research identified several pressing challenges that significantly impact the quality of service provision in pre-primary education within the Gambella Regional State. Among these challenges are budget shortages, which limit funding for essential resources and hinder program effectiveness, and geographical barriers that create inconvenient school locations, adversely

affecting access to education. Furthermore, the shortage of qualified teachers presents a substantial barrier to delivering quality education, compounded by inadequate infrastructure that detracts from the overall learning experience. The lack of age-appropriate materials and insufficient teaching resources emerged as major concerns, while limited parental engagement indicated low levels of involvement in children's education, which ultimately affects student success. Additionally, inadequate supervision and weak monitoring practices were identified as critical weaknesses in the system. Other challenges included a lack of professional training opportunities for teachers, unclear implementation guidelines, and insufficient community awareness regarding the importance of early childhood education. This comprehensive assessment highlights the need for targeted improvements in these areas, emphasizing that addressing gaps in teacher training, resource availability, and parental engagement is essential for enhancing the overall quality of service provision and creating a more effective and supportive educational environment for young learners.

5.2. Conclusions

This study investigated the practices and determinants that influencing the quality of service provision in preprimary schools in Gambella Regional State, Ethiopia. Employing a mixed-methods approach that included both quantitative and qualitative data, the research assessed the provision of quality services and identified key determinants. The findings indicated that, preschools largely fell short in delivering quality services. This shortfall has significant implications for children's learning outcomes, including literacy and numeracy skills.

At the heart of these challenges lies a critical disconnect between policy intentions and on-the-ground realities. The attachment of pre-primary schools to primary institutions, for instance, reflects a structural oversight that prioritizes administrative convenience over pedagogical appropriateness. This setup dilutes focus on early childhood development needs, perpetuating a cycle where young learners are underserved. Similarly, the lack of independent leadership and clear quality guidelines has resulted in uneven implementation, leaving teachers without the support or accountability mechanisms needed to thrive.

The study identified teacher-related factors including inadequate qualifications, poor pedagogical skills, and insufficient training as the most influential determinant, accounting for 56.4% of variance in service quality. This underscores a fundamental truth: even with ideal resources and policies, quality cannot be achieved without skilled educators. The Gambella region's acute teacher

shortage exacerbates this challenge, demanding prioritized investments in teacher recruitment, training, and retention. The data underscores teachers as the most influential factor in service quality, explaining over half of the variance observed. Yet, the majority lack training in play-based and child-centered methodologies approaches proven to foster cognitive and socio-emotional growth. This gap is not merely a matter of skill deficits but points to broader systemic failures in teacher preparation and professional development. Compounding this issue is the stark shortage of qualified educators, a crisis that cannot be resolved without targeted investments in training pipelines and incentives to attract talent to the profession.

The findings from the analysis addressing learning resource and facility indicated that, while safe and stimulating physical environments are universally recognized as essential for early learning, the study found classrooms in Gambella lacking basic facilities (e.g., play areas, hygiene provisions). Regression analysis attributed 35.2% of service quality variance to resource availability, highlighting how material deficits directly undermine developmental outcomes. However, the "so what" extends beyond funding: it calls for context-sensitive design facilities tailored to local needs (e.g., low-cost play materials, community-built infrastructure).

The findings from the analysis addressing the crucial factors necessary for effective parental engagement in delivering high-quality services at pre-primary schools. A noteworthy finding is the lack of consensus among respondents regarding the extent of parental support for pre-primary activities, participation in school events, and involvement in decision-making processes. This highlights the need for clearer communication and a more unified approach to parental involvement. Despite moderate correlation ($r^* = 0.336$), parental involvement remains inconsistent and underutilized. The 11.3% variance explained signals its potential, but qualitative data reveal cultural and communicative barriers. This suggests a need for structured community dialogues to align schools and families on shared goals, rather than passive awareness campaigns.

The examination of supervisory practices reveals systemic weaknesses that significantly constrain quality service provision in Gambella's pre-primary schools. Current supervision mechanisms suffer from fundamental structural deficiencies, characterized by inconsistent monitoring frequencies and ambiguous quality standards. This fragmented approach to oversight contributes substantially to the uneven quality observed across institutions.

A key structural barrier emerges from the organizational dependence of pre-primary schools on primary institutions. This administrative arrangement creates inherent conflicts of interest and dilutes specialized focus on early childhood education needs. The resulting supervision gap perpetuates a cycle of inadequate support and limited accountability for pre-primary educators.

These findings collectively signal a systems breakdown one where isolated fixes will yield limited results. Meaningful change requires integrated solutions: policies that grant pre-primary schools autonomy, budgets that prioritize foundational resources, and partnerships that leverage community strengths. The stakes extend far beyond classrooms; quality pre-primary education is a proven catalyst for breaking cycles of poverty and inequality. For Gambella and for Ethiopia ignoring these gaps risks perpetuating disparities that will reverberate for generations.

The path forward demands courage and collaboration. Policymakers must champion early childhood education as a non-negotiable priority, educators need support to transform practices, and communities deserve meaningful roles in shaping solutions. This study serves not just as a diagnosis but as a call to action: the time to invest in Gambella's youngest learners is now, for their futures and the region's prosperity depend on it. Overall, these findings emphasize the urgent need for targeted interventions to enhance the quality of pre-primary education in the Gambella Regional State, ensuring that every child has access to a supportive and effective learning environment.

5.3. Recommendations

Based on the findings of the present study, the following recommendations are provided to improve the quality of pre-primary education in Gambella Regional State, Ethiopia. These recommendations target various education sectors, stakeholders, and parents, aiming to create an enabling environment for young children's holistic development and long-term academic success.

1. Establish a Structure for Pre-Primary Education:

It is advisable for the Gambella Regional Education Bureau to create a comprehensive structure across all levels of the education sector that specifically addresses the responsibilities and oversight of pre-primary education. In collaboration with the Ministry of Education, this bureau is encouraged to develop clear and comprehensive implementation guidelines tailored to the developmental needs of young children. A critical reassessment of the current policy framework

governing pre-primary education is essential. Based on additional research and analysis, it is recommended that dedicated pre-primary schools be established, each led by a qualified principal. This structural separation would facilitate a concentrated focus on the unique developmental and educational needs of young children, fostering an environment conducive to high-quality early childhood education. Providing autonomy for preschools to manage their resources, budgets, and academic affairs could further enhance their effectiveness.

2. Operationalize the Integrated Ecological-Social Constructivist Framework:

To fully realize the potential of pre-primary education, it is crucial to operationalize the integrated Ecological-Social Constructivist Framework I. This approach emphasizes the interconnectedness of children's learning environments, including family, community, and educational institutions. Stakeholders should work collaboratively to implement this model, ensuring that educational practices reflect the diverse contexts in which children are raised.

3. Enhancing Teacher Training and Professional Development:

The Bureau of Education and Gambella Teacher's Education College should develop comprehensive training and professional development programs focusing on early childhood education best practices and child-centered teaching methodologies. Targeted professional development programs should be implemented to improve educators' understanding of early childhood education principles. Concurrently, Local Government Authorities must address inadequate teacher-student ratios by recruiting additional qualified pre-primary educators, ensuring that each child receives the necessary attention and support.

4. Fostering Effective Parental Engagement:

The study highlights the importance of parental engagement in pre-primary education. Encouraging active participation from parents in the governance and management of preschools is critical. By enhancing existing parent-teacher associations, educational leaders can foster collaboration among parents, teachers, and school administrators to address issues related to physical environments, facilities, and classrooms. School administrators should work with parents to develop strategies that enhance communication and collaboration. Additionally, community

organizations, NGOs, and community leaders should implement awareness programs to emphasize the importance of early childhood education and promote active family involvement.

5. Investing in Learning Resources and Facilities:

Significant efforts should be made to improve the current status of learning environments in pre-primary schools. Educational leaders must ensure that sufficient resources are allocated to enhance physical environments, provide basic facilities, and design conducive classrooms. Strengthening public-private partnerships is essential to secure additional funding, ensuring that preschools have the necessary resources for effective learning environments. Discussions about the learning environment should be prioritized in the pre-primary education agenda, with the government reinforcing its commitment to systemic reforms that address identified gaps and align practices with national policy expectations.

6. Enhancing Supervision and Monitoring Practices:

The Regional Education Bureau, along with zonal and Woreda education offices, should implement regular monitoring of teaching and learning to ensure quality education. Providing clear goals and expectations to staff members, involving stakeholders in decision-making processes, and seeking external support can enhance leadership practices. Establishing a robust supervision framework that includes regular monitoring and evaluation of pre-primary schools will assess the effectiveness of educational practices and ensure accountability, thereby enhancing the overall quality of pre-primary education in the region.

7. Foster Multi-Collaboration and Policy Coherence:

It is vital to foster multi-sector collaboration and ensure policy coherence among various stakeholders involved in early childhood education. Joint initiatives can lead to more effective resource allocation and strategic planning, promoting a unified approach to improving pre-primary education.

8. Ensuring Accountability:

Accountability mechanisms must be established to track progress and outcomes in pre-primary education. Stakeholders should be held responsible for implementing recommendations and achieving set goals, creating a culture of transparency and continuous improvement.

9. Strengthen Leadership:

Strengthening leadership at all levels of pre-primary education is essential for driving improvements. Training programs should be developed to empower educational leaders, equipping them with the skills needed to effectively manage and support early childhood education initiatives.

Limitations of the Study

This study is constrained by several factors that may affect the generalizability and validity of its findings:

Geographic Focus: The research is limited to pre-primary schools within the Gambella Regional State. As such, the findings may not accurately represent the broader educational landscape in other regions of Ethiopia, where cultural, economic, and educational contexts may differ significantly.

Confounding Variables: The analysis did not fully control for confounding variables, such as socioeconomic status, school location, and class size. These factors could influence the quality of service provision and may affect the interpretation of the results.

Subjective Measures: The study primarily relied on self-reported data from teachers and principals regarding perceived service quality. This reliance on subjective assessments may limit the validity of the outcome measures. Future research should incorporate direct evaluations of children's learning outcomes, such as formative assessments, to provide a more comprehensive understanding of service quality.

Future Research Directions

Broader Geographic Scope: Conduct studies in diverse regions of Ethiopia to compare and contrast pre-primary education practices and outcomes, thereby enhancing the generalizability of findings.

Focus on Confounding Variables: Investigate the effects of confounding factors such as socioeconomic status, school location, and class size on the quality of pre-primary education to better understand their roles in shaping educational outcomes.

Direct Learning Assessments: Integrate direct assessments of children's learning, such as formative evaluations, to triangulate findings and provide a more objective measure of service quality and effectiveness.

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APPENDICES

Appendix A: Questionnaires for Pre-Primary School Teachers and Principals

Dear Pre-primary School Teachers and Principals,

I am a PhD candidate at Jimma University College of education and behavioral sciences, department of educational planning and management, and currently doing a research on **Practices and Determinants of Quality Service Provision in Pre-Primary Schools of Gambella Region State, Ethiopia**. Your participation is entirely voluntary and essential for the success of this research. Please respond truthfully and honestly to ensure the accuracy of the study's findings. Rest assured that all information provided will be treated with utmost privacy and confidentiality.

Please take the time to comprehensively complete this questionnaire. For items with alternative responses, kindly use a checkbox () to show your choices.

Thank you for your time and willingness to participate in this research project.

Yours faithfully,

Chala Ayele Legede

Gambella Region Education Bureau

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1. General Background of the Respondents

- a. Name of Woreda _____
- b. Category of respondents: 1. Pre-primary teacher 2. Principal
- c. Gender: 1. Male 2. Female
- d. Age: 1. 20 – 30 years 2. 31 – 40 years 3. 41 – 50 years 4. 51 years and above _____
- e. Qualification: 1. Certificate 2. Diploma 3. First Degree 4. Any other _____
- f. Year/s of teaching experience as pre-primary teacher: 1. 1-5 2. 6-10 3. 11-15
4. 16-20 5. 21 and above _____

- g. Years of experience as a pre-primary/ primary school principal: 1. 1-5 2. 6-10 3. 11-15 4. 16-20 5. 21 and above _____
- h. Training in preschool education 1. Yes, 2. No
- i. Duration of the training 1. One month 2. Three months 3. Six month 4. One year 5. Greater than one year 6. Any other _____
- j. Training in Education Leadership: 1. No formal training 2. Short-term training 3. Professional development courses 4. **Diploma in educational leadership** 5. Degree in educational leadership 6. Any other _____

2. Existing Practices Pre-Primary Education and Quality Service Provision in Preprimary Schools

Assessing the current practices and quality service provision in pre-primary schools can be accomplished through the examination of various indicators. Kindly express your level of agreement or disagreement in the table below. Use a Likert scale of 1 to 5, where 1. "Strongly Disagree," 2. "Disagree," 3. "Not sure," 4. "Agree," and 5. "Strongly Agree."

Table: 1 Existing Practices of Pre-Primary Education and its Provision of Quality Services

| No. | Items | Scale | | | | |
|-----|------------------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | The school has guidelines for the implementation of pre-primary education. | 1 | 2 | 3 | 4 | 5 |
| 2 | The school provides age-appropriate teaching-learning materials. | 1 | 2 | 3 | 4 | 5 |
| 3 | The curriculum includes activities that enhance children's interaction. | 1 | 2 | 3 | 4 | 5 |
| 4 | Teacher-student ratio is according to the standard set by the Ministry of Education. | 1 | 2 | 3 | 4 | 5 |
| 5 | The size of the classrooms is adequate for children's. | 1 | 2 | 3 | 4 | 5 |
| 6 | The school classrooms are well ventilated. | 1 | 2 | 3 | 4 | 5 |
| 7 | The tables and chairs are fit to children's age and maturity. | 1 | 2 | 3 | 4 | 5 |
| | Existing Leadership Practices | 1 | 2 | 3 | 4 | 5 |
| 8 | The school leaders regularly monitor teaching and learning in the pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 9 | The school leaders inform the goals of the pre-primary school to staff. | 1 | 2 | 3 | 4 | 5 |
| 10 | The school leaders actively involve stakeholders in decision-making. | 1 | 2 | 3 | 4 | 5 |
| 11 | The school leaders ask for support from different bodies to meet the needs of pre-primary education. | 1 | 2 | 3 | 4 | 5 |
| | Attachment of Pre-Primary Education to Primary School | | | | | |

| | | | | | | |
|----|---------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 12 | The attachment of pre-primary school to primary school has problems in the teaching and learning of children. | 1 | 2 | 3 | 4 | 5 |
| 13 | The attachment of pre-primary school to primary school has influence on preprimary school. | 1 | 2 | 3 | 4 | 5 |
| 14 | The attachment of pre-primary education to primary school has challenges in leadership. | 1 | 2 | 3 | 4 | 5 |
| 15 | It is good to separately establish preprimary schools from primary school. | 1 | 2 | 3 | 4 | 5 |
| 16 | The attachment of pre-primary education to primary school enhances the transition process for children. | 1 | 2 | 3 | 4 | 5 |

Status of Quality Service Provision in Preprimary Schools

Assessing the current status of quality service provided in pre-primary schools can be done through the examination of various indicators. Kindly express your level of agreement or disagreement in the table below. Use a Likert scale of 1 to 5, where 1. "Strongly Disagree," 2. "Disagree," 3. "Not sure," 4. "Agree," and 5. "Strongly Agree."

Table 2: Status of Quality Service Provided

| No. | Items | Scale | | | | |
|-----|---------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | There is improvement in the reading skills of children. | 1 | 2 | 3 | 4 | 5 |
| 2 | Children have shown improvement in recognizing alphabet letters. | 1 | 2 | 3 | 4 | 5 |
| 3 | Children's interest in learning /coming to school daily/ was improved. | 1 | 2 | 3 | 4 | 5 |
| 4 | The average performance of children in the class has improved. | 1 | 2 | 3 | 4 | 5 |
| 5 | Stakeholders express satisfaction with the pre-primary school's services. | 1 | 2 | 3 | 4 | 5 |
| 6 | The retention of children in the pre-primary school has improved. | 1 | 2 | 3 | 4 | 5 |
| 7 | The curriculum in the pre-primary school is inclusive. | 1 | 2 | 3 | 4 | 5 |
| 8 | The pre-primary school engages students with diverse learning needs. | 1 | 2 | 3 | 4 | 5 |

4. Teacher-Related Factors Influences on Quality Service Provision in Pre-Primary Schools

Dear Participant, your response regarding the statements presented in the table is highly valued. Kindly request that you indicate your level of agreement or disagreement with each statement using a Likert scale ranging from 1 to 5, where 1. "Strongly Disagree," 2. "Disagree," 3. "Not Sure," 4. "Agree," and 5. "Strongly Agree."

Table: 3 Teacher-Related Factors Influences on Quality Service Provision in Pre-Primary Schools

| No | Item Description | Scale | | | | |
|----|----------------------------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | The teachers in the pre-primary school have an understanding of early childhood learning. | 1 | 2 | 3 | 4 | 5 |
| 2 | Teachers have appropriate qualifications in pre-primary education. | 1 | 2 | 3 | 4 | 5 |
| 3 | Teachers have experience in providing quality services to children. | 1 | 2 | 3 | 4 | 5 |
| 4 | Teachers address the individual learning needs of children. | 1 | 2 | 3 | 4 | 5 |
| 5 | Teachers use play-based methods that are suitable for children's cognitive, social, and emotional development. | 1 | 2 | 3 | 4 | 5 |
| 6 | Teachers are managing their time to ensure learning for children. | 1 | 2 | 3 | 4 | 5 |
| 7 | Teachers are managing resources to ensure learning for children. | 1 | 2 | 3 | 4 | 5 |
| 8 | The teachers in the pre-primary school use developmentally appropriate teaching methods. | 1 | 2 | 3 | 4 | 5 |
| 9 | The teachers in the pre-primary school provide individualized support to each child's learning needs. | 1 | 2 | 3 | 4 | 5 |
| 10 | Teachers communicate with parents, in supporting children's learning. | 1 | 2 | 3 | 4 | 5 |
| 11 | Teachers have access to professional development opportunities. | 1 | 2 | 3 | 4 | 5 |
| | Average mean | 1 | 2 | 3 | 4 | 5 |

Key: Strongly disagree =not done at all, disagree=no much is done, moderately agree= modestly done, agree= well done, strongly agree = very well done

5. Parental Participation in the Provision of Quality Service in Pre-Primary School.

Please indicate your level of agreement with the following statements regarding parental participation in the provision of quality services in pre-primary schools of the Gambella Region. Use a Likert scale ranging from 1 to 5, where 1= "Strongly Disagree," 2= "Disagree," 3= "Neutral," 4 = "Agree," and 5 = "Strongly Agree." Place a tick mark (✓) in the boxes that correspond to your rating.

Table: 4 Parental Engagements in Provision of Quality Service in Pre-Primary School.

| No. | Items | Scale | | | | |
|-----|-------------------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | Parents willingly contribute their support to various pre-primary school activities. | 1 | 2 | 3 | 4 | 5 |
| 2 | Parents participate in school-based community engagement activities. | 1 | 2 | 3 | 4 | 5 |
| 3 | Parents make cash contribution for preprimary school. | 1 | 2 | 3 | 4 | 5 |
| 4 | Parents make material contributions for preprimary school. | 1 | 2 | 3 | 4 | 5 |
| 5 | Parents are involved in decision-making processes related to their children's education. | 1 | 2 | 3 | 4 | 5 |
| 6 | Parents play an active role in monitoring and ensuring their children's regular attendance at school. | 1 | 2 | 3 | 4 | 5 |
| 7 | Parents monitor the homework of their children. | 1 | 2 | 3 | 4 | 5 |
| 8 | Parents actively seek information about the school's activities. | 1 | 2 | 3 | 4 | 5 |
| 9 | Parents regularly communicate with teachers to discuss their children's progress. | 1 | 2 | 3 | 4 | 5 |
| 10 | Parents actively participate in parent-teacher meetings. | 1 | 2 | 3 | 4 | 5 |

6. Fulfillments of Learning Resources and Facilities for the Provision of Quality Service in Pre-Primary Schools

Please provide your assessment of the degree of learning resource and facility fulfillment in pre-primary schools by indicating your opinion in the corresponding box below. Use a scale of 1 to 5, where 1 represents "Very low," 2 represents "Low," 3 represents "Average," 4 represents "High," and 5 represents "Very high."

Table: 5 Availability of Learning Resources, and Facility

| No. | Items | Scale | | | | |
|-----|-----------------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| | Classroom Materials and Equipment | | | | | |
| 1 | The suitability of the classrooms for all children. | 1 | 2 | 3 | 4 | 5 |
| 2 | Presence of reading corners. | 1 | 2 | 3 | 4 | 5 |
| 3 | Availability of age appropriate books. | 1 | 2 | 3 | 4 | 5 |
| 4 | Availability of alphabet tables. | 1 | 2 | 3 | 4 | 5 |
| 5 | The use of locally produced learning materials. | 1 | 2 | 3 | 4 | 5 |
| 6 | Availability of age-appropriate tables and chairs those are suitable for young children. | 1 | 2 | 3 | 4 | 5 |
| 7 | Availability of counting and numeracy chart. | 1 | 2 | 3 | 4 | 5 |
| 8 | Availability of art materials such as crayons, markers, paints, brushes, paper, glue, and scissors. | 1 | 2 | 3 | 4 | 5 |
| 9 | Presence of picture books, and storybooks. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|----|------------------------------------------------------|---|---|---|---|---|
| 10 | Involve children in music activities. | 1 | 2 | 3 | 4 | 5 |
| | Outdoor Facilities | | | | | |
| 11 | Availability of playgrounds. | 1 | 2 | 3 | 4 | 5 |
| 12 | Accessibility of play materials. | 1 | 2 | 3 | 4 | 5 |
| 13 | Conduciveness of toilets. | 1 | 2 | 3 | 4 | 5 |
| 14 | The availability of tap water. | 1 | 2 | 3 | 4 | 5 |
| 15 | Availability of safe and child-friendly environment. | 1 | 2 | 3 | 4 | 5 |

Key: very low=very little available, low=little available, average =modest available, high =high available, very high= very high available

6. The Role of Supervision in Quality Service Provision in Preprimary School.

You are required to give your opinion with the statement in the table below using a Likert scale of 1-5 where 1 – Strongly Disagree 2 –Disagree, 3 – Not Sure, 4 –Agree, 5 –Strongly Agree.

Table: 7 Role of Supervision in Quality Service Provision

| | | Scale | | | | |
|--|----------------------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| | preprimary school supervision is satisfactory in terms of providing quality physical environment. | 1 | 2 | 3 | 4 | 5 |
| | preprimary school supervision is satisfactory in terms of ensuring the quality of teaching and learning. | 1 | 2 | 3 | 4 | 5 |
| | supervision is satisfactory for ensuring appropriate teacher-learner interaction. | 1 | 2 | 3 | 4 | 5 |
| | supervision experts/supervisors/ provide clear guidance to teachers. | 1 | 2 | 3 | 4 | 5 |
| | supervision is effective in considering the diverse needs of preprimary school learners. | 1 | 2 | 3 | 4 | 5 |
| | supervision supports the implementation of play-based learning approaches in this pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| | supervision facilitates professional development opportunities for pre-primary school teachers. | 1 | 2 | 3 | 4 | 5 |
| | supervision ensures the provision of resources and materials in this pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| | supervision ensures a strong relationship with parents in this pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| | supervision promotes continuous improvement in pre-primary education. | 1 | 2 | 3 | 4 | 5 |

7. Challenges Impeding the Provision of Quality Services to Children in Government Pre-Primary Schools of Gambella Regional State.

Please describe your agreements or dis agreements with the challenges that impeding quality service provision, in your pre-primary school for the statement in the table below using a scale of 1-5 where 1 – Strongly Disagree 2 –Disagree, 3 – Not Sure, 4 –Agree, 5 –Strongly Agree.

Table: 8 Major Challenges in the provision of quality services in pre-primary school

| No. | List of challenges | Scale | | | | |
|-----|--------------------------------------------------------------------------------------------|-------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | There is shortage of qualified teacher in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 2 | There is shortage of mother tongue teachers in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 3 | There is lack of professional training for teachers in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 4 | There are no age-appropriate learning materials and resources in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 5 | There is shortage of infrastructures and facilities in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 6 | There is no implementation guideline in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 7 | There is no parental engagement and support in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 8 | There is lack of supervision from education office in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 9 | The shortage of budget in pre-primary school. | 1 | 2 | 3 | 4 | 5 |
| 10 | The attachments of pre-primary school to primary school. | 1 | 2 | 3 | 4 | 5 |
| 11 | There is limited awareness of the community about the importance of pre-primary education. | 1 | 2 | 3 | 4 | 5 |

Thank you for your participation!!

Appendix B: Interview guide for Education Bureau Head and Directors

Instructions: The interview guide aims to collect information on the practices and determinants of quality service provision in pre-primary schools of the Gambella Region: Hence, you are kindly requested to respond honestly and thoughtfully. The success of the study depends on your genuine information. The information to be gathered will be used only for research purposes. The information from participants will be used confidentially. Your frank responses will be highly appreciated.

As per the study objectives, the emphasis will be on key thematic areas.

Section A: Background Information:

1. What is your highest qualification?
2. What is your position?
3. How long have you been in your position?

Section B: Information on specific variables of the study

1. The current state and implementation of quality service provision in pre-primary education

i. What roles are expected of the REB in the management and supervision of preprimary school? Does it have a distinct organizational structure, starting from the 'Woreda' level and with a designated head teacher responsible for the program?

ii. Is the policy regarding pre-primary education effectively put into practice? what do you say about the attachments of pre-primary school to primary school?

iii. How would you evaluate the current status of pre-primary education in the Gambella Regional State?

iv. What are the fundamental determinants for ensuring quality service provision in pre-primary schools within the Gambella Region State?

v. Has there been any progress in the quality of service provision in pre-primary schools in the Gambella Region as a result of the expansion of pre-primary education?

vi. Overall, what is your perspective on the quality service provision of pre-primary education in the Gambella Region?

2. Teachers related factors

i. How are pre-primary schools teachers selected, trained, and assigned in the Gambella Region?

ii. To what extent does teacher training impact the provision of quality services in pre-primary education in the Gambella Region State?

iii. How would you evaluate the availability and qualification of pre-primary school teachers who are proficient in the local mother tongue in your region?

iv. What are the minimum qualifications required for pre-primary school teachers in the Gambella Region?

v. How does the education bureau ensure that pre-primary school teachers meet the necessary qualifications and standards?

vi. Are there any ongoing professional development opportunities for pre-primary school teachers in the region?

vii. How does the education bureau address any challenges or gaps in teacher qualifications and training in pre-primary education?

viii. What strategies are in place to attract and retain qualified pre-primary school teachers in the Gambella Region?

3. Learning resources and facility

i. How do you rate the availability of resources and facilities in pre-primary schools of Gambella Regional State? Could you explain the kinds of resources and facilities specifically your pre-primary schools have?

ii. Is there adequate space for indoor, and outdoor play and learning activities, and safe and child-friendly facilities such as water pipes and toilets?

iii. How does the availability of resources and facilities influence the provision of quality pre-primary education in Gambella Regional State?

4. The status of supervision in pre-primary schools

- i. What do practices of pre-primary school supervision look like in your region?
- ii. To what extent does supervision influence the provision of quality pre-primary education service provision in Gambella Regional State?
- iii. Do Woreda education offices supervise and support pre-primary schools? How do you follow up?
- iv. Do the supervisors have the document of the preschool syllabus /curriculum?

5. Parental participation

- i. What about the awareness of parents in pre-primary education and the demand for access and its quality?
- ii. How do you interact with parents and other communities? Do they have any role in the preprimary schools?
- iii. Is there any method of empowering and engaging parents and the community in the education of young children?
- iv. To what extent does parental involvement influence the provision of quality pre-primary education service in Gambella Regional State?
- v. What are the general challenges related to quality service of preprimary education in your region?
- vi. Any other issue you want to tell me?Thank You

Appendix C: Interview guide for Zone Education Department

Instructions: The interview guide aims to collect information on the practices and determinants of quality service provision in pre-primary schools of the Gambella Region: Hence, you are kindly requested to respond honestly and thoughtfully. The success of the study depends on your genuine information. The information to be gathered will be used only for research purposes. The information from participants will be used confidentially. Your frank responses will be highly appreciated.

As per the study objectives, the emphasis will be on key thematic areas.

Section A: Background Information:

1. What is your highest qualification?
2. What is your position?
3. How long have you been in your position?

Section B: Information on specific variables of the study

1. The current state and implementation of quality service provision in pre-primary education
 - i. What roles are expected of the Zone Education Department in the management and supervision of preprimary school? Does it have a distinct organizational structure, starting from the 'Woreda' level and with a designated head teacher responsible for the program?

- ii. Is the policy regarding pre-primary education effectively put into practice? What do you say about the attachments of pre-primary school to primary school?
- iii. How would you evaluate the current status of pre-primary education in your Zone?
- iv. What are the fundamental determinants for ensuring quality service provision in pre-primary schools within your Zone?
- v. Has there been any progress in the quality of service provision in pre-primary schools in your Zone as a result of the expansion of pre-primary education?
- vi. Overall, what is your perspective on the quality service provision of pre-primary education in your Zone?

2. Teachers related factors

- ix. How are pre-primary schools teachers selected, trained, and assigned in this Zone?
- x. To what extent does teacher training impact the provision of quality services in pre-primary education in in this Zone?
- xi. How would you evaluate the availability and qualification of pre-primary school teachers who are proficient in the local mother tongue in your Zone?
- xii. What are the minimum qualifications required for pre-primary school teachers in in this Zone?
- xiii. How does the education bureau ensure that pre-primary school teachers meet the necessary qualifications and standards?
- xiv. Are there any ongoing professional development opportunities for pre-primary school teachers in this Zone?
- xv. How does the education bureau address any challenges or gaps in teacher qualifications and training in pre-primary education?
- xvi. What strategies are in place to attract and retain qualified pre-primary school teachers in this Zone?

3. Learning resources and facility

- iv. How do you rate the availability of resources and facilities in pre-primary schools of in this Zone? Could you explain the kinds of resources and facilities specifically your pre-primary schools have?
- v. Is there adequate space for indoor and outdoor play and learning activities, and safe and child-friendly facilities such as water pipes and toilets?
- vi. How does the availability of resources and facilities influence the provision of quality pre-primary education in this Zone?

4. The status of supervision in pre-primary schools

- v. What do practices of pre-primary school supervision look like in this Zone?
- vi. To what extent does supervision influence the provision of quality pre-primary education service provision in this Zone?
- vii. Do Woreda education offices supervise and support pre-primary schools? How do you follow up?

5. Parental participation

- vii. What about the awareness of parents in pre-primary education and the demand for access and its quality?
- viii. How do you interact with parents and other communities? Do they have any role in the preprimary schools?
- ix. Is there any method of empowering and engaging parents and the community in the education of young children?
- x. To what extent does parental involvement influence the provision of quality pre-primary education service in this Zone?
- xi. What are the general challenges related to quality service of preprimary education in this Zone?
- xii. Any other issue you want to tell me?

Thank you for the participation

Appendix D: Interview guide for Parents' representatives

Dear respondent,

You have been selected to participate in this study entitled: Practice, and determinants of quality services provision in preprimary school of Gambella Regional State, Ethiopia. The information sought is required for academic purposes only and participation is entirely out of your own will; and necessary for the success of this study. I request you to respond with truthfulness and honesty for the success of the study. Remember that the information you provide will also be treated with maximum confidentiality.

I. Demographic characteristics of Respondents

Gender _____

Age _____

Number of years _____ spent in _____ Kabale _____ Woreda as a resident

Educational level _____

II. Information on specific variables of the study

1. Pre-primary education practice and Parental participation in the provision of learning materials for pre-primary school

- 1.1. How do you perceive the current practices of pre-primary education in this particular school?
- 1.2. What types of services are provided for your child/children in this pre-primary school? Do you consider these services to be quality?
- 1.3. Does this pre-primary school have a sufficient number of qualified teachers?
- 1.4. How available and dedicated are the teachers in this pre-primary school in carrying out their responsibilities?
- 1.5. Do the pupils in this pre-primary school have access to an adequate amount of learning materials?
- 1.6. Does this pre-primary school have enough classrooms and toilets?
- 1.7. Is this pre-primary school accessible to all children of school age?
- 1.8. Have you noticed any improvement in your child's reading and writing skills as a result of the good service provision in this pre-primary school?

- 1.9. What is your level of involvement in providing teaching and learning materials for this pre-primary school, and what materials do parents typically contribute to the school?
- 1.10. Overall, what is your opinion on the quality of services provided by this pre-primary school?
- 2. The extent of parental involvement in decision-making within this pre-primary school**
 - 2.1. Does this pre-primary school have an active Parent-Teacher Association (PTA)? If so, what specific areas of the school do parents participate in?
 - 2.2. Do parents consistently attend school meetings and actively seek information about the school's activities?
 - 2.3. Are parents involved in the budgeting process of the school?
 - 2.4. Are parents involved in addressing disciplinary issues concerning both teachers and students who misbehave?
- 3. Parents' monitoring of preprimary school**
 - 3.1 What about the parental participation in the process of monitoring and evaluation of this preprimary school?
 - ✓ How do Parents monitor teachers' and students' attendance?
 - ✓ How do Parents monitor infrastructure utilization in this school?
 - ✓ How do Parents monitor the conduct of teachers and students in these schools?

Thank you for your cooperation

Appendix E: FGD Questions for Woreda Education Office Head, and Team Leaders

Dear Group members:

The purpose of this Group discussion is to collect information on the practices and determinants of quality service provision in pre-primary schools of the Gambella Region: Hence, you are kindly requested to respond honestly and thoughtfully. The success of the study depends on your genuine information. The information to be gathered will be used only for research purposes. The information from participants will be used confidentially. Your frank responses will be highly appreciated.

As per the study objectives, the emphasis will be on key thematic areas.

Section A: Information on specific variables of the study

1. The current practices and level of quality service provision of pre-primary education
 - i. Is the policy regarding pre-primary education effectively put into practice in your woreda? What do you say about the attachments of pre-primary school to primary school?
 - ii. How is pre-primary education managed in your woreda?
 - iii. How would you assess the current level of pre-primary education in your woreda?
 - iv. What is the practice of delivering quality services in pre-primary schools in your woreda?

- v. Have there been any improvements in the provision of quality services in pre-primary schools as a result of the expansion of pre-primary education?
- vi. How do you evaluate the outcomes of pre-primary education services at the preschool level, in terms of their quality, in your woreda?
- vii. Overall, what is your opinion on the quality of pre-primary education in all the pre-primary schools in your respective area?

2. Teachers related factors

- i. What is your perspective on the qualifications, experiences, and employment methods of preprimary school teachers in your woreda? Are they trained in preschool teaching or the mother tongue language?
- ii. To what extent does the qualification of teachers influence the provision of high-quality pre-primary education based on your understanding?
- iii. How would you assess the availability and qualifications of mother tongue pre-primary school teachers in your woreda?
- iv. What is the teacher-to-pupil ratio like in pre-primary schools in your woreda?
- v. Is there anything else you would like to mention or discuss regarding preprimary school teachers in your woreda?

3. Learning resources and facility

- i. What are your observations regarding the availability of the preprimary books, guidelines policy documents at the preschool centers in your woreda?
- ii. How would you assess the availability of resources and facilities, including financial resources, in pre-primary schools in your woreda?
- iii. Do pre-primary schools in your woreda have sufficient and suitable indoor and outdoor facilities to enhance child learning and development?
- iv. How does the availability of resources and facilities impact the provision of high-quality pre-primary education in your woreda?

4. The status of supervision in pre-primary schools

- viii. What is the current practice of pre-primary school supervision in your woreda?
- ix. To what extent does supervision influence the provision of high-quality pre-primary education services in your woreda?
- x. How do the Woreda education offices supervise and support pre-primary schools? What methods are employed to follow up on pre-primary schools?
- xi. How frequently are pre-primary schools within your woreda supervised?
- xii. Do the supervisors possess the preschool syllabus/curriculum document?
- xiii. What is your perspective on the effectiveness of supervisory leadership in implementing the pre-primary curriculum in your woreda?

5. Parental participation

- xiii. How are the parents involved in preschool education, and what specific roles are expected from them?
- xiv. How are parents engaged in ensuring the provision of high-quality services in pre-primary schools in your woreda?
- xv. How do you interact with parents and the wider community? What roles do they have in pre-primary schools?
- xvi. What suggestions do you have regarding parental involvement in pre-primary schools, including parental support, evaluation of pre-primary education programs, and parental satisfaction with these programs?
- xvii. What are the main challenges related to the provision of quality pre-primary education services in your woreda?
- xviii. Is there any other issue or topic you would like to discuss?

Thank you for your cooperation

Appendix F: Observation Checklist for selected preprimary schools

| No | I. Teaching learning process | Yes | No | Remark |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------|-----|----|--------|
| | Implementation of the preschool syllabus of the country. | | | |
| | Instructional documents in the class e.g. teachers guides, syllabus, checklists, student portfolio, communication books, and other documents. | | | |
| | Education schedule based on preschool standards | | | |
| | Teaching methodology of teachers | | | |
| | Classroom TL materials | | | |
| | Teaching aids in the classrooms | | | |
| | Placement of teaching aids at the eye level of children | | | |
| | Adequate lighting and width of the class | | | |
| | Teaching aids and teaching aids promote the holistic development of students | | | |
| | Classrooms Furnishes appropriate for the physical size of the children | | | |
| | Classroom suitability for children with special needs | | | |
| | Use of textbooks for children | | | |

| | | | | |
|---|---------------------------------------------------------------------|--|--|--|
| 2 | umber of children in a class according to the standard of preschool | | | |
| | Language and culture | | | |
| 3 | ing materials and pictures reflecting the society's culture | | | |
| 4 | r tongue used in teaching-learning process | | | |
| | Outdoor materials | | | |
| 5 | g materials in the compound | | | |
| 6 | ate playing materials according to the number of students | | | |
| | Washrooms | | | |
| 7 | nient toilets for all children | | | |
| 8 | te toilets for girls and boys & children and adults | | | |
| 9 | tion of toilets | | | |
| 0 | bility of pipe water | | | |

Thank you for your cooperation

Appendix G: Participant Consent Form

Title: **Practices and Determinants of Quality Service Provision in Pre-Primary Schools of Gambella Regional State**

Dear Participant,

This document serves to provide you with information regarding your voluntary participation in a study on the practices and determinants of quality service provision in pre-primary schools within the Gambella Regional State. It is important to note that you have the freedom to decide whether or not to participate in this study, and you may withdraw your participation at any time.

The primary objective of this study is to gain an in-depth understanding of the practices and determinants that contribute to the provision of quality services in pre-primary schools located in the Gambella Regional State. For this purpose, participants will be purposively selected from the Gambella Region Education Bureau, and in-depth interviews will be conducted to gather information.

Throughout the study, you are encouraged to ask any questions you may have about the research either before or during your participation. Your input and insights are valuable and can greatly contribute to the success of this study. Once the research is completed, I will be pleased to share the findings with you. However, it is important to note that your identity will be kept confidential, and your name will not be associated with the research findings in any way. Throughout the study, only a pseudonym will be used to refer to you. There are no known risks or discomforts associated with your participation in this study. The anticipated benefits of your involvement include contributing to the improvement of practices and determinants that enhance the quality of service provision in pre-primary schools within the Gambella Regional State. By signing below, you acknowledge that you have read and understood the nature and purpose of this study and provide your voluntary consent to participate -----

Date and Signature of Participant

Date and signature of researcher

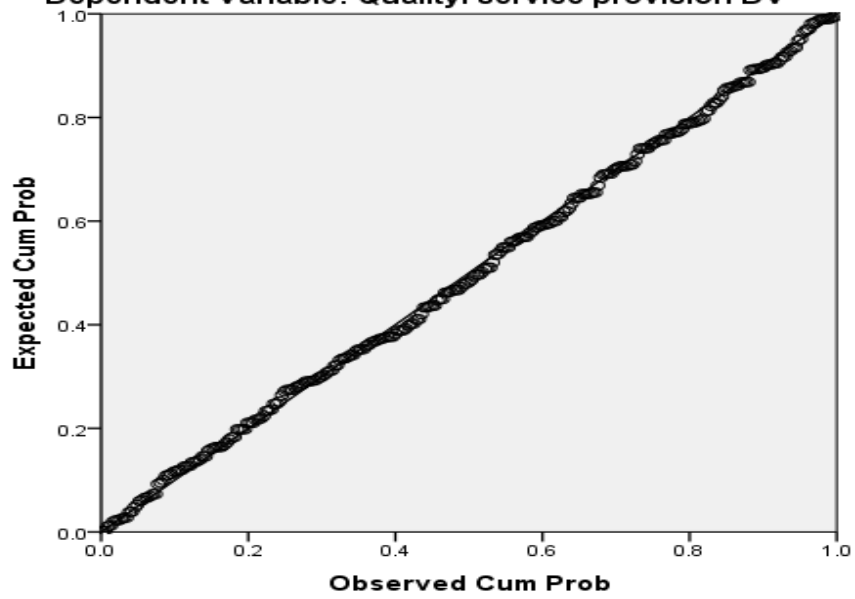
Appendix H: Basic Tests for Statistical Assumptions

4.3.1. Normality Tests

| Variables | Shapiro-Wilk | | |
|---------------------------------|--------------|-----|------|
| | Statistic | df | Sig. |
| Quality Service Provision DV | .979 | 279 | .050 |
| Teachers Related Factors IDV | .796 | 279 | .030 |
| Learning Resources Facility IDV | .841 | 279 | .050 |
| Parent engagement IDV | .963 | 279 | .030 |
| Supervision role IDV | .938 | 279 | .020 |

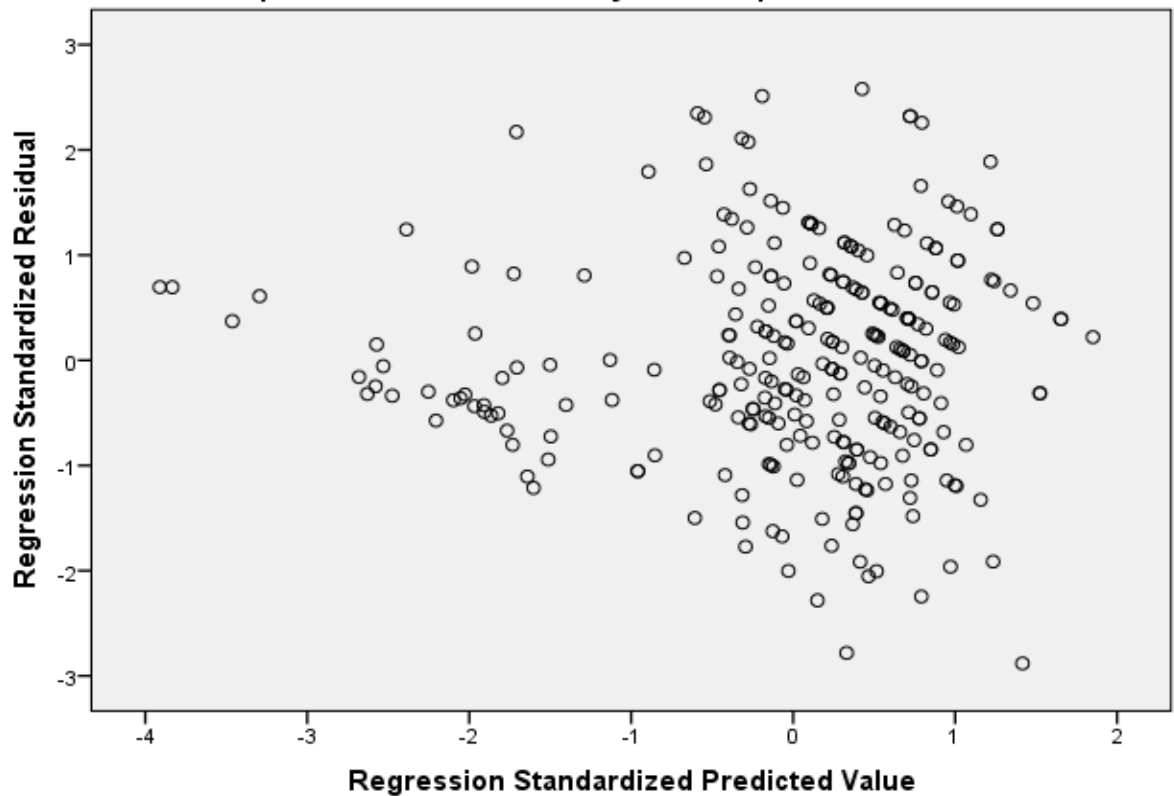
Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Quality service provision DV



Scatterplot

Dependent Variable: Quality service provision DV



4.3.2. Test of Linearity

| rrrelations | | | | | | |
|--------------------------------------------------------------|---------------------|--------------------|------------------------------|---------------------------------|-----------------------|----------------------|
| | | Quality service DV | Teachers Related Factors IDV | Learning Resources Facility IDV | Parent Engagement IDV | Supervision Role IDV |
| Quality service DV | Pearson Correlation | 1 | .751** | .593** | .336** | .250** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 |
| | N | 279 | 279 | 279 | 279 | 279 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | |

4.3.3. Tests for Multicollinearity

| Variable | Collinearity Statistics | |
|-----------------------------|-------------------------|-------|
| | Tolerance | VIF |
| Teachers related factors | .505 | 1.982 |
| Learning resources facility | .591 | 1.693 |
| Parental engagements | .799 | 1.252 |
| Supervision role | .801 | 1.249 |


4.3.4. Homoscedasticity Test

| rrrelations | | | | | | |
|------------------------------|---------------------|--------------------|------------------------------|------------------------|------------|----------------------|
| | | Quality service DV | Teachers Related Factors IDV | Resources Facility IDV | Parent IDV | Supervision role IDV |
| Quality service DV | Pearson Correlation | 1 | .751** | .593** | .336** | .250** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 |
| | N | 279 | 279 | 279 | 279 | 279 |
| Teachers Related Factors IDV | Pearson Correlation | .751** | 1 | .634** | .417** | .404** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 |
| | N | 279 | 279 | 279 | 279 | 279 |
| | Pearson Correlation | .593** | .634** | 1 | .246** | .326** |

| | | | | | | |
|------------------------|---------------------|--------|--------|--------|--------|--------|
| Resources Facility IDV | Sig. (2-tailed) | .000 | .000 | | .000 | .000 |
| | N | 279 | 279 | 279 | 279 | 279 |
| Parent IDV | Pearson Correlation | .336** | .417** | .246** | 1 | .317** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 |
| | N | 279 | 279 | 279 | 279 | 279 |
| Supervision IDV | Pearson Correlation | .250** | .404** | .326** | .317** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
| | N | 279 | 279 | 279 | 279 | 279 |

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix I: Letter



JIMMA UNIVERSITY
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*TC
Ref. No. EDPM 4/05/2023
*7
Date 14/12/2023

From: Educational Planning and Management Department,
Jimma University
To whom it may concern.

Subject: Request for Support

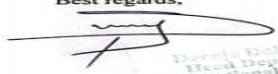
We are writing to request support from your esteemed office at the regional level in the Gambella Regional State, Ethiopia. Our Ph.D. candidate, Chala Ayele, from Jimma University's College of Education and Behavioral Sciences and the Department of Educational Planning and Management, is currently conducting a dissertation study titled "Practices and Determinants of Quality Service Provision in Preprimary Schools."

As part of his research, Chala Ayele needs to collect data from various zones, woredas, and schools in the Gambella Regional State. Therefore, we kindly request your office to provide us with the necessary support and information to facilitate the data collection process.


Your support in this matter is highly appreciated. Please feel free to contact us if you require any further clarification or if there are any specific requirements for support.

Thank you for your attention to this matter.

Best regards,



Berea Delema Kenno
Head Department of
Educational Planning and
Management



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