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PREPRIMARY TEACHERS' KNOWLEDGE, ATTITUDES, AND SELF-EFFICACY
TOWARD INCLUSIVE EDUCATION AND THE PROVISION OF SERVICES FOR
CHILDREN WITH SPECIAL NEEDS

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Preprimary Teachers' Knowledge, Attitudes, and Self-Efficacy Toward
Inclusive Education and the Provision of Services for Children with
Special Needs

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Declaration

I, Hela Getachew, declare that this thesis is my work and has not been submitted for a degree at any other university or institution. All sources used in this research have been properly acknowledged and referenced. I have adhered to anti-plagiarism guidelines by appropriately crediting any text, data, graphics, pictures, or tables borrowed from external sources.

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Table of Contents

Declaration	i
List of Tables	iv
Acknowledgments.....	v
Abbreviations and acronyms.....	vi
Abstract.....	vii
Chapter One	1
1. Introduction.....	1
1.1. Background of the study	1
1.2. Statement of the Problem.....	6
1.3. Research Questions	8
1.4. Objective of the Study	9
1.5. Significance of the study.....	9
1.6. Delimitations.....	9
1.7. Operational Definition of Variables.....	10
Chapter Two.....	11
2. Literature Review.....	11
2.1. Definition and Importance of Early Childhood Inclusive Education	11
2.2. Legal and Policy Frameworks for Inclusive Education.....	12
2.2.1. International Perspectives on Inclusive Education Policies.....	12
2.2.2. National Legal Frameworks and Inclusive Education Policies	12
2.2.3. Local Implementation and Impact of Inclusive Education Policies	13
2.3. Theoretical Perspectives on Inclusive Practices	14
2.3.1. Social Constructivism and Inclusive Practices	14
2.3.2. Universal Design for Learning (UDL) and Inclusive Practices.....	14
2.3.3. Ecological Systems Theory and Inclusive Practices.....	15

2.3.4. Implications of Theoretical Perspectives on Inclusion Policies	15
2.4. Practices and Challenges in Implementing Inclusive Education	16
2.5. Preprimary Teachers' Knowledge about Inclusion	17
2.6. Attitudes of Preprimary Teachers towards Inclusion.....	20
2.7. Preprimary Teachers' Efficacy for Inclusion	22
2.8. Service Provisions for Children with Special needs in inclusive education.....	25
Chapter Three.....	28
3. Research Methodology	28
3.1. Research Design.....	28
3.2. Description of study sites.....	29
3.3. Targeted population	29
3.4. Sampling and Sampling techniques	30
3.5. Data collection instruments.....	31
3.5.1. Questionnaire for teachers	32
3.5.2. Interview questions	32
3.6. Validity and Reliability.....	33
3.7. Method of data gathering	33
3.8. Method of Data Analysis	34
3.9. Ethical Considerations	35
Chapter Four	36
4. Results.....	36
4.1. General and demographic information	36
4.2. Preprimary teacher's Knowledge towards Inclusive Education.....	38
4.2.1. Interview Insights on Teachers' Knowledge.....	40
4.3. Attitude of Preprimary Teachers toward Inclusive Education.....	41
4.3.1. Interview Insight on Attitudes Towards Inclusion.....	44
4.4. Preprimary Teachers' Self-Efficacy	45

4.4.1. Interview Insights on Pre-primary Teachers' Self-Efficacy in Inclusive Education	47
4.5. Support and Service Provision.....	47
4.6. Correlations between Efficacy, Knowledge, and Attitude.....	48
4.7. Variance across demographic variables.....	49
4.8. Emerging Insights: Challenges in Implementing Inclusive Education.....	53
Chapter Five.....	56
5. Discussion of Major Findings.....	56
5.1 Pre-Primary Teachers' Knowledge of Inclusion	56
5.2 Attitudes of Pre-primary Teachers towards Inclusion	57
5.3 Pre-primary Teachers' Efficacy for Inclusion	59
5.4 Service Provisions for Children with Special Needs	60
5.5. The relationship between knowledge, attitude, and efficacy.....	61
5.6. Attitude, efficacy, and knowledge across the demographic variables	62
5.6.1. Age demographic	62
5.6.2. Preprimary Teachers' Experiences.....	62
5.6.3. Experience teaching special needs.....	63
Chapter Six.....	65
6. Summary, Conclusion and Recommendations	65
6.1. Summary.....	65
6.2. Conclusion	66
6.3. Recommendations.....	67
References.....	69
Appendices.....	77

List of Tables

Table 1 :Sampling techniques	31
Table 2 . Frequency distribution for demographic.....	36
Table 3: Teachers' knowledge of inclusive education	38
Table 4. Attitude toward inclusive education	42
Table 5. Teachers' efficacy towrds inclusive practice	45
Table 6. Spearman's Rho correlation between Knowledge. Attitude and Efficacy	48
Table 7. Spearman Rho correlation beween Knowledge, Efficacy, Attitude and demographic variables	50
Table 8. Kruskal-Wallis Test, Years of experiences.....	51
Table 9. Kruskal-Wallis test, Age of Particiapants.....	52
Table 10 .Kruskal-Wallis test , Years of experience of teaching Special needs.....	53

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Abbreviations and acronyms

ECCE: Early Childhood Care and Education

ECE: Early childhood education

ECIE: Early Childhood Inclusive Education

IEP: Individualized Education Programme

MoE: Ministry of Education

SD: Standard deviation

SEND: Special Education needs

SEN: Special education needs

SPSS: Statistical Package for Social Sciences

UN: United Nations

UNESCO: United Nations Educational Scientific and Cultural Organization

Abstract

This study explores preprimary teachers' knowledge, attitudes, efficacy toward inclusive education and the provision of support for children with special needs in Addis Ababa. A convergent parallel mixed-methods design was employed, combining a quantitative survey using a five-point Likert scale and qualitative semi-structured interviews. The study took place in three sub-cities, Arada, Yeka, and Gulele, which have a total of 515 preschool teachers. From this population, a sample of 115 teachers from six inclusive schools was selected. In addition, 13 teachers and special education teachers participated in the interviews. Data collected through surveys and interviews provided insights into teachers' understanding, attitudes, and efficacy related to inclusive education. The findings revealed a significant gap between teachers' self-reported knowledge and their actual understanding of inclusion. Although teachers generally expressed positive attitudes toward inclusive education and reported high confidence in implementing inclusive strategies, they often lacked practical skills and struggled to adapt teaching activities to meet diverse needs. The study also found a positive correlation between teachers' knowledge, attitudes, and self-efficacy, indicating that higher levels of knowledge are associated with greater confidence in implementing inclusive strategies. However, no significant differences were found between demographic factors such as age, teaching experience, or exposure to students with special needs in influencing teachers' knowledge or attitudes. The study further highlighted gaps in service provision for children with special needs, compounded by limited collaboration with special education experts and class teachers and insufficient training. Thus, advancing inclusive education in preschool settings requires targeted professional development, stronger collaboration between teachers and special needs, and better allocation of resources. Recommendations for policy and practice include comprehensive teacher training programs and improved cooperation between general and special education department.

Key Terms: Inclusive Education, Knowledge, Attitude, efficacy, service provision

Chapter One

1. Introduction

This research study explores *Pre Primary Teachers' Knowledge, Attitudes, and Self-Efficacy Toward Inclusive Education and the Provision of Services for Children with Special Needs*. It is organized into six chapters. Chapter One introduces the study's background, problem statement, objectives, and significance. Chapter Two presents a literature review highlighting gaps in existing research. Chapter Three describes the research design, sampling methods, and data collection and analysis procedures. Chapter Four presents the findings. Chapter Five discusses the results in relation to the research objectives, and Chapter Six concludes the study and offers recommendations.

1.1. Background of the study

In the past, the education of children with disabilities was often provided by charities, religious organizations, and volunteers. The early 20th century marked a turning point with the emergence of special education as a separate field. During this period, specialized schools were founded, targeted teacher training programs were developed, and materials and equipment adapted to different disabilities were created, with the aim of providing more structured and effective support (MoE, 2022). This shift towards inclusion was reflected in international policy through the Salamanca Statement and Framework for Action on Special Needs Education, adopted in 1994, and in national policy in Ethiopia, such as the Special Needs Education Program Strategy of 2006 and the Special Needs/Inclusive Education Strategy published in 2012 (MoE, 2016).

As inclusive education gained global traction, the debate shifted from access and location to a wider philosophical and practical understanding of what inclusion really means. The idea of inclusive education, originally intended to provide equal opportunities for children with disabilities, has evolved to include all children in mainstream educational settings (Allday, Neilsen-Gatti, & Hudson, 2013). Despite this development, there continues to be no broad consensus on the definition of inclusive education. Some scholars distinguish between a narrow and a broad understanding of inclusivity. The narrow view focuses on specific children with

identified special educational needs and disabilities (SEND) and addresses their placement and support (Nelis, Pedaste & Šuman, 2023; Haug, 2017). On the other hand, the broader perspective takes into account the diversity of all children and highlights the necessary changes in schools and the education system to create a supportive learning environment for all (Nelis, Pedaste & Šuman, 2023; Haug, 2017).

In light of this broader concept, early childhood inclusion has received considerable attention. This educational practice involves teaching children ages 3 to 6 who have special needs alongside their typically developing peers (Lawrence, Smith, & Banerjee, 2016). It has gained widespread attention worldwide because it provides equitable and quality education for all children, including those with different learning needs.

Inclusive early childhood education (ECE) addresses the diverse needs of young learners and aims to create supportive learning environments that promote educational equity and holistic development. This approach ensures children's active participation and involvement in the learning process, promotes educational equity, and contributes to the overall development of the child (UNESCO, 2021; Park et al., 2014).

Beyond its foundational principles, inclusive ECE has shown to deliver significant social and developmental benefits to all children. The benefits of successful inclusion highlight how it benefits both children with and without special needs. Buysse (2002) found that typically developing children in inclusive settings had more friends than those in special classrooms, while Okagaki (1998) observed positive interactions between children with and without disabilities in inclusive programs. Odom (2004) further supports these findings, stating that inclusive settings lead to positive developmental and behavioral outcomes for all children. These studies highlight the importance of inclusive education in promoting social interaction and positive attitudes towards diversity.

Recognizing these benefits, many countries have adopted inclusive education as a guiding framework, though its implementation varies across contexts. Finland considers inclusion a fundamental right, with teacher training that supports individualized learning plans and collaboration among educators, families, and specialists. Canada also advances inclusive education through comprehensive policies that encourage respect for diversity and improved

social outcomes (World Bank, 2021). In contrast, developing countries like Ethiopia face multiple challenges in implementing inclusive education. These include limited teacher training, insufficient resources, and societal stigma toward disability. Although national policies emphasize inclusion, practical implementation remains inadequate. Enrollment rates for children with disabilities are still low, reflecting persistent barriers in accessing quality education (World Bank, 2021).

These systemic challenges are reflected in the classroom, where teachers' perceptions and preparedness play a critical role in shaping inclusive practices. Ethiopian teachers hold mixed perceptions of inclusive education. While some acknowledge its value in fostering peer interaction and acceptance, others express doubt about their preparedness due to limited training (Alemayehu et al., 2022). This can hinder effective inclusive practices, especially in early childhood settings.

Considering the significant benefits of inclusive education for the overall development of children with special needs, its effective implementation matters to maximize the benefits it offers. A critical element in successful inclusion is teachers' knowledge. This encompasses understanding diverse disabilities, employing inclusive teaching strategies, and applying legal frameworks supporting inclusion. Knowledgeable teachers are more adept at creating inclusive classrooms and adapting materials to support varied learning needs (Geleta, 2019; Singh et al., 2023).

Understanding the concept of inclusive education among teachers covers several key areas. First, it involves recognizing that inclusive education goes beyond simply placing children with special needs in mainstream settings; the aim is to create a learning environment where every child, regardless of abilities or disabilities, feels welcome, supported, and valued. This understanding includes knowledge about different types of disabilities and their unique learning needs (Geleta, 2019). Additionally, teachers must be familiar with specific strategies and accommodations to adapt their teaching methods, materials, and assessments to meet the needs of all learners. This knowledge is critical because teachers knowledgeable about inclusive education create a supportive classroom environment (Singh et al., 2023).

Studies in countries like Australia and Canada reveal that teachers with comprehensive training in inclusive education can effectively differentiate instruction and enhance outcomes for all students. However, Ethiopian pre-primary educators often lack such training. For instance, Gurmessa (2018) found that only 25% of teachers had received formal instruction in inclusive education, limiting their ability to support children with special needs.

In addition to teachers' knowledge about inclusive education, teachers' attitudes toward inclusion play a critical role in its successful implementation. Positive attitudes involve belief in the capabilities of all learners, appreciation of diversity, and willingness to adapt (Beyene & Tizazu, 2011). In Ethiopia, societal stigma can influence teacher attitudes negatively. Tefera and Abebe (2020) found that 60% of teachers held biases that hindered their perceptions of children with disabilities and special needs, often seeing them as burdens rather than integral members of the classroom.

Moreover, teacher efficacy is a key element in the successful implementation of inclusive education. Teacher efficacy in inclusive education refers to a teacher's confidence in their ability to teach successfully in an inclusive classroom. This includes managing a diverse group of learners, differentiating instruction, addressing challenging behaviors, and fostering positive relationships (Brady & Woolfson, 2008). It also includes collaboration with parents and specialists because inclusive education requires effective teamwork. High teacher efficacy means believing that all students, regardless of their challenges, can learn and succeed. A teacher with high self-efficacy has a greater chance of meeting the needs of children with special needs (Brady & Woolfson, 2008). In Ethiopia, pre primary teachers report low confidence in handling diverse classrooms. Tefera and Abebe (2020) noted that 70% of teachers felt overwhelmed by inclusion-related challenges, which discouraged the adoption of inclusive strategies.

While teachers are expected to effectively implement inclusive education, many lack the necessary knowledge and experience to teach children with special needs in inclusive settings. This knowledge gap often leads to negative attitudes toward inclusion and a reluctance to accommodate these children in mainstream classrooms (Odom, 2004). This lack of knowledge acts as a significant barrier to effective inclusive practices, impacting teachers' ability to meet the diverse needs of all students. Along with knowledge, a teacher's attitude toward inclusion is

crucial for its success. These attitudes shape expectations and behaviors that can either facilitate or hinder the inclusion of students with disabilities. Furthermore, as teachers gain more knowledge about inclusive practices, their attitudes tend to become more positive, leading to increased self-efficacy in meeting the needs of all children, including those with disabilities (Brady & Woolfson, 2008).

All these factors play a crucial role in the support and services teachers provide to all children with special needs within inclusive pre-primary schools (Noreen, Intizar, & Gulzar, 2019; Laskar, 2018). Support provision refers to supporting children with special educational needs in educational settings. It can be referred to in various terms such as "additional help and attention," "special needs support," or simply "special support." The objective of these provisions is to increase children's engagement in activities, routines, and play, as well as to facilitate and improve their learning experience (Sandall & Schwartz, 2008).

Children with special needs often require changes to the curriculum and teaching methods to meet their individual needs. To include these children successfully in pre-primary, teachers must adjust the classroom setting, use effective teaching strategies, and provide equal learning opportunities for all children (Bricker, 2000). These steps are crucial for helping children with special needs feel included, thrive, participate actively, and learn effectively (Sandall, Schwartz, & Joseph, 2001; Sandall et al., 2008). It is important to give children with special needs the extra help and attention they need to benefit from their education and fully integrate into their classroom environment.

Despite the increasing emphasis on inclusive education, gaps remain in understanding how pre primary teachers in Ethiopia approach inclusion, particularly in terms of their knowledge, attitudes, and self-efficacy. Addressing these gaps is crucial for ensuring that inclusive education delivers on its promise of equitable learning for all children.

1.2. Statement of the Problem

Early childhood education is widely recognized as a critical foundation for lifelong learning and development (UNESCO, 2015). In Ethiopia, the government has shown a strong commitment to promoting inclusive education by developing policies that encourage the integration of children with special needs into mainstream classrooms. Despite these efforts, the practical implementation of inclusive education in early childhood settings remains a significant challenge. Pre-primary teachers, who play a central role in creating inclusive environments, often face many barriers that limit their ability to effectively support children with special needs (Ainscow, 2021).

Research shows that successful inclusive education depends on teachers having the necessary knowledge, skills, attitudes, and values (European Agency for Development in Special Needs Education, 2012). Teachers' attitudes toward children with special needs, along with their knowledge and training, significantly influence their competence in implementing inclusive practices. In many low- and middle-income countries, including Ethiopia, teachers often receive limited or no training in inclusive education practices. As a result, many feel unprepared, lack confidence, and are hesitant to adapt their teaching strategies to meet the needs of diverse learners.

In response to these challenges, a significant focus was placed on addressing the needs of children with special needs and disability during the fifth Ethiopian Education Sector Development Plan (ESDP V) from 2015 to 2020. Subsequently, the Ministry of Education introduced a 10-year Master Plan for Special Needs and Inclusive Education from 2016 to 2025. Furthermore, the National Early Childhood Development and Education policy framework (FDRE, 2022) highlights that Children with special needs will receive a sufficient and high-quality education alongside their peers in any local pre-primary setting, without facing any discrimination.

However despite these efforts, children with special needs face significant challenges in accessing and benefiting from education, making them one of the most disadvantaged groups. These challenges vary depending on the type and severity of their disability and challenges, as well as their gender and socio-economic status (Franck & Joshi, 2016). The difficulties they

encounter in accessing education stem from several factors, including inadequate physical infrastructure on their journey to school, unfriendly physical school environments, a lack of trained teachers and professionals, and negative attitudes from various stakeholders. Additionally, the formal processes for identifying children with special needs are limited, leading schools to rely on informal visual observation processes, which are often ineffective (Franck & Joshi, 2016).

According to the Ministry of Education's directives, Ethiopian general education teachers are required to understand the philosophy and principles of inclusive education and develop competencies to address the diverse needs of students (Ginja & Chen, 2021). However, there is a recognized gap in teachers' knowledge and experience, particularly in understanding inclusion strategies, managing diverse interactions students need in classrooms, and implementing effective teaching strategies. This gap hinders the quality of inclusion in classrooms, highlighting the urgency for teachers to receive adequate support, training, and access to resources (Ginja & Chen, 2021).

While there is a growing body of research on inclusive education, much focuses on primary and secondary education. There remains a noticeable gap in studies that examine how preschool teachers' knowledge, attitudes, self-efficacy, and service delivery impact inclusive practices in early childhood education, especially in Ethiopia. Most research emphasizes policy discussions rather than the practical challenges that preprimary teachers face. Yet, early attitudes, knowledge, and teaching practices are crucial in shaping children's educational experiences during this formative stage (Ainscow, 2021).

Understanding the factors that influence preprimary teachers' ability to implement inclusive practices is therefore essential. Teachers who possess knowledge of inclusive practices, maintain positive attitudes toward children with special needs, and feel confident in their teaching abilities are more likely to foster truly inclusive learning environments (Sharma et al., 2012). However, many pre-primary teachers feel inadequately trained and supported. A study by Fekadu and Hailu (2021) reported that more than 60% of preprimary teachers felt unprepared to teach children with special needs, which impacts their perceived knowledge, attitudes, and

efficacy. Overwhelmed by the diverse needs of their students, teachers may become reluctant to implement inclusive strategies.

Similar challenges are reported in other low- and middle-income countries. For example, studies from Kenya, Uganda, and South Africa show that while policies promote inclusive education, teachers often feel ill-equipped to put these policies into practice (Engelbrecht et al., 2019). Additionally, teacher characteristics such as age, educational background, and previous training in special needs education may influence their knowledge, attitudes, and confidence. However, very little research has explored these factors within preprimary contexts in Ethiopia. There is also limited understanding of the specific services and strategies pre-primary teachers use to support young children with special needs.

Given these gaps, this study aims to provide valuable insights into pre-primary teachers' perceived knowledge, attitudes, efficacy, and service provision related to inclusive education in Ethiopia. Understanding these aspects is important for informing future teacher training programs, improving policy implementation, and ultimately creating more inclusive and supportive learning environments for all young children.

1.3. Research Questions

This study seeks to answer the following research questions:

- ❖ What are the levels of perceived knowledge, efficacy, and attitudes of pre-primary school teachers toward inclusive education?
- ❖ Is there any statistically significant difference in pre-primary school teachers' knowledge, Attitude, and Efficacy across their demographic characteristics?
- ❖ Is there any relationship between the levels of efficacy, knowledge, and attitude among pre-primary teachers?
- ❖ What types of services do pre-primary teachers provide to support the inclusion of children with special needs?

1.4. Objective of the Study

The main objective of this study is to investigate preprimary teachers' knowledge of inclusive education practices, attitudes towards including children with special needs, self-efficacy in teaching children with special needs, and service provision practices for children with special needs in three sub-cities in Addis Ababa.

1.5. Significance of the study

Understanding the concept of inclusive education is important because it ensures all children, including those with special needs, have equal opportunities to learn. It helps create supportive environments where every student can succeed. By focusing on this, we can better address the challenges and improve the quality of education for everyone. Thus, this research, "Preprimary Teachers' Knowledge, Efficacy, and Attitudes Toward Inclusive Education, and Provision of Services for Children with Special Needs," holds significant importance for several reasons,

- ❖ Provides insights into pre-primary teachers' knowledge, efficacy, and attitudes toward early childhood inclusive education, highlighting effective practices and areas needing support.
- ❖ Helps develop targeted professional development programs to improve teachers' skills and confidence in inclusive classrooms.
- ❖ Adds to the research on inclusive education, particularly in early childhood education in Ethiopia, and identifies challenges faced by pre-primary teachers.
- ❖ Inform policymakers in identifying gaps in educational practice and contribute to the development of policies that promote inclusive education.

1.6. Delimitations

This study is confined to examining the attitudes, knowledge, and efficacy of pre-primary teachers concerning inclusive education practices and the provision of services for children with special needs. The research was conducted in three sub-cities of Addis Ababa, where 68 pre-primary schools are located. Given the impracticality of including all of these schools, the study

focused on a purposely selected sample of six pre-primary government schools across the three sub-cities.

1.7. Operational Definition of Variables

Knowledge: This refers to preschool teachers' understanding and awareness of various aspects related to inclusion, such as types of disabilities, inclusive strategies (e.g., IEPs), and best practices in inclusive education.

Efficacy: Refers to teachers' confidence and belief in their ability to effectively implement inclusive practices, adapt teaching methods, manage classroom dynamics, collaborate with other professionals (special needs), and meet the diverse needs of children with special needs.

Attitude: Teachers' beliefs, values, and feelings toward inclusive education and accepting diversity.

Service Provisions: Refers to the support and assistance that preschool teachers offer to children with special needs. This includes specific strategies, accommodations, and resources that teachers use to help these children learn and participate in classroom activities. It also involves working with other professionals and families to create a supportive environment for all students.

Children with special needs Refer to all children who require additional support or accommodations due to different factors. These factors can include developmental disorders, physical disabilities, sensory impairments (visual or hearing impairments), cognitive challenges, communication difficulties, and emotional or behavioral disorders.

Chapter Two

2. Literature Review

2.1. Definition and Importance of Early Childhood Inclusive Education

Early Childhood Care and Education (ECCE) provides comprehensive care and education for children aged 0 to 8, covering health, nutrition, hygiene, safety, responsive caregiving, early stimulation, education, and developmental activities. The aim is to ensure a proper environment that can offer developmental support for the child in the areas of physical, cognitive, social, emotional, and linguistic development (UNESCO, 2021).

Early childhood education consists of activities focused on age-appropriate learning, which enhances children's curiosity, creativity, critical thinking, problem-solving skills, and social interaction (Hirsh-Pasek et al., 2009). These programs often include activities such as play-based learning, storytelling, art, music, movement, and early literacy and numeracy experiences (Bodrova & Leong, 2007).

The goals of Early Childhood Care and Education are to ensure the well-being and healthy development of young children, to support families in their caregiving roles (Sylva et al., 2004), to prepare children for formal schooling (Pianta et al., 2009), and to promote lifelong learning (McCoy et al., 2017). ECCE is important for laying a strong foundation for children's future academic success, social adaptability, and well-being (McCoy et al., 2017).

On the other hand, Early Childhood Inclusive Education (ECIE) refers to an educational approach that welcomes diversity, promotes equality, and promotes the active participation and learning of all young children, regardless of their abilities, disabilities, language, culture, or socioeconomic status (UNESCO, 2021). It recognizes and values the unique strengths, needs, and potential of every child, striving to create inclusive learning environments that accommodate and support diversity.

The main objectives of ECIE are holistic development, social inclusion, improved learning achievements, and successful transitions to further education and beyond the early years (Forlin & Loreman, 2020). Similarly, ECIE aspires to provide each child access to quality education and individualized support, to actively participate in learning experiences, and to develop positive attitudes toward diversity and inclusion.

2.2. Legal and Policy Frameworks for Inclusive Education

Legal and policy frameworks play a critical role in shaping inclusive education practices by providing guidelines, mandates, and support structures for ensuring equitable access and participation for all learners (UNESCO, 2021). This section examines key legal and policy frameworks at the international, national, and local levels that influence inclusive education, with a focus on their implications for educational systems, practices, and outcomes.

2.2.1. International Perspectives on Inclusive Education Policies

Internationally, groups like UNESCO and the United Nations have pushed for inclusive education using declarations, conventions, and guidelines (UNESCO, 2019). The Salamanca Statement (UNESCO, 1994) was a key document that said inclusive education is a basic human right. It stressed removing barriers, giving proper support, and valuing diversity in schools. Later efforts, like the Sustainable Development Goals (SDGs), also highlight how inclusive education helps reach global education goals (UNESCO, 2020). These international frameworks discuss accessibility, adjusting for needs, and teaching that includes everyone as important parts of inclusive education policies (UNESCO, 2021).

2.2.2. National Legal Frameworks and Inclusive Education Policies

Many countries have developed specific laws, policies, and guidelines to promote inclusive education within their educational systems. For example, the Individuals with Disabilities Education Act (IDEA) in the United States mandates the provision of free and appropriate education in the least restrictive environment for students with disabilities (IDEA, 2004).

Similarly, the United Kingdom's Special Educational Needs and Disability (SEND) outlines principles for identifying and meeting the needs of learners with SEND in mainstream schools.

National frameworks often address issues such as assessment and identification, access to support services, teacher training, parental involvement, and transition planning, that is, supporting children with special needs as they move from one educational stage to another to promote inclusive practices (European Agency for Special Needs and Inclusive Education, 2018).

Ethiopia has made notable progress in promoting inclusive education, as reflected in its policy frameworks and initiatives. The Education and Training Policy (MoE, 1994) emphasizes the principles of equity, access, and inclusion for education for all learners. Further more, the Inclusive Education Strategy (MoE, 2016), details the specific objectives and strategies to promote school-level inclusive practices.

2.2.3. Local Implementation and Impact of Inclusive Education Policies

Policies for inclusive education are implemented locally in schools and communities. Schools, teachers, administrators, parents, and community members are important stakeholders who play their roles by creating cultures of inclusiveness, overcoming obstacles, and encouraging successful outcomes for all learners. Ethiopia has taken significant steps to implement inclusive education policies, particularly through its Education Sector Development Program (MoE, 2015). The program emphasizes the importance of inclusive practices, teacher training, curriculum adaptations, accessible learning materials, and community involvement in promoting inclusive education (MoE, 2019). Local education offices, schools, educators, and communities play important roles in translating national policies into effective practices that meet the diverse needs of learners.

Although there has been progress in inclusive education, significant challenges persist. Limited resources, infrastructure constraints, inadequate training, and support for educators, as well as attitudinal barriers, remain key issues (MoE, 2019). Addressing these challenges requires

targeted interventions, policy reforms, collaboration between stakeholders, and sustained investments in inclusive education initiatives (FDRE, 2019).

2.3. Theoretical Perspectives on Inclusive Practices

Theoretical perspectives guide inclusive practices in educational settings. Below are key theoretical frameworks, highlighting their implications for policy, pedagogy, and student outcomes.

2.3.1. Social Constructivism and Inclusive Practices

Social constructivism emphasizes that knowledge is actively constructed through social interactions and experiences (Vygotsky, 1978). In the context of inclusive education, this perspective emphasizes collaborative learning, peer support, and the importance of inclusive classroom environments. Research by Ainscow and Miles (2008) highlights the role of social constructivist approaches in promoting positive attitudes towards diversity, creating a sense of belonging among all students, and facilitating collaborative problem-solving. Educators adopting social constructivist principles often emphasize cooperative learning, peer tutoring, and differentiated instruction to meet different learning needs (Dyson, 2010).

2.3.2. Universal Design for Learning (UDL) and Inclusive Practices

UDL is a framework that advocates for designing flexible learning environments and instructional materials to accommodate diverse learners (Rose & Meyer, 2002). Implementing Universal Design for Learning (UDL) means teachers need to identify and remove obstacles that prevent students from learning effectively. They should create lesson plans that consider different learning styles and needs, offering various ways for students to engage with the material. This approach helps create a classroom where all students can participate and succeed (Rose and Mayer, 2002).

The core principles of UDL's multiple means of representation, engagement, and expression align closely with inclusive education goals. Research by Hall, Strangman, and Meyer (2003)

highlights the benefits of UDL in promoting access to the curriculum, reducing barriers to learning, and encouraging student engagement. Educators who implement UDL principles often utilize a variety of teaching strategies and accessible materials to create inclusive learning experiences that benefit all students (Dalton, 2017; Salend, 2016).

2.3.3. Ecological Systems Theory and Inclusive Practices

Ecological Systems Theory, proposed by Bronfenbrenner (1979), emphasizes the interconnectedness of individuals with their environments and the impact of various systems on development. In the context of inclusive education, this theory highlights the importance of considering multiple levels of influence, such as the individual, classroom, school, family, and community, in promoting inclusive practices.

Research by Bronfenbrenner and Morris (2006) discusses how ecological systems thinking can inform inclusive policies, collaboration among stakeholders, and the creation of supportive learning environments. Educators applying ecological systems theory often engage in collaborative problem-solving, family-school partnerships, and community outreach initiatives to support inclusive practices (McLeskey & Waldron, 2011).

2.3.4. Implications of Theoretical Perspectives on Inclusion Policies

Different theories help educators understand and address diversity, equity, and inclusivity in schools. By taking on inclusive theories like Social Constructivism and Ecological Systems Theory, educators can gain a deeper understanding of the complex and ever-changing nature of inclusive education. Theories like Social Constructivism give a framework for understanding how social and cultural factors influence learning and support inclusivity. These theories emphasize the importance of creating inclusive learning environments that value diversity, promote fairness, and empower all students to succeed. They also highlight the need for collaboration among educators, families, and other stakeholders involved to make inclusive practices work effectively.

These theories on inclusive education give valuable insights into how to address diversity, equity, and inclusion in schools (Florian, 2014). Theories also highlight the complexities and dynamics of inclusive education (Amor et al., 2018). Such frameworks help recognize and provide frameworks for addressing the social, cultural, and systemic barriers that prevent marginalized students from having equal educational opportunities. They stress the importance of teamwork among educators, families, and other stakeholders to make inclusive practices a reality.

2.4. Practices and Challenges in Implementing Inclusive Education

Inclusive education is a critical component of modern educational systems worldwide, aiming to create environments where students of all backgrounds and abilities, including those with disabilities, can learn together in the same classroom. In Ethiopia, significant strides have been made in promoting inclusive education through national policy frameworks guided by international conventions, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) and the Education for All (EFA) framework. Policies such as the Education and Training Policy (1994) and the Education Sector Development Program (2006) emphasize the integration of students with disabilities into mainstream classrooms (Alemu, 2019).

Despite this progress, the implementation has faced considerable barriers in Ethiopia. Teachers often lack specialized training, and resources are limited, especially in rural areas. Special schools and resource centers exist primarily in Addis Ababa, but are frequently under-resourced and unable to fully support inclusive teaching. Moreover, teacher preparation programs are only beginning to integrate training on inclusive education, creating a gap between policy intentions and classroom realities (Fenta & Mekonnen, 2020).

Looking at global contexts offers valuable insights into effective strategies. In Finland, inclusive education is a fundamental part of teacher preparation, with a strong emphasis on collaborative teaching models where general and special education teachers work together (Ainscow & Sandhill, 2010). Similarly, in Canada, inclusive education involves the development of individualized education plans (IEPs) and close collaboration among families, educators, and

school communities (Skerbetz, 2013). New Zealand's application of the Universal Design for Learning (UDL) framework encourages teachers to use flexible strategies that meet diverse learner needs, promoting multiple ways of engagement and expression (Smith, 2019).

Nevertheless, challenges remain in many contexts, including Ethiopia. A major obstacle is inadequate teacher training. Many teachers, particularly in underserved regions, have limited exposure to inclusive practices, making it difficult to meet the needs of students with disabilities. Resource constraints also persist, with challenges in adapted learning materials and accessible infrastructure. Cultural attitudes pose additional challenges. In Ethiopia, children with disabilities often face stigmatization, and some families resist inclusive approaches due to limited awareness or societal stigma (Dube & Ayele, 2018).

Another significant issue is the inflexibility of curricula. These are often not adapted to the needs of diverse learners, leaving teachers without guidance on how to modify content or assessment. While international frameworks like UDL advocate for flexible curricular approaches, such adaptations remain underutilized in many countries, including Ethiopia (Skerbetz, 2013).

2.5. Preprimary Teachers' Knowledge about Inclusion

Knowledge involves the ability to observe and recall events both generally and specifically through information processing and restructuring methods (Yusof, N. I., & Ismail, H. 2020). Teachers are often the primary individuals in identifying children who require special education. Hodkinson (2005) emphasizes that teachers' conceptualizations of inclusive education significantly impact its implementation. Therefore, inclusive education requires teachers to possess a clear awareness and understanding of how to identify, support, and adapt instruction for learners with varying needs including those with disabilities within the general education classroom. This includes knowledge of inclusive pedagogical strategies, special education policies, individual learning profiles, classroom management for diverse learners, and collaboration with support professionals.

Effective inclusive education requires teachers to understand the diverse needs and abilities of their students. This knowledge allows them to adopt appropriate pedagogical strategies and

classroom management techniques that cater to the unique needs of each student. Preschool teachers play an important role in including children with special needs in mainstream settings (Kilgallon & Maloney, 2003). However, they often lack the necessary knowledge and skills for effective inclusive practices (Akalın et al., 2014).

Despite the critical role of preprimary teachers, many studies have highlighted the limited knowledge and readiness of teachers to support students with special needs in regular classrooms. Gyasi, Okrah, & Anku (2020) found that teachers often lack in-depth knowledge of inclusive practices and specific learning disorders. This issue is compounded by the challenge's educators face when applying the curriculum to students with special needs (Thompson et al., 2018).

Preschool teachers often lack sufficient knowledge and experience to work with children with special needs. They perceive their knowledge and experience as the most significant barrier to inclusion (Sucuoglu et al., 2014). Teachers require knowledge in various areas, including techniques to support interactions among children with and without special needs and effective classroom strategies. They also need support from principals, experts, and access to necessary resources.

Additionally, despite believing in the benefits of inclusive education, preschool teachers report feeling unprepared to educate children with special needs (Sucuoglu et al., 2014). Teachers indicate a need for training, support from special education teachers, and additional materials and tools for inclusive classes. They emphasize the importance of learning how to adapt the preschool program to meet inclusion requirements and engage children with special needs in daily routines (Akalın et al., 2014).

Teachers believe that inclusion would be more successful if they received appropriate on-the-job training. One-time in-service training is not sufficient to equip them with the necessary skills to meet the needs of children with special needs. Many teachers only gain the necessary knowledge

and experience through trial and error after special needs children are placed in their classroom (Akalın et al., 2014).

One crucial factor is the training and professional development preprimary teachers receive in inclusive education. Teachers who have received comprehensive training on adapting instructional strategies, managing diverse classrooms, and collaborating with specialists are more likely to feel confident and knowledgeable in implementing inclusive practices (Singh et al., 2023) This training should be a shared responsibility of all stakeholders, including the government, education partners, and teacher education programs (Ngadni et al., 2023).

Furthermore, the availability of resources and support systems for preprimary teachers. Adequate funding, specialized equipment, and access to a network of support professionals, such as special education teachers and therapists, can greatly enhance teachers' ability to cater to the needs of all students in an inclusive setting (Ngadni et al., 2023). Additionally, the attitudes and beliefs of preschool teachers towards inclusive education can significantly influence their knowledge and implementation of inclusive practices. Teachers with positive perceptions of inclusive education and believe in the benefits of including children with diverse needs are more likely to embrace inclusive teaching strategies.

A study by (Sucuoglu et al., 2014), aimed to create and validate a test called the Inclusion Knowledge Test (IKT) to measure preschool teachers' understanding of inclusive practices. They developed short stories (vignettes) about inclusion, which involved 169 preschool teachers. Results showed that teachers generally lacked knowledge in areas like incidental teaching, working with families, and behavior management. Taking a pre-service course on special education significantly improved IKT scores. The study suggests that educating preschool teachers about effective inclusive practices could enhance preschool inclusion and support children with special needs.

2.6. Attitudes of Preprimary Teachers towards Inclusion

Attitudes are defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken 1993, 1) On the other hand, Latchanna & Dagneu, (2009) define attitude as a complex mental state involving beliefs and feelings that influence behavior. This is particularly relevant in teaching, where teachers' attitudes can significantly impact their performance and the learning environment.

Research shows that when teachers have a positive attitude toward inclusive schools, they become more willing to adapt their teaching methods to meet the diverse needs of their students (Cullen et al., 2010, as referenced by Mata and Clipa (2020). In contrast, the negative attitude of teachers toward inclusion is associated with students having less satisfaction within the classroom, friction, competitiveness, and difficulty in behavior among students (Ewing, Monsen, & Kielblock, 2017).

Teachers' attitudes toward including children with special educational needs (SEN) in mainstream classrooms vary widely. Some teachers support inclusion when adequate support is available, while others believe it may affect other students' education. Some feel SEN children would be better served in special schools, where they may receive higher-quality support (Ewing, Monsen, & Kielblock, 2017). However, preprimary teachers displayed more positive expectations about inclusion compared to higher-level school teachers. This difference is attributed to preprimary teachers' focus on social and developmental aspects rather than academic skills (Nonis et al., 2016).

Given their critical role in early education, preprimary teachers play an important role in the implementation of inclusive practices, and their attitudes towards inclusive education can significantly impact its success. Several factors have been identified as influencing preschool teachers' attitudes toward inclusive education (Avramidis & Norwich 2002) which can be categorized into child-related, teacher-related, and educational environment-related variables.

Child-related variables include the type and severity of disabilities, with teachers generally more accepting of students with physical disabilities over those with cognitive or emotional-behavioral difficulties (Avramidis & Norwich 2002). Moreover, preprimary teachers find it more challenging to work with children with emotional or behavioral difficulties compared to those with other types of disabilities (Singh et al., 2023). Another important factor is the teachers' previous experiences with inclusion (Mata and Clipa, 2020). Findings suggest that teachers who have had positive experiences with inclusion, either through their teaching or through observing successful inclusive classrooms, are more likely to have favorable attitudes toward inclusive education (Leatherman & Niemeyer, 2005. Dias & Cadime, (2016) add that teachers with experience in special needs and inclusive classrooms tend to show more positive attitudes toward inclusion compared to less experienced teachers.

Teacher-related variables encompass demographic and personality traits, including years of experience, training received, and self-efficacy beliefs. One of the key factors is the level of training and support that teachers receive in managing inclusive classrooms. Studies have shown that pre-service teachers who receive more comprehensive training in inclusive practices tend to have more positive attitudes toward inclusion. Moreover, the level of teachers' training positively impacts their attitudes towards inclusion, with higher levels of training correlating with more positive attitudes (Nonis et al., 2016). In addition, teachers' perceived efficacy influences their attitudes towards an inclusive system. Self-efficacy influences teachers' attitudes towards inclusive education, particularly social integration. It is the only proven factor affecting their willingness to integrate students with special needs into general schools.

Environment-related include the physical environment of the preschool classroom, which also impacts preschool teachers' attitudes toward inclusive education. The level of administrative support and resources available to teachers can significantly influence their attitudes (Avramidis & Norwich 2002).

Various studies have emphasized the significance of teachers' attitudes toward inclusive education and how these attitudes influence their practices in the classroom. For example, Boer

et al. (2011) highlight the importance of understanding teachers' attitudes towards inclusive education and their impact on the social participation of students with special needs in regular schools. Furthermore, well-trained teachers are more likely to hold positive attitudes toward inclusion. This finding aligns with (Khokhar et al., 2023), who investigated the impact of Teacher Efficacy for Inclusive Practices (TEIP) on teachers' attitudes towards inclusive education, stressing the role of teacher efficacy in shaping attitudes towards inclusion.

On the other hand, research done by Tsegaye, Menbere, Godie, & Birhanu, (2024) to evaluate the attitude of preschool and primary school teachers towards including children with autism spectrum disorders (ASD) in their classrooms in public schools in Addis Ababa, teachers between the ages of 20 and 25 had 90% lower knowledge compared to those above 40 years. Teachers whose source of knowledge about ASD did not come from surrounding people were 2.5 times more likely to have a positive attitude. The study concluded that teachers displayed a generally positive attitude towards autism spectrum disorder, but there is a need for increased emphasis on educational interventions aimed at enhancing attitudes towards ASD further. The study recommended focusing on providing training and resources to teachers to improve their knowledge and attitudes towards inclusive education for students with ASD.

2.7. Preprimary Teachers' Efficacy for Inclusion

The concept of self-efficacy was introduced by Bandura and according to Bandura (1997), self-efficacy refers to one's beliefs in their 'capabilities to organize and execute the courses of action required to produce given attainments'. In the context of teaching, Teachers' self-efficacy, and their belief in their capacity to promote learning and manage diverse classrooms, significantly influence their implementation of inclusive practices (Soodak, Podell, & Lehman, 1998).

Teacher efficacy is commonly divided into two dimensions: general and personal. General teacher efficacy pertains to a teacher's belief about the teacher's ability to influence student learning (Malinen 2013). On the other hand, personal teacher efficacy is a more individual and specific belief about the effectiveness of one's teaching. Teachers with high instructional self-efficacy believe that even challenging students can be taught. Higher self-efficacy leads to

increased teacher effort, better performance, and the formation of higher efficacy beliefs. Moreover, Teachers with a strong sense of self-efficacy tend to exhibit more effective instructional practices, better classroom management skills, and a more positive attitude toward their students (Malinen, 2013).

Research has established a positive correlation between teachers' self-efficacy and their ability to create inclusive learning environments (Soodak, Podell, & Lehman, 1998). Teachers' self-efficacy, or their belief in their ability to successfully teach and support all students, is essential for the effective implementation of inclusive education.

Moreover, studies have indicated that preprimary teachers' self-efficacy toward inclusive education can greatly impact the success of inclusive learning environments. Teachers with high self-efficacy are more likely to use innovative instructional methods and approaches that promote student participation in classroom activities (Lu & Mustafa, 2021). Additionally, teachers with strong self-efficacy are more likely to engage in proactive and solution-focused pedagogy, leading to increased student engagement and academic achievement (Ningsih et al., 2020).

However, numerous studies shed light on the challenges that can undermine teachers' self-efficacy. Lee, Patterson, & Vega, (2011) and Black (2015) point the impact of limited resources, inadequate preparation, and high workloads on self-efficacy. When teachers have low teaching efficacy, they may not exert much effort because they feel they lack the necessary skills or resources to make a meaningful impact on their students' lives. On the other hand, teachers with high teaching efficacy are likely to put in significant effort in the classroom and demonstrate persistence in their endeavors (Park et al. 2014).

Additionally, research on teachers' self-efficacy in inclusive education has identified various predictors and consequences. Internal factors such as knowledge, experience, and training, as well as external factors like school climate, can influence teachers' self-efficacy (Kristiana,

2018). However, research on teacher efficacy toward inclusion has been limited (Sharma, Loreman, & Forlin, 2011).

Teacher self-efficacy significantly impacts student outcomes, including academic achievement, motivation, and engagement. Highly efficacious teachers tend to create more enriching and supportive learning environments, which in turn foster positive student outcomes. Teacher self-efficacy is a multifaceted construct encompassing a teacher's beliefs about their ability to fulfill their pedagogical duties effectively. It involves a sense of confidence in their capacity to design and deliver engaging and meaningful learning experiences, manage the classroom environment effectively, motivate and engage students, and engage positively with colleagues and parents (Shah & Bhattarai, 2023)

Teacher self-efficacy is context-specific which means that teachers experience varying levels of efficacy in different situations. For instance, they may feel highly efficacious in teaching certain subjects or at specific grade levels, while feeling less efficacious in others (Malinen et al., 2013). Factors such as teacher experience, training, and classroom environment can all contribute to variations in teacher self-efficacy.

Furthermore, teacher self-efficacy is a multidimensional construct, consisting of several distinct dimensions that are related to instruction, classroom management, engaging and motivating students, and in a recent study of how teachers work with parents and their colleagues (Malinen et al., 2013). These dimensions reflect a teacher's confidence in their ability to plan, implement, and evaluate effective instruction. It involves an understanding of the subject matter, pedagogical strategies, and assessment techniques. Classroom management efficacy relates to a teacher's ability to establish a positive and productive learning environment. It encompasses the ability to set clear expectations, manage student behavior, and create a supportive and disciplined classroom climate. Student motivation and engagement efficacy reflect a teacher's confidence in their ability to motivate and engage students in the learning process. It involves the capacity to create a stimulating and challenging learning environment, use effective instructional strategies, and build positive relationships with students (Malinen et al., 2013).

Ultimately, teachers' self-efficacy beliefs influence teaching practices in inclusive education and positive attitudes toward students with special needs. Teachers with high self-efficacy hold more positive attitudes towards inclusion, are more sensitive to students with special needs, and perceive their success in teaching students with special needs in general education classrooms. Training and experiences play an important role in enhancing teachers' efficacy toward inclusion, ultimately benefiting students' learning experiences. Moreover, previous interaction with individuals with special needs increases self-efficacy and efficacy regarding inclusion (Özokcu, 2017).

2.8. Service Provisions for Children with Special needs in inclusive education

The concept of inclusive preschool education is grounded in the belief that all children, regardless of their abilities, backgrounds, or developmental needs, should have access to high-quality educational opportunities that serve their unique strengths and challenges. Inclusive preschool classrooms are designed to provide a nurturing and stimulating environment where children with different needs, including those with disabilities, can learn and grow alongside their typically developing peers.

High-quality inclusion combines general early childhood practices with specialized teaching strategies to meet individual learning needs (Buisse & Hollingsworth, 2009). The NAEYC has created a framework to guide high-quality inclusive programs. This framework focuses on three main features: access, participation, and support. It aims to achieve key goals such as a sense of belonging, positive social relationships, and the development needed to reach one's full potential (Buisse & Hollingsworth, 2009).

Ensuring access means making the environment easy for all children to use, physically, socially, and academically, while participation means the curriculum and teaching methods should be flexible to fit children's abilities, interests, and needs. On the other hand, comprehensive support systems are also important, including extra help and specialized assistance to improve

participation, learning, and overall experience (Lundqvist, Allodi, & Siljehag, 2015). Without these supports, children with special needs may struggle to benefit from their education and feel included in their classroom.

Inclusive education aims to avoid making students adapt to a rigid system. Instead, it involves adjusting teaching methods, curriculum, staff, and pedagogy to support the learning of all students (UNICEF, 2014). Therefore, the provision of services to students with special needs in inclusive schools is crucial for the successful implementation of inclusive practices. Quality services and practices in these settings benefit everyone - children, families, educators, and communities.

Effective service provisions are crucial for meeting the diverse needs of children with special needs in inclusive settings (Odom et al., 2021). This includes personalized support plans, accommodations, and access to specialized services, which are key factors in successful inclusion (Salend, 2008). A study by the New Zealand government in 2011 assessed the inclusion of children with moderate to severe special needs in early childhood services (ECS) across 268 locations. They found that highly inclusive services share common traits: belief in the abilities of children with special needs, implementation of inclusive practices, additional support provision, and collaboration with parents and professionals. Effective transitions and support positively impact the well-being, learning, and development of children with special needs. Conversely, less inclusive services often struggle due to physical environment limitations, inadequate adult-to-child ratios, limited pedagogical knowledge, and challenges in adapting the curriculum (Education Review Office, 2012).

Implementing inclusive practices in early childhood education (ECCE) successfully depends on several important factors. Professional development and training are crucial because they help practitioners effectively implement inclusive practices in ECCE (Soukakou, Dionne, & Palikara, 2024). One critical factor is the support and resources available to early childhood educators. Professionals in inclusive programs have highlighted the importance of factors like sufficient funding, suitable training and development opportunities, and access to specialized equipment

and services (Soukakou, Dionne, & Palikara, 2024). These resources are valuable for early childhood educators to meet the diverse needs of all children in their care. With them, educators may be able to provide adequate support. However, successful inclusion in early childhood care and education (ECCE) depends on collaboration across sectors and coordinated efforts.

In Ethiopia, the commitment to inclusive education has gained momentum, with policies such as the Ethiopian Disability Policy (2011) and the Education and Training Policy (1994) emphasizing the inclusion of children with disabilities in regular educational settings. However, significant challenges remain, particularly in rural areas, where schools often lack the necessary physical infrastructure, resources, and specialized staff to support students with special needs. Teacher training is another barrier, as many educators are not adequately equipped with the knowledge and skills needed to implement inclusive teaching strategies effectively. Cultural attitudes toward disability can also hinder the inclusion of children with special needs, as stigma and discrimination persist in many communities.

Despite these challenges, efforts at the grassroots level, supported by NGOs and advocacy groups, are working to improve the situation by raising awareness and providing resources (Solomon, 2022). Globally, inclusive education emphasizes the importance of access, participation, and support, ensuring that all children, regardless of ability, have the opportunity to learn in a supportive and engaging environment (Buisse & Hollingsworth, 2009). In Ethiopia, while policies exist to support inclusive education, resource limitations, teacher training deficits, and physical environment barriers must be addressed to fully realize the potential of inclusive education. Ensuring that children with special needs have the necessary accommodations, specialized services, and meaningful participation in the learning process is crucial for their success and integration into society.

Chapter Three

3. Research Methodology

This chapter focuses on research methodology employed in the study, including the research design, variables, location of the study, and target population. The chapter also discussed the sampling technique, sample size, and data collection methods, including a description of the ethical procedure used in the data collections.

3.1. Research Design

A convergent parallel mixed design, which combines both qualitative and quantitative methods, is a valuable approach to research. This design involves collecting both types of data simultaneously, giving equal importance to each, with independent analysis of both sets before integrating the results during the interpretation phase to draw comprehensive conclusions (Creswell, 2008). This approach is ideal for this study because it helps explore the different aspects of inclusive education. The quantitative component, through surveys, provides measurable insights into pre-primary teachers' knowledge, attitudes, and self-efficacy regarding inclusive practices for children with special needs. These surveys help identify broad trends and patterns across a large sample of teachers, providing a statistical overview of the general state of inclusive education in preschool settings.

In addition to the quantitative component, the qualitative part of the study, which involves semi-structured interviews, offers a deeper understanding of teachers' personal experiences, challenges, and the specific support they provide to children with special needs. This qualitative approach adds value to the study by offering detailed insights into teachers' beliefs, attitudes, and the difficulties they face when applying inclusive practices. The combination of both data types offers a comprehensive perspective, where the numerical data from the surveys are complemented by the insights from the interviews. This integration helps to clarify underlying patterns and provides a deeper understanding of the issues at hand.

3.2. Description of study sites

The research was conducted in Addis Ababa, the capital city of Ethiopia, focusing on six government pre-primary schools located in three sub-cities: Yeka, Arada, and Gulele. These sub-cities were randomly selected from the 11 sub-cities in Addis Ababa to ensure representation of different geographical areas within the city. The study sites included Genet Pre-primary School in Arada Sub-city, Dil Betigil Pre-primary School and Dejazmach Belay Zeleke Pre-primary School in Gulele Sub-city, and Kokebe Tsibah Pre-primary School, Hizbawi Serawit, and Wendirad Pre-primary School in Yeka Sub-city.

The decision to focus on government schools in Addis Ababa was made to ensure the study captures a broader and more diverse range of early childhood education experiences. Government schools in Ethiopia typically serve a larger proportion of the population, including children from various socioeconomic backgrounds, providing a more comprehensive understanding of the challenges and practices in inclusive education. By selecting schools from different sub-cities, the research aimed to gain a well-rounded perspective on early childhood education practices and to shed light on the experiences of teachers in varied contexts across the city.

3.3. Targeted population

The study involved pre-primary teachers working in different public schools with varying experience levels in inclusive education and teaching children with special needs. In Addis Ababa, there were a total of 214 government pre-primary schools registered across 11 sub-cities. From this list, three sub-cities were randomly chosen: Gulele sub-city, Yeka sub-city, and Arada sub-city, with a total population of 515 teachers. The study focuses on inclusive school teachers working in various public schools that include children with special needs. Conducting the study in all sub-cities would have been impractical, thus, three sub-cities were randomly selected due to time and budget limitations.

3.4. Sampling and Sampling techniques

This research uses a multistage cluster sampling technique to ensure a representative and comprehensive sample of pre-primary teachers in Addis Ababa. The initial stage is a simple random sampling in which three sub-cities (Arada, Yeka, and Gulele) were randomly selected from the eleven sub-cities to represent different geographical areas.

The second stage focuses on the clustering of inclusive preschools within the three sub-cities. Thus, there are a total of 21 preschools in the sub-city of Gulele, of which 5 are inclusive schools. In addition, there are 15 government pre-primary schools with 4 inclusive schools in Arada sub-cities and 31 government preschools with 9 inclusive schools in Yeka sub-cities. A number of schools were selected from each sub-city (Arada: 1 school, Yeka: 3 schools, Gulele: 2 schools), identified based on logical feasibility and availability of resources for data collection. In the final stage of the sample, all pre-primary teachers from the selected pre-primary inclusive schools are included. Thus, a total of 134 teachers were involved in the study. Out of these, 115 teachers participated in the survey, representing a response rate of 85%. Additionally, a total of 13 teachers participated in the semi-structured interview, comprising 8 regular teachers and 5 special needs teachers.

Table 1 : Sampling techniques.

Stage	Description	Selection Method	Outcome	Sample
Initial Stage	Random selection of sub-cities to represent diverse geographical areas	Simple random sampling	3 sub-cities selected (Arada, Yeka, and Gulele)	With a total of 67 schools
Second Stage	Clustering of inclusive schools within each selected sub-city	Clustering	18 Inclusive schools	
Second Stage	Random selection of Pre-primary schools within each sub-city	Random selection	Arada: 1 school, Yeka: 3 schools, Gulele: 2 schools	6 schools
Final Stage	Inclusion of all pre-primary teachers within the chosen schools	Inclusion of all teachers	All pre-primary teachers from selected schools	A total sample of 134 teachers

3.5. Data collection instruments

A survey questionnaire was administered to assess teachers' knowledge, self-efficacy, and attitudes regarding the inclusion of children with special needs. The survey includes Likert-scale questions. Additionally, semi-structured interviews were conducted with a subset of teachers to explore their experiences, challenges, and strategies related to providing services to students with special needs, as well as their knowledge, attitudes, and efficacy regarding inclusive education.

The questionnaire consists of four parts: the first section gathers demographic information on teachers' age, sex, years of experience, and years of teaching students with special needs, teaching level, and qualifications. The rest of the questions focus on teachers' knowledge of inclusive education (8 questions), teachers' attitudes towards inclusive education (10 questions),

and teacher efficacy towards inclusive education (8 questions), with a total of 26 items (see Appendix).

3.5.1. Questionnaire for teachers

A standard survey was used to assess teachers' knowledge, attitudes, and efficacy. The survey was developed by the researcher to measure teachers' knowledge of inclusive education. It assessed preprimary teachers' understanding of key concepts such as the purpose of inclusive education, methods for evaluating student progress, identifying learning needs, making curriculum adjustments, using diverse teaching strategies, and the importance of collaboration with other stakeholders.

Another survey includes the Teachers Attitude Towards Inclusive Scale (TATIS), which originally consisted of 30 questions and was developed by Cullen, Gregory, & Noto (2010) to measure teachers' attitudes toward the inclusion of children with special needs in the classroom. The other survey is Teacher Efficacy for Inclusive Practice (TEIP), developed by Tschannen-Moran and Woolfolk Hoy (2001), which included 18 questions measuring teacher efficacy. However, for the research, the questionnaire was adopted and modified to reflect the cultural context. The research questions were translated into Amharic for better understanding.

3.5.2. Interview questions

For effective qualitative research, a commonly preferred interview format is the semi-structured approach. This format allows for a balance between structure and flexibility. In semi-structured interviews, the interviewer provides topics and questions but encourages the interviewee to speak freely and express their thoughts and opinions without being directed towards specific answers. The interviewer uses probing techniques to go deeper into the interviewee's responses and gather detailed information.

In this study, a semi-structured interview procedure was chosen to gather information on teachers' attitudes, efficacy, and knowledge toward inclusive education and the service provision

of preschool teachers to students with special needs. An interview question was developed to ensure consistency and relevance in the questions asked of participants. Each interview lasted approximately 30 minutes, with additional time allocated as needed based on the discussion during the interview. Participants were encouraged to share openly and provide as much detail as possible.

3.6. Validity and Reliability

To ensure the credibility of the study results, both the validity and reliability of the research tools were carefully considered. The suitability of the techniques was first examined through a thorough literature review before the instrumentation was developed and modified. Following the development of the tools, valuable suggestions were gathered through discussions with the thesis supervisor, which helped to improve the quality of the instruments. Based on feedback, several revisions were made to refine the questions. In particular, feedback from both the thesis advisor and teachers in the pilot study led to adjustments in the wording and context of certain questions to ensure they were culturally appropriate for the Ethiopian context. For example, questions that were unclear to participants were modified to enhance clarity.

To assess reliability, the instruments were tested during the pilot study using Cronbach's Alpha, 0.774 for knowledge, 0.74 for attitudes, and 0.828 for efficacy. The results indicated that the instruments demonstrated acceptable reliability, with Cronbach's Alpha values exceeding the acceptable threshold for each section of the surveys. This suggested that the items within each survey were consistent in measuring the intended constructs. After the pilot study, feedback from both teachers and experts, along with the results of the reliability and validity tests, was used to make final adjustments to the instruments. Once these adjustments were made, the instruments were finalized and then administered for the main data collection.

3.7. Method of data gathering

The researcher visited the selected schools to complete the survey questionnaire after obtaining permission and making necessary arrangements with school principals. A formal letter from the university requesting collaboration was submitted, explaining the purpose of the research.

During the school visits, the researcher explained the research objectives to the participants and assured them of the confidentiality of their names and identities. The researcher established a positive relationship with participants, addressed potential questions, and provided clear instructions on how to complete the survey questionnaire. Participants were encouraged to provide honest and accurate answers. They also had the option to decline participation or withdraw from the study.

3.8. Method of Data Analysis

Data analysis involves both quantitative and qualitative approaches. Various procedures were used to analyze the quantitative data. Descriptive statistics summarized and described the survey responses on teachers' knowledge, self-efficacy, and attitudes. This approach helped identify patterns in the data and detect significant differences based on teacher demographics, such as age, years of experience, and experience working with children with special needs.

In addition, the Kruskal-Wallis test, a nonparametric test, was used to examine differences in knowledge, attitudes, and efficacy across various demographic groups (age, years of experience, and experience in teaching special needs children). Correlation analysis was also used to explore the relationships between teachers' knowledge, attitudes, and efficacy, as well as to compare these factors across different demographic groups. SPSS (Statistical Package for the Social Sciences) version 26 was used to perform the descriptive statistics, Kruskal-Wallis tests, and correlation analyses.

Qualitative data from interviews undergo thematic analysis to identify patterns, themes, and insights related to teachers' experiences, knowledge, attitudes, efficacy, challenges, and strategies for supporting students with special needs. This approach was important for understanding the personal experiences and challenges teachers face in inclusive education, which quantitative methods alone could not capture. All interviews recorded in Amharic were transcribed and translated into English. After carefully reviewing the transcripts to ensure no missing ideas, the data were categorized, and themes were identified as the final step of the analysis.

3.9. Ethical Considerations

Ethical considerations in research are crucial for ensuring the protection and well-being of participants and the integrity of the research process (Hasan et al. 2021). This involves adhering to a strict code of ethics throughout the research project (Hasan et al. 2021). To maintain ethical standards, researchers should consider the potential impact of their work on individuals and society and seek approval from research ethics committees (Dahlöf, 2013). This involves obtaining informed consent, ensuring confidentiality, and minimizing potential harm (Hasan et al. 2021). Overall, ethical considerations in research are essential for upholding the principles of fairness, respect, and honesty (Hasan et al. 2021).

In this study, the researcher obtained informed consent from participants, ensured confidentiality, and protected the rights and privacy of participants. Participants were informed about the potential benefits of the study. Additionally, all participants were treated with respect and dignity throughout the research process, with more consideration given to their values, beliefs, and cultural backgrounds.

Chapter Four

4. Results

This chapter presents the key findings of the study, including descriptive statistics, results from the Kruskal-Wallis test, and findings from Spearman's rho correlation analysis. The chapter also includes an overview of the interview responses.

4.1. General and demographic information

The following table summarizes the general demographic information of the participants who participated in the study.

Table 2 . Frequency distribution for demographic

Characteristics of the Participants		Frequency	%
Gender	Female	112	97.4%
	Male	3	2.6%
Age	18-25	17	14.8%
	26-30	37	32.2%
	31-35	41	35.7%
	36-40	14	12.2%
	41-45	4	3.5%
	>46	2	1.7%
Education Status	Certificate	2	1.7%
	Diploma	111	96.5%
	Degree	2	1.7%
	Masters	0	0.0%
	PhD	0	0.0%

In this study, 132 pre-primary school teachers from Addis Ababa participated. As indicated in Table 2, the participants were 115 teachers, with 112 (97.4 %) female teachers and 3 (2.6%)

male. The age distribution reveals that the majority fall within the 26-35 years range with a total of (67.9%), indicating a relatively young population. The representation decreases significantly at age 46 and above (1.7%). On the other hand, the majority of individuals hold a diploma (96.5%). There is a minimal representation of higher educational qualifications such as degrees (1.7%) where there are no master's or PhD holders.

Table 2 (Continued)

Characteristics of the Participants		Frequency	%
Years of Experience	1-5	33	28.7%
	6-10	59	51.3%
	11-15	19	16.5%
	16-20	4	3.5%
	21-25	0	0.0%
	> 26	0	0.0%
Years teaching SN	None	31	27.0%
	< 1 Year	24	20.9%
	1-3 Years	36	31.3%
	4-5 Years	21	18.3%
	> 5 Years	3	2.6%

Regarding teaching experiences, More than half of the individuals have 6-10 years of experience (51.3%), suggesting a moderately experienced workforce. Very few individuals have over 15 years of experience (3.5 %). In addition, a notable proportion of individuals have experience teaching students with special needs, with 31.3% having 1-3 years of experience. Nonetheless, a significant portion of participants (27.0%) had no experience teaching students with special needs.

4.2. Preprimary teacher's Knowledge towards Inclusive Education

One of the objectives of the current study is to find out pre-primary school teachers' knowledge of implementing inclusive education and the inclusion of children with special needs in the regular classroom. Teachers were asked to answer five-point Likert scale survey questions to achieve this objective. The findings are presented below in Table 3 using frequencies, percentages, and Mean.

Table 3: Teachers' knowledge of inclusive education

Items	SD (%)	D (%)	Neutral (%)	A (%)	SA (%)	M	SD
Q.1. Inclusive education aims to ensure that all students, regardless of their abilities or disabilities, can learn together in the same classroom.	2.6%	16.5%	0.9%	50.4%	29.6%	3.88	1.093
Q.2. I understand the legal and policy frameworks that support inclusive education practices.	16.5%	15.7%	13.9%	41.7%	12.2%	3.17	1.306
Q.3. I can identify common developmental milestones in preschool-aged children.	6.1%	6.1%	5.2%	47.0%	35.7%	4.00	1.100
Q.4. I understand different types of disabilities and how they affect learning in inclusive classrooms (e.g., autism, ADHD, speech disorders).	6.1%	22.6%	13.0%	40.0%	18.3%	3.42	1.199

Note. SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree. Percentages reflect responses on a 5-point Likert scale. M = Mean; SD = Standard Deviation.

Likert scale averages are interpreted using standard intervals that represent varying degrees of agreement or disagreement. For example, the interval from 1.00 to 1.80 means “Strongly Disagree,” which indicates strong disagreement. The range of 1.81 to 2.60 represents “disagree,” indicating a lower level of disagreement. Values between 2.61 and 3.40 are considered “neutral,” which means neither agreement nor disagreement. “Agree” corresponds to values from 3.41 to 4.20, indicating agreement, while “Strongly Agree” ranges from 4.21 to 5.00, indicating strong agreement.

The table above shows that participants generally demonstrated a strong level of knowledge about inclusive education. The average agreement score was 3.84 out of 5 ($SD = 1.01$), with the median score being 4.00. This suggests that teachers generally agree with the concept of inclusive education, with the central tendency reflecting an agreement across the items.

Table 3 (Continued)

Items	SD (%)	D (%)	Neutral (%)	A (%)	SA (%)	M	SD
Q.5.Modifying teaching approaches supports children with disabilities or special needs.	1.7%	11.3%	3.5%	43.5%	40.0%	4.09	1.022
Q.6.Collaboration and teamwork among educators, children, and families are essential for successful inclusive education	2.6%	1.7%	4.3%	69.6%	21.7%	4.06	0.7553
Q.7. I can adapt teaching strategies to meet the needs of children with special needs.	2.6%	7.8%	5.2%	53.9%	30.4%	4.02	0.955
Q.8. I understand how individual support plans support children with disabilities in inclusive classrooms by offering customized teaching strategies for improving their learning participation.	3.5%	14.8%	6.1%	53.0%	22.6%	3.77	1.071

Furthermore, participants showed varying levels of agreement across different aspects of inclusive education. Notably, a high level of agreement was observed for items such as the understanding of common developmental milestones in preschool-aged children ($M = 4.00$, $SD = 1.10$) and the belief in the importance of modifying teaching approaches for children with disabilities ($M = 4.09$, $SD = 1.02$). Conversely, lower levels of agreement were seen in items related to understanding legal and policy frameworks supporting inclusive education practices ($M = 3.17$, $SD = 1.31$) and adapting teaching strategies to meet the needs of children with special needs ($M = 4.02$, $SD = 0.96$). These findings suggest that while participants generally support inclusive education, there may be areas where additional training or education could strengthen their understanding, especially in legal and policy contexts and in adapting teaching strategies for specific needs.

4.2.1. Interview Insights on Teachers' Knowledge

Preschool teachers have a general understanding of what inclusive education entails, though they struggle with identifying children's developmental milestones, which are crucial for understanding their growth and progress.

While teachers are aware of the broad principles of inclusive education, their understanding of specific concepts, policies, and practices varies. For example, Participant 3 explained, "Inclusive education is where children with special needs learn alongside children without special needs." The focus of this approach is on integration and mutual learning. Furthermore, Participant 6 highlighted the social benefits, stating, "Children with special needs and children without special needs both benefit from inclusive education, particularly in their social interactions. Children without special needs learn acceptance and empathy." This demonstrates how inclusive methods benefit both groups of children.

Additionally, teachers recognized the significant role they play in the process. Participant 10 acknowledged the importance of teachers, stating, "Inclusive education is important and benefits both children with and without special needs. However, it depends on the teacher to create awareness within their classroom and encourage children with special needs to participate fully in

lessons." This highlights the significant responsibility educators have in creating an inclusive environment.

When asked about common disabilities and developmental challenges affecting children with special needs, teachers expressed difficulty in identifying specific conditions. Participant 9 explained, "I don't have much knowledge of the types of disabilities or characteristics; we only took one course in university, which is not enough to help us understand children with special needs. Additionally, the administration and special needs teachers don't inform us of the children's challenges." Further more, participant 5 also pointed out, "There are different types of special needs, ranging from epilepsy to physical, developmental, and behavioral challenges." However, despite this awareness of the range of conditions, teachers often struggled to pinpoint the specific conditions impacting their students and understand the reasons behind certain behaviors in the classroom. Participant 2 remarked, "I don't know the specific conditions of the three children in my classroom, but I suspect one of them may have Down syndrome." Participant 13 echoed this sentiment, saying, "I don't have the knowledge or confidence to identify the types of disabilities or challenges, but I can easily identify a child who is struggling by comparing their behavior to that of other children."

4.3. Attitude of Preprimary Teachers toward Inclusive Education

One of this study's objectives is to determine preschool teachers' attitudes toward inclusive education, particularly the inclusion of children with special needs. Survey responses were collected using a five-point Likert scale. The results, including frequencies, percentages, and means, are summarized in Table 4 below.

Table 4. Attitude toward inclusive education

Items	SD (%)	D (%)	Neutral (%)	A (%)	SA (%)	M	SD
Q.1.The needs of children with special needs can best be served through separate classes.	12.2%	18.3%	5.2%	38.3%	26.1%	3.48	1.373
Q.2. Children with special needs classroom behavior generally require more patience from the teacher than does the behavior of a non-special needs child.	7.0%	7.0%	4.3%	36.5%	45.2%	4.06	1.187
Q.3. The extra attention children with special require is to the detriment of the other children	9.6%	38.3%	8.7%	28.7%	14.8%	3.01	1.288
Q.4. The behavior of children with special needs sets a bad example for the other students	18.3%	48.7%	13.0%	14.8%	5.2%	2.40	1.107
Q.5. A child with special needs probably develops academic skills more rapidly in a special classroom than in a regular classroom.	19.1%	23.5%	7.0%	35.7%	14.8%	3.03	1.401

Note. SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree. Percentages reflect responses on a 5-point Likert scale. M = Mean; SD = Standard Deviation.

The result indicates a generally positive attitude toward including children with special needs in a regular classroom, with an overall mean (M= 3.6). Respondents believe that inclusion promotes the social independence of children, which means they think that children with special needs can gain the skills and confidence to participate in everyday social activities within an inclusive setting (M= 3.73, SD= 1.02).

Table 4 (Continued)

Items	SD	D	Neutral	A	SA	<i>M</i>	<i>SD</i>
Q.6.The inclusion of children with special needs requires a significant change in regular classroom procedures	4.3%	14.8%	17.4%	45.2%	18.3%	3.58	1.084
Q.7.Including the child with special needs in the regular classroom promotes his or her social independence.	1.7%	8.7%	3.5%	55.7%	30.4%	4.04	0.921
Q.8.The inclusion of children with special needs can be beneficial for students without special needs.	0.9%	14.8%	19.1%	40.9%	24.3%	3.73	1.020
Q. 9 Children with special needs benefit from repeated, clear instructions from a teacher who explains what they need to do and how to do it.	2.6%	7.8%	3.5%	50.4%	35.7%	4.09	0.969
Q.10.Inclusion of children with special needs necessitates extensive retraining of regular classroom teachers.	2.6%	6.1%	0.0%	27.8%	63.5%	4.43	0.965

Participants also acknowledged the need for change in classroom procedures ($M= 3.58$, $SD= 1.084$) and extensive teacher training to effectively implement inclusive practices ($M= 4.43$, $SD=0.965$). Furthermore, respondents strongly agreed that children with special needs require more patience from teachers ($M= 4.06$, $SD=1.187$) and they also benefit from clear instruction ($M= 4.09$, $SD=0.969$). Opinions are mixed on whether separate classes better serve children with special needs ($M= 3.48$, $SD=1.373$) and whether the extra attention they require distracts others ($M= 3.01$, $SD= 1.288$). There is a clear disagreement on the notion that children with special needs set a bad example for other children ($M= 2.40$, $SD= 1.107$). Overall, the survey shows that teachers are generally positive about the inclusion of children with special needs in mainstream classes.

4.3.1. Interview Insight on Attitudes towards Inclusion

Preschool teachers generally had positive attitudes toward inclusive education. Interview participants echoed the survey results, noting that exposure to students with special needs has encouraged acceptance and compassion. They emphasized the significant benefits of inclusive education for both the academic and personal growth of children with special needs.

Participants recognized the benefits for both special needs students and their typically developing peers, emphasizing the importance of social acceptance, empathy, and creating inclusive environments. As Participant 6 stated, "Inclusive education benefits both students with special needs and students without special needs, in their social interactions, and for non-special needs, they learn empathy and acceptance." Similarly, Participant 10 highlighted, "Inclusive education has a lot of benefits, for special needs, one is social acceptance, having the opportunity to learn and have access to education, having a natural environment, which will also be helpful when they grow up and have jobs."

Moreover, inclusive education is seen as a supportive environment that contributes to students' development. According to Participant 11, "The benefit of inclusive education is evident with the change in the children. In my class, I have a student who doesn't speak a single word, but now she can communicate and reply to the prompts. This development is a direct result of being in an inclusive setting".

Teachers expressed satisfaction with the progress observed in children with special needs, noting improvements from the start of the academic year to the time of the interview. They reported significant advancement in social skills, language development, fine and gross motor skills, and self-help abilities, attributing this improvement to the inclusive setting. As Participant 11 noted, "there should be increased emphasis on providing training, resources, and support systems for teachers and other stakeholders to promote the effectiveness of inclusive education".

4.4. Preprimary Teachers' Self-Efficacy

This section focuses on preschool teachers' self-efficacy in implementing inclusive education. One of the objectives of this study is to assess both their understanding of inclusive practices and their confidence in applying them. These aspects were measured using a five-point Likert scale survey, as shown in Table 5.

Table 5. Teachers' efficacy towards inclusive practice

Items	SA (%)	D (%)	Neutral (%)	A (%)	SA (%)	M	SD
Q.1. I am able to provide an alternate explanation or example when students are confused	1.7%	2.6 %	0.9%	44.3%	50.4%	4.39	0.791
Q.2. I have confidence in planning educational activities so that the individual needs of students with disabilities are adequately addressed.	0.9%	9.6%	8.7%	45.2%	35.7%	4.05	0.954
Q.3. I am able to calm a student who is disruptive or noisy.	2.6%	2.6%	3.5%	52.2%	39.1%	4.23	0.849
Q.4. I can assist families in helping their children do well in school and their children with special needs.	2.6%	3.5%	5.2%	56.5%	32.2%	4.12	0.860
Q.5. I can work together with other professionals and staff (e.g., assistants and other teachers) to teach students with special needs in the classroom.	1.7%	8.7%	8.7%	47.8%	33.0%	4.02	0.964

Note. *SD = Strongly Disagree; D = Disagree; A = Agree; SA = Strongly Agree. Percentages reflect responses on a 5-point Likert scale. M = Mean; SD = Standard Deviation.*

The data in Table 5 indicates that preprimary teachers generally feel confident in their ability to support children with special needs in inclusive education, with an overall mean score of 4.08, suggesting positive teacher self-efficacy. Most responses received a mean score of around 4.0, indicating a general consensus of agreement or strong agreement with the statements provided. The highest mean score ($M = 4.39$) was recorded for the item: *"I am able to provide an alternate explanation or example when students are confused."* This suggests that teachers are particularly confident in adapting instruction to support understanding.

Table 5 (Continued)

Items	SA (%)	D (%)	Neutral (%)	A (%)	SA (%)	<i>M</i>	<i>SD</i>
Q.6. I am confident in informing others who know little about laws and policies relating to including students with special needs.	7.0%	10.4%	18.3%	42.6%	21.7%	3.62	1.144
Q.7. I can assess children's performance using various methods, such as reviewing their daily activity, administering tailored tests, observing their task execution, and more.	2.6%	6.1%	1.7%	47.8%	41.7%	4.20	0.938
Q.8 .I have confidence in my ability to involve parents in the school activities of their children with disabilities or children with special needs.	2.6%	5.2%	7.8%	53.0%	31.3%	4.05	0.916

Conversely, the lowest mean score ($M=3.62$) was for the item "I am confident in informing others who know little about laws and policies relating to including students with special needs." This indicates a notable degree of uncertainty or lack of confidence in this area. Other areas of strength include the ability to calm disruptive students ($M = 4.23$), assess children's performance using various methods ($M = 4.20$), and plan educational activities that meet individual needs ($M = 4.05$). Teachers also reported confidence in working with other professionals ($M = 4.02$) and

involving parents in the school activities of children with special needs ($M = 4.05$), though some responses reflected moderate hesitation. Overall, the findings point to a strong sense of teacher efficacy in classroom management and instructional adaptation, with a relative weakness in policy-related communication.

4.4.1. Interview Insights on Pre-primary Teachers' Self-Efficacy in Inclusive Education

This section presents qualitative findings from teacher interviews regarding their self-efficacy in supporting students with special needs in inclusive classrooms.

The self-efficacy of teachers in supporting children with disabilities or special educational needs in inclusive settings varied widely. Participant 12 expressed confidence despite a lack of knowledge, stating, "I have the confidence to support children with special needs to the best of my ability, even though I do not have enough knowledge." Similarly, Participant 1 said, "I believe that I can handle students with special needs despite their challenges."

While some teachers felt capable and experienced, others highlighted the need for further training and support. Participant 8, with 7 years of experience, emphasized the necessity of comprehensive training, support plans, and increased parental awareness to effectively support these students, noting, "Inclusive education is beneficial, but proper training, support plans, and parental awareness are essential for effectively supporting special needs students."

4.5. Support and Service Provision

In the service provision sections, teachers discussed various aspects of support for students with special needs. One significant concern is the lack of flexibility in the curriculum, as it doesn't include a specific section for these students. This makes it challenging to adjust teaching methods and materials to meet children's unique needs. Furthermore, schools employ different support strategies. Some schools provide pullout services, where special needs students receive specialized instruction from a special needs teacher for a limited time. For instance, Participant 4 mentioned that special needs students get pullout services for 15 minutes twice a week.

However, in regular classrooms, students with special needs often don't receive extra support such as additional activities or explanations of content. As Participant 12 noted, "There is no extra activity or separate workbook provided for them; however, they are encouraged to scribble or do the activity on their own." Additionally, there's a lack of specialized assessments and plans tailored to the needs of special needs students. Participant 4 highlighted this, stating, "There are no specialized plans prepared for the students to accommodate the child." Similarly, Participant 13 mentioned, "There is no special assessment for students with special needs; they take the same assessments as other students," which may not accurately gauge their abilities and progress.

4.6. Correlations between Efficacy, Knowledge, and Attitude

A Spearman rank-order correlation analysis was conducted to investigate the potential relationship between preprimary teachers' attitudes, knowledge, and efficacy regarding inclusive education and including students with special needs. The result of the analysis is presented in Table 6 below.

Table 6. Spearman's Rho correlation between Knowledge, Attitude and Efficacy

		Knowledge	Attitude	Efficacy
Spearman's rho	Knowledge	1.000		
	Correlation Coefficient			
	Sig. (2-tailed)	.		
	N	115		
Attitude	Knowledge	.327**	1.000	
	Correlation Coefficient			
	Sig. (2-tailed)	.000	.	
	N	115	115	
Efficacy	Knowledge	.529**	.331**	1.000
	Correlation Coefficient			
	Sig. (2-tailed)	.000	.000	.
	N	115	115	115

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

The two-tailed significance test revealed a substantial correlation between knowledge and attitude $r_s(113) = .327, p < .01$. This implies that teachers' attitudes become more positive as their knowledge of inclusion increases. This finding suggests that enhancing teachers' understanding of inclusive practices could positively impact their attitudes toward inclusive education.

Additionally a significant positive relationship was found between knowledge and efficacy $r_s(113) = .529, p < .01$, suggesting that teachers who have greater knowledge about inclusive education also report stronger self-efficacy in implementing inclusive practices. Furthermore, the study showed a significant positive relationship between attitude and efficacy $r_s(113) = .331, p < .01$, indicating that teachers' positive attitudes toward inclusive education are associated with a greater sense of self-efficacy in implementing inclusive practices.

4.7. Variance across demographic variables

A series of Spearman rank-order correlation analyses were conducted to examine possible relationships between years of teaching students with special needs, participants' age, and teachers' years of experience, in terms of Knowledge, Attitude, and Efficacy. The result showed that there was no significant correlation between years of teaching students with special needs and knowledge of inclusive education, $r_s(113) = .022, p = .812$; Age of participants and knowledge of inclusive education, $r_s(113) = -.034, p = .720$; or the teachers' years of experience and knowledge of inclusive education, $r_s(113) = .008, p = .933$.

Likewise, no significant correlations were found between years of teaching students with special needs and attitudes toward inclusive education, $r_s(113) = .134, p = .152$; Age of participants and attitude towards inclusive education, $r_s(113) = -.135, p = .149$; or teachers' years of experience and attitude towards inclusive education, $r_s(113) = -.115, p = .220$. For preprimary teachers' self-efficacy towards inclusive education, there were no significant correlations with years teaching students with special needs, $r_s(113) = .130, p = .166$; or the age of participants, $r_s(113) = .065, p = .491$. However, a significant positive correlation was found between teachers' years of experience and self-efficacy in inclusive education, $r_s(113) = .221, p = .018$. This suggests

that teachers with more years of experience tend to have higher self-efficacy in implementing inclusive educational practices.

Table 7. Spearman Rho correlation between Knowledge, Efficacy, Attitude and demographic variables

			Years teaching special needs students	Age of the participants	Teachers' Years of Experience
Spearman's rho	Knowlege_IE	Correlation Coefficient	.022	-.034	.008
		Sig. (2-tailed)	.812	.720	.933
		N	115	115	115
	Attitude_IE	Correlation Coefficient	.134	-.135	-.115
		Sig. (2-tailed)	.152	.149	.220
		N	115	115	115
	Efficacy_IE	Correlation Coefficient	.130	.065	.221*
		Sig. (2-tailed)	.166	.491	.018
		N	115	115	115

*. Correlation is significant at the 0.05 level (2-tailed).

In addition to correlations, the Kruskal-Wallis, a nonparametric test, is used to determine whether there are statistically significant differences in median scores between three or more independent groups (teachers' experiences, age, and special education teaching experience) on three dependent variables: Knowledge, effectiveness, and attitude. The result is summarized in Table 8 below.

Table 8. Kruskal-Wallis Test, Years of experience

Test Statistics^b

	Knowledge	Attitude	Efficacy
Kruskal-Wallis H	1.077	7.988	7.806
df	3	3	3
Asymp. Sig.	.783	.046	.050

a. Kruskal Wallis Test

b. Grouping Variable: Teachers' Years of Experience

A Kruskal-Wallis test was conducted to examine the differences in knowledge about inclusive education, attitudes toward inclusive education, and efficacy in implementing inclusive practices across groups based on teachers' years of experience. The Kruskal-Wallis test statistic was $H(3) = 1.077$, $p=.783$. This suggests that there is no statistically significant difference in pre-primary teachers' knowledge about inclusive education among years of experience.

On the other hand teachers' years of experience are associated with differences in their attitudes toward inclusive education, $H(3)=7.988$, with a significant p-value of .046. Pairwise comparisons were conducted for pre-primary teachers' attitudes, revealing significant differences between the following groups; the 16-20 years of experience group and the 11-15 years of experience group $p=0.047$, the 16-20 years of experience group and the 1-5 years of experience group $p=0.016$, and the 16-20 years of experience group and the 6-10 years of experience group $p=0.007$. However, since the overall test did not show significant differences across the groups, no pairwise comparisons were performed.

Furthermore, A series of independent-samples Kruskal-Wallis tests were conducted to assess the distribution of knowledge, attitude, and self-efficacy of preprimary teachers across different age categories of participants as shown in Table 9.

Table 9. Kruskal-Wallis test, Age of Participants

Test Statistics^b

	Knowlege_IE	Attitude_IE	Efficacy_IE
Kruskal-Wallis H	3.372	4.880	3.758
df	5	5	5
Asymp. Sig.	.643	.431	.585

a. Kruskal Wallis Test

b. Grouping Variable: Age of the participants

The test statistic for preprimary teachers' knowledge was $H(5) = 3.372$, with $p = 0.643$, indicating that there is no significant difference in knowledge between age categories. Similarly, the test statistic for preschool teachers' attitudes was: $H(5) = 4.880$, with $p = 0.431$, indicating that there is a significant difference in preschool teachers' attitudes toward inclusive education between age categories. Furthermore, the test statistic of preschool teachers' self-efficacy revealed that $H(5) = 3.758$, $p = 0.585$, which also indicates no significant difference between age categories. Overall, Kruskal-Wallis tests revealed no significant differences in the distribution of preschool teachers' knowledge, attitudes, and self-efficacy regarding inclusive education across different age groups, suggesting that age may not be a significant factor affecting these variables.

Finally, A Kruskal-Wallis test was conducted to examine the differences in teachers' knowledge of inclusive education, their attitudes toward inclusive education, and their self-efficacy in implementing inclusive practices based on the number of years in which they teach students with special needs. Table 10 summarizes the result.

**Table 10 .Kruskal-Wallis test , Years of experience of teaching Special needs
Test Statistics^b**

	Knowlege_IE	Attitude_IE	Efficacy_IE
Kruskal-Wallis H	.561	3.265	3.913
df	4	4	4
Asymp. Sig.	.967	.514	.418

a. Kruskal Wallis Test

b. Grouping Variables: Years teaching special needs students

The test results showed no significant differences between the different categories for any of the variables. For Knowledge, $H(4)=0.561$, $p=.967$; for Attitude, $H(4) =3.265$, $p=0.514$; and for self-efficacy, $H(4)=3.913$, $p = .418$. These results indicate that there are no statistically significant differences in knowledge, attitudes, or self-efficacy regarding inclusive education based on the number of years teachers have taught students with special needs.

4.8. Emerging Insights: Challenges in Implementing Inclusive Education

Although the primary focus of this study was to assess teachers' knowledge of inclusive education, several challenges in implementing inclusive education were highlighted by interview participants. These insights, though not a central objective of the study, provide valuable context on the barriers teachers face in effectively supporting students with special needs.

Curriculum

A recurring issue identified by participants was the lack of inclusion for students with special needs in the curriculum. This includes the preparation of materials for students with lower abilities and the creation of resources such as braille. Participant 5 highlighted this issue: "There is a gap in the curriculum; it doesn't include assessment options for students with different challenges. Working outside of the curriculum is not acceptable. There should be lessons suitable for teaching students with special needs included in the curriculum. The curriculum should

provide ways to assess students with special needs, offering options on how to observe and assess them."

Collaboration

Teachers emphasized the need for the special needs department to collaborate more closely with general education teachers, providing consistent support. There were also challenges in involving parents in the process, particularly those who are unwilling to acknowledge their child's condition. Participant 11 stated, "Raising awareness among parents would enhance the effectiveness of support provided to children with special needs."

Training

Participant 8 highlighted the lack of adequate preparation in university in-service courses. They stressed, "The government needs to pay more attention to inclusive education, provide proper training, and offer more opportunities for teachers to learn how to support students with diverse special needs."

Creating Awareness

A significant barrier mentioned by several participants was the lack of awareness, even among professionals, regarding how to effectively include students with special needs. Participant 7 observed, "There is no special needs professional to properly assess whether a child fits in inclusive education or the special needs room/center."

Infrastructure

Several participants pointed to infrastructure limitations, particularly the lack of updated resources for special needs students. Participant 10 remarked, "There are not enough materials; only some resources like maps, braille, canes, and computers. However, there are no updated braille books for the current curriculum."

Support to Teachers

Teachers expressed the need for more support to help them build their confidence and knowledge in supporting children with special needs. Participant 12 remarked, "We should give more attention to students with special needs. Rather than just saying they should be included, we need to see the reality and work on how to best support these children. Once the government initiated inclusion, students were included but then forgotten and not sufficiently supported. They need attention. The government needs to support teachers and help them develop their knowledge in training for the types of special needs." The lack of support for teachers was also highlighted by Participant 1: "Inclusive education is a good approach for both special needs and typically developing students. Students become more tolerant and empathetic towards special needs students. However, teachers are important; they need to be supported and encouraged in supporting students with special needs."

Chapter Five

5. Discussion of Major Findings

This chapter presents and interprets the main findings of the study in relation to existing literature on inclusive education in preprimary settings. It discusses the results in the following order: teachers' knowledge of inclusive education, their attitudes toward inclusion, their self-efficacy in implementing inclusive practices, and the services provided to children with special needs.

5.1 Pre-Primary Teachers' Knowledge of Inclusion

Existing literature indicates that pre-primary teachers often lack sufficient knowledge to implement effective inclusive practices (Akalın et al., 2014). The findings of this study reflect a mixed picture. In the Likert scale survey, teachers' knowledge of the concepts of inclusive education showed that teachers believed that they had a high level of knowledge. The questions included the conceptualization of inclusive education, most participants reported that inclusive education includes students with special needs in a mainstream classroom and learning with their age mates. Existing literature points to the conceptual ambiguity surrounding the term. Researchers such as Nelis, Pedaste, and Šuman (2023) and Haug (2017) argue that the concept of inclusive education is often vague and difficult to define. This aligns with the finding from this study's interview, where teachers are unable to explain what inclusion entails and what an inclusive classroom requires.

The survey further explored teacher's knowledge on various aspects: identifying developmental milestones in preschool-aged children, understanding different types of disabilities and their impact on learning, teachers' knowledge in modifying teaching approaches and adapting teaching strategies to meet the needs of children with special needs, the role of collaboration and teamwork among educators, and families. Despite teachers' self-reported knowledge, the semi-structured interview indicated a different picture. Teachers have a general idea of what inclusive education entails, but they struggle with identifying children's milestones, which is important in understanding students' growth stages. When asked about the common disability and

developmental challenges, teachers are unable to explain specific conditions. Although they could identify children with Down syndrome based on their facial characteristics. Generally, teachers lacked specific knowledge about the conditions affecting children and faced challenges in understanding and managing certain behaviors in the classroom.

The research finding highlighted that the knowledge gap among teachers in inclusion is evident in teachers' difficulties in adopting appropriate pedagogical strategies and classroom management techniques for children with special needs (Gyasi, Okrah, & Anku, 2020; Thompson et al., 2018). This was supported by the semi-structured interview, which found that teachers pointed out that they don't modify their teaching approach or prepare a simpler activity for students with special needs. On a more positive note, teachers believed that collaborating with other professionals, like special needs teachers and parents for successful inclusion.

Research findings stressed that pre-primary teachers lack the necessary knowledge and skills for effective inclusive practices (Akalin et al., 2014). Further literature emphasizes that preschool teachers perceive their lack of knowledge and experience as significant barriers to inclusion (Sucuoglu et al., 2014). This is consistent with the study findings, where teachers emphasized the need for constant and targeted training and ongoing professional development to better support children with diverse needs. The study by Sucuoglu et al. (2014) also found that pre-service courses in special education can significantly enhance teachers' understanding and effectiveness in inclusive settings. Teachers also mentioned that inadequate university preparation in inclusive education has affected their professional competency. This suggests that structured and continuous training programs are essential for equipping teachers with the necessary skills and knowledge.

5.2 Attitudes of Pre-primary Teachers towards Inclusion

The findings of this study reveal that pre-primary teachers predominantly showed a positive attitude toward inclusion and inclusive education. The highlights that positive attitudes of preschool teachers toward inclusion play a critical role in the successful implementation of inclusive practices. Research indicates that positive attitudes are associated with a greater

willingness to adapt teaching methods and create supportive learning environments (Cullen et al., 2010; Meta & Clipa, 2020).

The Likert survey assessed preprimary teachers' beliefs regarding the benefits and challenges of inclusion. It addressed topics such as the need for separate classes, the impact on classroom behavior and other students, and the requirements for adapting teaching strategies and classroom procedures. It also evaluates the perceived benefits of inclusion for social independence and the overall classroom environment. Overall, teachers expressed a positive attitude towards inclusive education and how it benefits both students with special needs and students without special needs.

The semi-structured interviews provide further insights. Participants emphasized that exposure to students with special needs has normalized acceptance and fostered a more compassionate attitude toward these children. Respondents also highlighted the significant benefits of inclusive education, noting positive impacts on both the academic and personal growth of children with special needs. The teachers observed significant improvements in social skills, language development, fine and gross motor skills, and self-help abilities in the inclusive setting.

These findings are consistent with prior studies by Nonis et al. (2016), which found that preprimary teachers tend to have a more positive attitude towards inclusive education compared to teachers at higher levels of schooling. Preprimary teachers prioritize social inclusion over academics, which was reflected in this study where teachers reported satisfaction with the development of children with special needs.

However, research indicates that teachers with positive attitudes toward inclusion are more likely to embrace inclusive teaching strategies (Dias & Cadime, 2016). This contradicts the findings of the study, where both the survey and interview questions indicate that preschool teachers did not significantly adapt their teaching strategies to accommodate students with special needs.

Furthermore, teachers expressed a preference for working with students who have mild or moderate needs, particularly those without significant behavioral challenges. This aligns with findings by Singh et al. (2023), who noted that teachers find it more difficult to support children with emotional or behavioral difficulties compared to those with other types of disabilities. Overall, while pre-primary teachers in this study appear to value inclusion and recognize its benefits, their practices do not always reflect these attitudes.

5.3 Pre-primary Teachers' Efficacy for Inclusion

In the Likert scale survey, teachers' perceived self-efficacy for supporting children with special needs in inclusive settings generally indicated high confidence levels. Most teachers agreed or strongly agreed that they could provide alternate explanations when students were confused, disruptive, and assess children's performance using various methods. This suggests a positive self-perception of their abilities to manage diverse classrooms effectively and support students with special needs.

However, interviews revealed a significant gap between perceived efficacy and actual practice. While teachers believe they can manage diverse classrooms, many reported not adopting lessons to accommodate students with special needs. For example, despite recognizing challenges with writing activities or understanding concepts, teachers admitted they rarely modify their teaching methods or assessments to support these students. This discrepancy suggests that while teachers are confident in their abilities, they lack the practical strategies and support to implement inclusive practices effectively.

When asked if they could accommodate child with special needs, teachers generally expressed confidence. However, this belief did not translate into modified instructional practices. One teacher noted, "I feel capable of including any student in my class, but I'm not sure how to adapt my lessons to meet their specific needs." This indicates a need for more practical training and resources to bridge the gap between confidence and effective inclusion.

Research indicates that factors such as knowledge, experience, and training can significantly influence teachers' self-efficacy (Kristiana, 2018). Teachers who receive comprehensive pre-service and in-service training on inclusive education tend to feel more confident and competent in implementing inclusive practices. This finding was echoed by participants in the interviews, highlighting that experience with special needs students in their classrooms increased their exposure and confidence. For instance, one participant stated, "Having a special needs student in my class has definitely made me more aware and confident, but I still need more training on specific strategies." These insights suggest that while teachers' self-efficacy is high, it is often based on theoretical knowledge rather than practical application.

5.4 Service Provisions for Children with Special Needs

The literature highlighted that effective service provisions are essential for the successful inclusion of children with special needs (Buysse & Hollingsworth, 2009; Odom et al., 2021). This study covers the types of services provided to students with special needs in an inclusive learning environment. Ensuring that physical, social, and academic environments are accessible to all children is critical for fostering a sense of belonging and positive social relationships.

Comprehensive support systems, including personalized support plans, accommodations, and access to specialized services, are identified as key factors in effective inclusion (Salend, 2008). However, the findings reveal a discrepancy between teachers' reported abilities to accommodate students with special needs and their actual practices. While teachers claim to adjust lessons and assessments to meet the needs of these students, semi-structured interviews indicate that additional activities tailored to the severity of students' challenges are often lacking.

Moreover, the provision of pullout services aimed at enhancing life skills is inconsistent across different schools. Teachers identified several barriers to effective service provision, such as a lack of collaboration with special needs professionals, insufficient resources, inflexible curricula, and inadequate ongoing training. These challenges are consistent with the findings of Soukakou, Dionne, & Palikara (2024), highlighting systemic issues that hinder the implementation of inclusive practices.

Despite a clear understanding of what constitutes effective service provision for children with special needs, significant gaps remain in practice. Addressing the challenges, is crucial to improving the delivery of inclusive services in early childhood education settings.

5.5. The relationship between knowledge, attitude, and efficacy.

The Spearman rank-order correlation analyses conducted in this study examined the relationships between pre-primary teachers' knowledge, attitudes, and efficacy regarding inclusive education. The results revealed significant positive correlations among all three variables.

This indicates a moderate positive correlation between knowledge and attitude, suggesting that as teachers' knowledge about inclusive education increases, their attitudes toward inclusion become more positive. Moreover, a stronger positive correlation was found between knowledge and efficacy, suggesting that teachers with greater knowledge about inclusive education also feel more confident in implementing inclusive practices. This aligns with the findings by Lu & Mustafa (2021), which show that teachers with high self-efficacy use instructional methods that could accommodate students with special needs.

Additionally, the correlation between attitude and efficacy indicates a moderate relationship. This suggests that preschool teachers' positive attitude towards inclusive education is associated with a greater sense of self-efficacy in implementing inclusive practices. This finding aligns with (Khokhar et al., 2023), who highlighted the importance of teacher efficacy in shaping attitudes toward inclusion.

Building on this, the findings suggest that enhancing teachers' knowledge about inclusive education could promote more positive attitudes and greater efficacy, potentially leading to better inclusive practices in pre-primary settings. However, it is important to consider potential limitations, such as the self-reported nature of the data and the specific context of the study, which may affect the generalizability of the results. Future research could explore these

relationships among teachers with varying levels of experience to provide a comprehensive understanding.

5.6. Attitude, efficacy, and knowledge across the demographic variables

5.6.1. Age demographic

Literature pointed out that demographic factors significantly influence teachers' attitudes towards inclusive education. According to Koliqi and Zabeli (2022), older teachers tend to exhibit more negative attitudes towards inclusive education compared to younger counterparts. However, the result of the study contradicts this idea. The Kruskal-Wallis results show that preschool teachers don't have differences across ages for this study. Similarly, there are no notable variables in teachers' efficacy across age groups, which contradicts the finding by Lu & Mustafa (2021). This previous research suggested that older teachers might have more experience but could also face challenges adapting to new inclusive education practices, which can affect their self-efficacy. On the other hand, more experienced teachers may be more resistant to change and may require additional support and professional development to effectively implement inclusive strategies (Beyene & Tizazu, 2011). Interestingly, the study did not find any significant differences in teachers' knowledge levels based on age. These results lead us to consider the complexity of factors that influence attitudes toward inclusive education.

5.6.2. Preprimary Teachers' Experiences

According to Florian & Pantić (2017), teaching experience can significantly influence preschool teachers' understanding and approach toward inclusive education. Experienced preschool teachers often have a deeper understanding of diverse learning styles and strategies for accommodating students with special needs due to their extensive time in the classroom. While teaching experience didn't show significant differences across different groups in knowledge, attitude, or efficacy, it's worth noting the positive correlation between experience and self-efficacy, indicating that experienced teachers may feel more confident in implementing inclusive practices.

Positive experiences, such as the successful implementation of inclusive strategies and seeing children's progress, can boost teachers' confidence in their abilities and foster a positive attitude toward inclusive education (Koliqi and Zabeli, 2022). Conversely, negative experiences, such as facing challenges without adequate support or training, can undermine their confidence and lead to more negative attitudes toward inclusive practices. This indicates that while teaching experience undoubtedly affects the effective implementation of inclusive education, its direct impact on knowledge, efficacy, and attitude in inclusive education may not be as straightforward as previously implied in research. Recognizing this complexity draws attention to the many factors that influence teachers' readiness and efficacy in inclusive classrooms. Despite how long teachers have been teaching or what experiences they have had, it shows that providing teachers with support and ongoing training could be quite important in ensuring that they effectively implement inclusive education.

5.6.3. Experience teaching special needs

Research highlights that teaching experience and previous interactions with children with special needs can shape teachers' attitudes, often leading to more positive attitudes toward inclusive education (Koliqi and Zabeli, 2022). However, the study did not find a statistically significant difference in attitude between teachers with experience in teaching special needs and those without. On a related note, Özokcu (2017) pointed out that teachers who have prior interactions and experience with students with special needs tend to have higher self-efficacy regarding inclusion. This experience enhances their confidence and effectiveness in managing diverse classrooms and implementing inclusive practices (Kristiana, 2018). However, this contradicts the finding that there is no difference between teachers who have experience in teaching special needs and teachers who do not.

Moreover, the finding reveals that there is no significant difference in teachers' knowledge level between those with experience in special needs and those without. Further analysis of the Spearman rank correlation also shows that there is no significant relationship between years of special education teaching experience and preschool teacher self-efficacy, knowledge, and attitude. This highlights the complexity of the factors that influence teachers' attitudes,

knowledge, and self-efficacy in inclusive educational environments. Further exploration of these discrepancies could provide valuable insights into effective strategies to support teachers in implementing inclusive practices.

Chapter Six

6. Summary, Conclusion and Recommendations

This final chapter presents the summary, conclusion, and recommendations of the study. It outlines the major findings related to teachers' knowledge, attitudes, self-efficacy, and support for inclusive education in preprimary settings, and offers practical recommendations for improvement.

6.1. Summary

The study investigated preprimary teachers' knowledge, attitudes, self-efficacy towards inclusive education, and the provision of support for children with special needs. A mixed-methods approach was utilized to address the research questions. A total of 115 preschool teachers from 6 inclusive schools in 3 sub-cities participated in the study, including both general education and special needs teachers. Semi-structured interviews were conducted to gain deeper insights into the knowledge, attitudes, efficacy, and the services they provide to children with special needs.

The study uncovered a discrepancy between teachers' self-reported knowledge and their actual understanding of inclusive education concepts. While teachers believed they were well-informed about inclusive education, they struggled to clearly define inclusion and apply its principles in practice. Although teachers generally had positive attitudes towards inclusion, they faced difficulties in implementing inclusive teaching strategies. While teachers expressed confidence in their ability to promote inclusion in their classrooms, they lacked practical strategies and support for effective implementation. Additionally, there were gaps between the reported abilities and actual practices of service provisions for children with special needs in inclusive settings.

The study also found a strong positive correlation between teachers' knowledge, attitudes, and efficacy regarding inclusive education. Higher levels of knowledge were linked to more positive attitudes toward inclusion and greater self-efficacy in implementing inclusive practices. However, despite these positive correlations, practical implementation remained a challenge, highlighting the need for targeted interventions and support.

Additionally, the study examined how demographic factors such as age, teaching experience, and exposure to special needs affect pre-primary teachers' knowledge, attitudes, effectiveness, and support for inclusive education. While these factors may influence teachers, no significant correlations or differences were found between demographic groups in knowledge or attitudes. However, there is a positive relationship between self-efficacy and years of experience.

The research also examines the services provided to children with special needs in inclusive preschools. It emphasized the importance of effective services for successful inclusion, including personalized support plans, accommodations, specialized services, and creating accessible environments for all children. However, the study found that there was a gap between teachers' self-reported skills in accommodating students with special needs and their actual implementation in the classroom. Teachers were willing to adapt lessons and tests, but the study showed they did not have the skills to do so. Challenges to providing good support included a lack of collaboration with special education experts, limited resources, and inadequate ongoing training.

6.2. Conclusion

Inclusive education in Ethiopia has made progress, but teachers face significant challenges in implementing inclusive practices in preschool settings. A key issue is that many teachers lack a clear understanding of what inclusion entails and believe that inclusive classrooms do not require additional preparation, revealing misconceptions that need to be addressed. Despite expressing positive beliefs about inclusion, teachers often lack the practical knowledge and skills to implement inclusive strategies effectively.

While surveys showed that teachers rated their knowledge and self-efficacy highly, qualitative interviews revealed gaps in their understanding of developmental milestones, disability-specific needs, and appropriate pedagogical adjustments. This discrepancy highlights a reliance on theoretical knowledge over practical application.

Although attitudes toward inclusion were generally positive, with teachers recognizing the social and emotional benefits for all children, these attitudes did not always translate into adaptive teaching practices. Teachers rarely modified their instruction or assessments to meet diverse learning needs, often preferring to work with students with milder challenges. This mirrors concerns in the broader literature on inclusive education.

Service provision remains inconsistent, with inadequate resources and limited collaboration with specialists further hindering effective implementation. These systemic barriers, along with insufficient training, compound the challenges faced by preschool teachers. Statistical analysis confirmed a positive correlation between knowledge, attitude, and efficacy, emphasizing their interdependence. However, demographic factors such as age, general teaching experience, and prior exposure to special needs students did not show significant differences, suggesting that experience alone is not enough.

Moreover, collaboration between special education departments and teachers needs to be strengthened to improve support for inclusive practices. Parental resistance and lack of awareness also pose significant barriers, with some parents hesitant to acknowledge their child's learning needs or to accept suggestions on how best to support them.

Ultimately, inclusive education has the potential to bring about positive changes, but it is essential to ensure that educators have the skills, knowledge, and resources needed to effectively support children with special needs. Adapting lessons to meet diverse needs and creating a supportive, collaborative atmosphere is important for successful inclusion in preschool settings. Ongoing research, collaboration, and policy backing are necessary to address challenges and advance inclusive practices that benefit all children.

6.3. Recommendations

- The Ministry of Education should develop and implement comprehensive training programs for preprimary teachers that focus on practical strategies for inclusive practices, thereby bridging the gap between theory and practice.

- Higher education institutions should integrate additional coursework and practical experiences in inclusive classrooms into pre-service teacher education programs, ensuring that new educators are well-prepared to implement inclusive education effectively.
- Parents should be supported through targeted outreach efforts aimed at increasing their awareness and acceptance of children's special needs. Additionally, they should receive guidance on how to effectively support their children's learning and development at home.
- Schools and special education departments should strengthen communication and collaboration between general education and special education teachers. This collaboration would promote the sharing of expertise and the development of strategies to address the diverse needs of students with special needs.
- Educational authorities should ensure effective follow-up on the placement of children with special needs in preschool settings. They should also oversee the implementation of inclusive practices and provide teachers and institutions with the necessary resources and support.
- Research institutions and educational stakeholders should examine demographic factors, such as teaching experience, age, and prior exposure to students with special needs, that influence teacher knowledge, attitudes, and efficacy. Insights from this research should inform future professional development initiatives and policy interventions.

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Appendices

Appendix A: Survey Questionnaire

Addis Ababa University

Colleague of Education and Behavioral Studies

Center for Early Childhood Care and Education

Thank you for taking part in this survey. Your responses will help us understand the Preschool teachers' knowledge, attitudes, efficacies, and service provision regarding students with special needs. Please carefully read each question and choose the response that most accurately reflects your opinion or experience. Your answers will be kept confidential and your honest input is invaluable. Please select the appropriate boxes (✓) and answer without any reservations. Please avoid writing your name on the paper.

Part 1: Demographic Information

Please use a checkmark (✓) to indicate your responses

How many years have you been teaching? _____			
Age	<input type="checkbox"/> 18-25	<input type="checkbox"/> 26-30	<input type="checkbox"/> 31-35
	<input type="checkbox"/> 36-40	<input type="checkbox"/> 41-45	<input type="checkbox"/> 46 and above
Gender	<input type="checkbox"/> Female	<input type="checkbox"/> Male	
Education status	<input type="checkbox"/> Certificate	<input type="checkbox"/> Diploma	<input type="checkbox"/> Degree
	<input type="checkbox"/> Masters	<input type="checkbox"/> PhD	
How long have you taught students with special needs in regular classes?	<input type="checkbox"/> Less than 1 year	<input type="checkbox"/> 1-3 years	<input type="checkbox"/> 4-5 years
	<input type="checkbox"/> 5 years and above		

Part II: Knowledge of Preschool Teachers towards Inclusive Education

This section focuses on assessing your knowledge and understanding of inclusive education practices. Please indicate your level of agreement with the following statements by using a checkmark (✓).

Knowledge of Inclusive Education					
Items	Strongly Disagree	Disagree	Neutral (Neither agree nor disagree)	Agree	Strongly Agree
1. Inclusive education aims to ensure that all students, regardless of their abilities or disabilities, can learn together in the same classroom.					
2. I understand the legal and policy frameworks that support inclusive education practices.					
3. I can identify common developmental milestones in preschool-aged children.					
4. I understand different types of disabilities and how they affect learning in inclusive classrooms (e.g., autism, ADHD, speech disorders).					
5. Modifying teaching approaches supports children with disabilities or special needs.					
6. Collaboration and teamwork among educators, children, and families are essential for successful inclusive education					
7. I can adapt teaching strategies to meet the needs of children with special needs.					
8. I understand how individual support plans support children with disabilities in inclusive classrooms by offering customized teaching strategies for improving their learning participation.					

Part III. Preschool teachers' attitude towards inclusive education

This section aims to assess your attitudes regarding inclusive education practices, particularly focusing on the inclusion of children with special educational needs in mainstream pre-primary schools. Please indicate your level of agreement with the following statements by using a checkmark (✓).

Teachers' Attitude Towards Inclusive (TATI)					
Items	Strongly Disagree	Disagree	Neither agree nor disagree (Neutral)	Agree	Strongly Agree
1.The needs of children with special needs can best be served through separate classes					
2. Children with special needs classroom behavior generally require more patience from the teacher than does the behavior of a non-special need child.					
3. The extra attention children with special require is to the detriment of the other children					
4.The behavior of children with special needs sets a bad example for the other students					
5.A child with special needs probably develops academic skills more rapidly in a special classroom than in a regular classroom.					
6.The inclusion of children with special needs requires a significant change in regular classroom procedures.					
7. Including the child with special needs in the regular classroom promotes his or her social independence					
8. The inclusion of children with special needs can be beneficial for students without special needs.					
9.Children with special needs benefit from repeated clear instructions from a teacher that explain what they need to do and how to do it.					
10.Inclusion of children with special needs necessitates extensive retraining of regular classroom teachers.					

Part. IV. Preschool teacher’s efficacy towards inclusive practice.

This part measures how confident you are in your ability to include students with special needs and make sure they feel welcome. Please tell us if you agree or disagree with the following statements by using a checkmark (✓).

Teacher Efficacy for Inclusive Practices (TEIP)					
Items	Strongly Disagree	Disagree	Neither agree nor disagree (Neutral)	Agree	Strongly Agree
1.I am able to provide an alternate explanation or example when students are confused					
2.I have confidence in planning educational activities so that the individual needs of children with special needs are adequately addressed.					
3.I am able to calm a student who is disruptive or noisy.					
4.I can assist families in helping their children do well in school and their children with special needs.					
5.I can work together with other professionals and staff (e.g. assistants, and other teachers) to teach students with special needs in the classroom.					
6.I am confident in informing others who know little about laws and policies relating to including students with special needs.					
7.I can assess children's performance using various methods, such as reviewing their daily activity, administering tailored tests, observing their task execution, and more.					
8.I have confidence in my ability to involve parents in the school activities of their children with disabilities or children with special needs.					

Appendix B: Amharic version

አዲስ አበባ ዩኒቨርሲቲ

የሥነ ትምህርትና ባህሪ ጥናት ኮሌጅ

የቀዳማይ ልጅነት ዘመን እንክብካቤና ትምህርት ማዕከል

የዳሰሳ ጥናት ጥያቄዎች

በቅድሚያ በዚህ ዳሰሳ ላይ ለመሳተፍ ፍቃደኛ ስለሆኑ አመሰግናለው። የእርስዎ ምላሾች ልዩ ፍላጎት ያላቸውን ተማሪዎች በቅድመ መደበኛ ትምህርት አካቶ ለማስተማር እና ከዚህ ጋር ተያይዞም የመምህራንን እውቀት፣ አመለካከት፣ ውጤታማነት (efficacy) በተጨማሪም የአገልግሎት አቅርቦትን እንድንረዳ ይረዱናል።

እባክዎን እያንዳንዱን ጥያቄ በጥንቃቄ በማንበብ የእርስዎን አስተያየት ወይም ልምድ በትክክል የሚያንጸባርቀውን ምላሽ ይምረጡ። መልሶቻቹ በሚስጥር የሚያዙና አንዲሁም ለዚህ ጥናት ብቻ የምንጠቀምበት ይሆናል። እባክዎ ምላሾችን በተገቢው ሳጥኖች ውስጥ የ(✓) ያስቀምጡ። እባክዎን ስምዎን በወረቀት ላይ ከመጻፍ ይቆጠቡ።

ክፍል I. ስነ-ሕዝብ መረጃ

እባክዎ ምላሾችዎን ለማመልከት የ(✓) ይጠቀሙ

ስንት አመት የማስተማር ልምድ አሎት: _____			
ዕድሜ	<input type="checkbox"/> 18-25	<input type="checkbox"/> 26-30	<input type="checkbox"/> 31-35
	<input type="checkbox"/> 36-40	<input type="checkbox"/> 41-45	<input type="checkbox"/> 46 በላይ
ጾታ	<input type="checkbox"/> ሴት	<input type="checkbox"/> ወንድ	
የትምህርት ሁኔታ	<input type="checkbox"/> የምስክር ወረቀት	<input type="checkbox"/> ዲፕሎማ	<input type="checkbox"/> ዲግሪ
የሚያሰተምሩበት የክፍል ደረጃ	<input type="checkbox"/> ማስተርስ	<input type="checkbox"/> ፕሎቶኒ	
ልዩ ፍላጎት ያላቸውን ተማሪዎች በመደበኛ ክፍሎች ምን ያህል ጊዜ አስተምረዋል?	<input type="checkbox"/> ከ1 አመት በታች	<input type="checkbox"/> 1-3 ዓመታት	<input type="checkbox"/> 4-5 ዓመታት
	<input type="checkbox"/> 5 አመትና ከዚያ በላይ		

ክፍል II. ስለ አካታቶ ትምህርት አውቀት መለኪያ

ከዚህ በታች ያሉት ጥያቄዎች የሚያተኩሩት እውቀትዎን እና የአካታቶ ትምህርት ግንዛቤዎን መገምገም ላይ ነው። እባክዎን የሚከተሉትን መግለጫዎች መስማማት ወይም አለመስማማትዎን በተገቢው ሰጥን ውስጥ የ(✓) ምልክትን በማስቀመጥ ያመልክቱ።

ስለ አካታቶ ማስተማር የመምህራን እውቀትን					
	በጣም አልስማማም	አልተስማማም	ገለልተኛ	ተስማምቻለሁ	በጣም ተስማምቻለሁ
1. አካታቶ ትምህርት ዓላማው ሁሉም ተማሪዎች አቅማቸው ወይም አካል ጉዳታቸው ምንም ይሁን ምን፣ በአንድ ክፍል ውስጥ አብረው እንዲማሩ ለማድረግ ነው።					
2. ስለ አካታቶ ትምህርት ተግባራት የሚደግፉ የህግ እና የፖሊሲ ማዕቀፎችን አውቃለሁ።					
3. ቅድመ መደበኛ ትምህርት ቤት ዕድሜ ላይ ላሉ ልጆች የእድገት ደረጃዎችን መለየት እችላለሁ።					
4. የለተለያዩ የአካል ጉዳት ዓይነቶች (ለምሳሌ፡ ኡቲዝም፣ ADHD፣ የንግግር እክል ፣ የአምሮ እድገት ውስንነት) ይህም የአካል ጉዳት በትምህርታቸው ላይ ስላለው ተጽእኖ ባለኝ እውቀት ሙሉ እምነት አለኝ።					
5. ልዩ ፍላጎት ያላቸውን ልጆች ለመደገፍ የማስተማር ዘዴዬን በመቀያየርና በማሻሻል አስተምራለሁ።					
6. በመምህራን እና ቤተሰቦች መካከል ትብብር እና የቡድን ስራ ለስኬታማ አካታቶ ትምህርት አስፈላጊ ናቸው።					
7. ልዩ ፍላጎት ያላቸውን ልጆች የሚያስፈልገውን የትምህርት ፍላጎት ለማሟላት የማስተማር ስልቶችን መቀያየር እችላለሁ።					
8. ካል ጉዳተኛ ተማሪዎችን አካታቶ ለማስተማር የሚደረግ የድጋፍ እቅዶች ክፍል ውስጥ በመተግበር እንዴት እንደሚረዳቸው ተረድቻለሁ።					

ክፍል III. ስለ አካታቶ ትምህርት የመምህራን አመለካከት መለኪያ

ከዚህ በታች ያሉት ጥያቄዎች ስለ አካታቶ ትምህርት ተግባራት ያለዎትን አመለካከት ለመገምገም ያለመ ነው። በተለይም ልዩ የትምህርት ፍላጎት ያላቸውን ልጆች በመደበኛ ትምህርት ቤቶች ውስጥ አካታቶ ስለማስተማር ያተኮራል። እባክዎን የሚከተሉትን መግለጫዎች መስማማት ወይም አለመስማማትዎን በተገቢው ሳጥን ውስጥ የ(✓) ምልክትን በማስቀመጥ ያመልክቱ።

ስለ አካታቶ ትምህርት የመምህራን አመለካከት					
	በጣም አልስማማም	አልተስማማም	ገለልተኛ	ተስማምቻለሁ	በጣም ተስማምቻለሁ
1. ልዩ ፍላጎት ያላቸውን ልጆች በተለይ ክፍሎች ውስጥ ቢማሩ ፍላጎቶቻቸው በይበልጥ ሊማሉ ይችላሉ።					
2. ልዩ ፍላጎት ያላቸው ልጆች ልዩ ፍላጎት ከሌላቸው ልጆች ይልቅ ከመምህሩ ትዕግስትን ይሻሉ።					
3. ልዩ ፍላጎት ያላቸው ልጆች የሚያስፈልጋቸው ተጨማሪ ትኩረት በሌሎች ተማሪዎች ላይ ተጽእኖ ያሳድራል።					
4. ልዩ የፍላጎት ያላቸው ልጆች ባህሪ ለሌሎች ተማሪዎች መጥፎ ምሳሌ ይሆናል።					
5. ልዩ ፍላጎት ያላቸው ልጆች የእውቀት ክህሎታቸው ከመደበኛ ክፍል ይልቅ በልዩ ክፍል ውስጥ ለብቻቸው ቢማሩ በፍጥነት ሊዳብር ይችላል።					
6. ልዩ ፍላጎት ያላቸውን ልጆች በመደበኛ ክፍል ውስጥ ማካተት በመደበኛ ትምህርት ሂደቶች ላይ ከፍተኛ ለውጥ እንዲመጣ ያስገድዳል።					
7. ልዩ ፍላጎት ያላቸውን ልጆች በመደበኛ ክፍል ውስጥ ማካተት ማህበራዊ እድገቶቻቸውን ያበረታታል።					
8. ልዩ ፍላጎት ያላቸውን ልጆች በመደበኛ ክፍል ውስጥ አካታቶ ማስተማር ልዩ ፍላጎት ለሌላቸው ልጆች ጠቃሚ ሊሆን ይችላል።					
9. ልዩ ፍላጎት ያላቸውን ልጆች በትክክል ምን ማድረግ እንዳለባቸው እና እንዴት እንደሚሰሩ ደጋግሞ አስተማሪው መንገር አለበት።					
10. ልዩ ፍላጎት ያላቸውን ልጆች በመደበኛ ክፍል ውስጥ እንዴት አካታቶ ማስተማር እንደሚቻል ለአስተማሪዎች ቀጣይነት ያለው ስልጠና መስጠት ያስፈልጋል					

ክፍል IV. በአካቶ ትምህርት ላይ የቅድመ መደበኛ መምህራን ውጤታማነት (Efficacy)

ከዚህ በታች ያሉት ጥያቄዎች ልዩ ፍላጎት ያላቸውን ልጆችን ለማከተት እና የባለቤትነት ስሜት እንዲሰማቸው ለማድረግ ያሉትን ብቃት ይለካል። እባክዎን የሚከተሉትን መግለጫዎች መስማማት ወይም አለመስማማትዎን በተገቢው ሳጥን ውስጥ የ(✓) ምልክትን በማስቀመጥ ያመልክቱ።

የመምህራን አካቶ ማስተማር ውጤታማነት (Efficacy)					
	በጣም አልስማማም	አልተስማማም	ገለልተኛ	ተስማምቻለው	በጣም ተስማምቻለው
1. ልጆች በሚሰጠው ትምህርት ላይ ግራ ሲገቡ ተጨማሪ ማብራሪያ ወይም ምሳሌ ማቅረብ እችላለሁ።					
2. ልዩ ፍላጎት ያላቸውን ልጆች ልዩ ፍላጎትቸውን በበቂ ሁኔታ ያገናኘን ትምህርታዊ መልመጃዎችን መስጠት እንደምችል እምነት አለኝ።					
3. ሚረብሽ ወይም ለየት ያለ ባህሪ ያለው ተማሪን ማረጋገጥ እችላለሁ።					
4. ልዩ ፍላጎት ያላቸውን ልጆች ወላጆች ልጆቻቸውን በትምህርትታቸው ስኬታማ ለማድረግ እንዴት መርዳት እንደሚችሉ ማሳየት እችላለሁ።					
5. ልዩ ፍላጎት ያላቸውን ልጆች በክፍል ውስጥ ለማስተማር ከሌሎች ባለሙያዎች እና ሰራተኞች (ለምሳሌ የልዩ ፍላጎት አስተማሪዎች እና ረዳት አስተማሪዎች) ጋር መስራት እችላለሁ።					
6. ልዩ ፍላጎት ያላቸውን ልጆች አካቶ ማስተማርን በሚመለከት ፖሊሲዎችን እና ሕጎችን በትንሹ ለሌሎች ለማያውቁ ማሳወቅ እችላለሁ።					
7. የልጆችን የእለት ተእለት እንቅስቃሴ መገምገም፣ ለአቅማቸው የሚመጥን ፈተናዎችን መስጠት፣ አንዴት አንደሚሰሩ መመልከት እና ሌሎች የተለያዩ ዘዴዎችን በመጠቀም የልጆችን የትምህርት አቀባበልን መገምገም እችላለሁ።					
8. ልዩ ፍላጎት ያለባቸውን ልጆች ወላጆቻቸውን በትምህርት ቤት እንቅስቃሴዎች እንዲሳተፉ ለማድረግ እንደምችል እርግጠኛ ነኝ።					

Appendix C

Interview Questions

1. What does 'inclusive education' mean to you, and how does it differ from traditional education approaches?
2. How important is it to include students with diverse learning needs in regular classrooms? What are the benefits for all students?
3. Can you name a policy or strategy for inclusive education/special needs education?
4. What strategies do you use to address the needs of students with disabilities or special educational needs?
5. How do you create and follow personalized learning plans for children with special needs?
6. How do you assess the progress and learning outcomes of students with special needs, and what adjustments do you make based on these assessments?
7. Do you believe that all students, including those with disabilities or special educational needs, can succeed in inclusive classrooms?
8. How do you perceive the social interactions and relationships between these students? Do you think inclusive education promotes positive social relationships among students?
9. How confident are you in teaching students with special needs within an inclusive classroom?
10. How confident are you in identifying different disabilities and children with special needs?
11. What accommodations, modifications, and special services are available to support children with special needs? How do you assess the students progress and make necessary adjustments?
12. How do you collaborate with parents and other stake holders to help children with special needs succeed in their school experiences and can you share any success stories from your experiences?
13. Have you received any specialized training or professional development related to supporting students with special needs? What are some of the difficulties you face, and what additional resources or support would you need?