UNIVERSITY OF EDUCATION, WINNEBA

TEACHER SUPPORT SERVICES FOR MANAGING THE INSTRUCTIONAL NEEDS OF CHILDREN WITH DISABILITIES IN KINDERGARTEN CENTRES WITHIN KUMASI METROPOLIS

AKUA TWUMWAA ODURO

MASTER OF PHILOSOPHY

2022

UNIVERSITY OF EDUCATION, WINNEBA

TEACHER SUPPORT SERVICES FOR MANAGING THE INSTRUCTIONAL NEEDS OF CHILDREN WITH DISABILITIES IN KINDERGARTEN CENTRES WITHIN KUMASI METROPOLIS

AKUA TWUMWAA ODURO
200030443

**A thesis in the Department of Early Childhood Education,
Faculty of Educational Studies, submitted to the
School of Graduate Studies in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy
(Early Childhood Education)
in the University of Education, Winneba**

JULY, 2022

DECLARATION

Student's Declaration

I, Akua Twumwaa Oduro, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my original work and has not been submitted either in part or whole for another degree elsewhere.

Signature: ……

Date: ……..……

Supervisor's Declaration

I certify that the preparation and presentation of this research were supervised by me in accordance with the guidelines for supervision of research laid down by the University of Education, Winneba.

Supervisor's Name: Dr. Michael Subbey

Signature: ……

Date: ……..……

DEDICATION

I wholeheartedly dedicate this work to my late father, Charles Oduro.

ACKNOWLEDGEMENTS

I am deeply indebted to Dr. Michael Subbey, my supervisor, whose comments, good guidance and sleepless nights at every stage of my writing helped this thesis to come out in this shape. A sincere thanks also go to Dr. Samuel Oppong Frimpong and Prof. Asonaba Kofi Addison, for their encouragement. I am extremely grateful.

A debt of gratitude goes to Mr. Seth Badu and Mr. Anthony Woode-Eshun for their motivation, enthusiasm and immense contributions to this thesis. No words of thanks can sum up the gratitude that I owe you.

Finally, to all my family members Mr. Kwame Oduro Ofirikyi and more especially to the Gyasi-Duku family for helping me survive all the stress and not letting me give up.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The research examined the support services for teachers in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis. The study adopted the sequential explanatory mixed methods design, which is characterised by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data. A sample of 234 public kindergarten teachers was selected for the study. They were selected using simple random sampling and purposive sampling techniques. Questionnaires and a semi-structured interview guide were the instruments used to collect data for the study. Descriptive statistics were used to analyse the quantitative data with the aid Statistical Product for Service Solution (SPSS). Qualitative data were analysed using thematic analysis. The study revealed that kindergarten teachers in Kumasi Metropolis have an appreciable knowledge of what teacher support services are and their roles in assisting teachers to help manage the instructional needs of children with disabilities. The study established that teacher support services in managing the instructional needs of children with disabilities were not present in kindergarten centres within the Kumasi metropolis. Based on the findings, the study recommends that headteachers and lead teachers at basic schools should institute enough measures to motivate teachers to hold onto their positive views about teachers' support services. The study further recommends to the Ministry of Education, Ghana Education Service and Kumasi Metropolitan Education Directorate to ensure that assistive technology, mobility service, interpreting service, speech-language pathology service, support teachers and special educators are available in kindergarten schools and are easily accessible to teachers.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The value of education in a child's overall growth cannot be overstated. Education may help individuals to develop skills, improve their social status and gain access to networks that could lead to enhanced social outcomes, independently of the effect of education on income (OECD, 2010). Aside that, education helps to make the world a better place to live.

Globally, children with disabilities experience marginalisation within the educational system and also traditionally experience varying forms of discrimination from mainstream society. Children with disabilities have remained relatively invisible in most governments' efforts to achieve universal access to primary education (UNESCO, 2012). As a result of all these, many children with disabilities are not reaping the full benefits of education.

Most education ministries in the Europe and Eurasia (E&E) region have made progress in the area of education for children with special needs. Policies are in place and international institutions; governments and non-governmental organizations (NGOs) have invested considerable efforts to extend the development of inclusion on all levels (UNESCO, 2003). The general public's knowledge of problems affecting underprivileged children and children with disabilities is rising, and parents are more vociferous in their worries about their children's rights to an acceptable educational and care environment.

Internationally, a growing focus has been placed on inclusion as the key strategy for promoting the right to education, including children with disabilities. Thus, global trends in special education have shifted from the institutionalization of children with disabilities in special schools towards inclusive approaches that enable children to access mainstream educational programs in the communities where they live (Ainscow & Sandill, 2010; Hutchinson & Martin, 2012).

According to Florian (2010), a paradigm shift has occurred in the way children with special needs are served in schools. Special education is no longer considered distinct from regular schooling. Current research supports the benefits of inclusive education and recent brain research offers insight into evidence-based strategies that facilitate academic improvement (Ngozi & Subbey, 2022; Bredekamp, 2020). In an age of accountability, schools and teachers are responsible for ensuring the success of all children regardless of socioeconomic status, cultural background, or disability (Spasovski, 2010). Learning outcomes, rather than learners' differences, are the focus of educators seeking to propel learners forward by providing rich, accessible, academic experiences (Florian, 2010). This empowers teachers and learners to think and work collaboratively and promotes the notion that learners with disabilities can learn alongside same-aged, non-disabled peers in the general education classroom (Willis, 2007).

It is well documented that disability presents certain challenges that influence the learning modes of persons, especially, children (Mitchell, 2008; Ocloo & Subbey, 2008; Peters, 2003). However, available data do not support the fact that persons with disabilities including children are "non-educable" (Culham & Nuid, 2003; Reiter & Vitani, 2007; Maul & Singer, 2009; Porter & Smith, 2011). Thus, all children are

capable of learning and becoming recipients of quality education if the right atmosphere of inclusion and acceptance are created (Mittler, Morton & Hornby, 2002).

It is in view of the importance attached to education for all children including children with disabilities that the teacher is seen as the most important element of achieving social progress and preparing a generation with spiritual, ideological, emotional and moral values in the light of the goals and aspirations of the community (Kurtts, 2006).

Kumar and Raja (2010) asserted that to facilitate learning opportunities for children with disabilities, teachers should use adequate support services which include appropriate teaching materials to reduce or eliminate children's deficits in specific learning areas. Again, teachers' knowledge of support services can influence many facets of their teaching practice (Ruppar, Gaffney, & Dymond, 2015; Stough & Palmer, 2003). Stough and Palmer (2003) illustrated the powerful effect of teachers' knowledge of support services affect decisions made during instruction. Stough and Palmer (2003) further commented that the more information teachers had the more effectively they assessed learners and provided instruction that met learners' needs. DeSimone and Parmar (2006) found that knowledgeable teachers tend to use more effective teaching strategies in inclusive classrooms. Teachers who are well-informed about persons with disabilities and supported services available to them have been shown to communicate with learners more effectively, facilitate meaningful dialogue, and provide accommodations (Mariage, Englert, & Garmon, 2000; Soto, 1997). Support provisions for teachers are crucial. A lack of support may risk creating circumstances where children cannot participate and learn, and thereby not benefit optimally from their education. The importance of support provisions in inclusive

practices is also stressed in international conventions (Sandall et al., 2008; Sandall, Schwartz, & Joseph, 2001; Soukakou, 2012). It is, therefore, important to address the support needs of teachers in teaching children with disabilities in inclusive classrooms.

Ghana Disability Act 715 defines disability as "an individual with physical, mental or sensory impairments including a visual, hearing, or speech functional disabilities which give rise to physical, cultural or social barriers that substantially limits one or more of the major life activities of that individual" (p. 141). Some children are born with a disabling health condition or impairment, while others may experience disability as a result of illness, injury or poor nutrition. There are fourteen categories of disabilities defined. These include Autism, Deaf-Blindness, Deafness, Developmental Delay, Emotional Disturbance, Hearing Impairment, Intellectual Disability, Multiple Disabilities, Orthopedic Impairment, Other Health Impairment, Specific Learning Disability, Speech or Language Impairment, Traumatic Brain Injury and Visual Impairment including Blindness. (Individuals with Individuals with Disabilities Education Improvement Act [IDEA], (2004).

The understanding of participation and learning of children with disabilities are espoused in research (Avoke, & Avoke, 2004; Mittler, 2000; Ainscow, 2005; Nolinske, 1999; Steele, 2011; Ghansah, 2011; Avramidis & Norwich, 2002; Deku & Vanderpuye, 2008) and it is assumed that participation and learning make possible the intellectual, social, emotional, moral and motor skill development of children. This means that support provisions for teachers can not only enhance participation and facilitate learning in educational activities, routines and play, but can in addition make possible children's development.

Opoku, Agbenyega, Mprah, Mckenzie, and Badu (2017) argued that teachers need to be supported and trained to adopt different teaching techniques, strategies, styles and approaches to teach and support diverse learners in the school and classroom. The government and other relevant stakeholders need to provide teachers with the resources and materials to help them effectively manage the instructional needs of children with disabilities. Proper facilities and infrastructures need to be provided in the schools to encourage and motivate teachers to teach disabled children (Kuyini, 2010). Agbenyega (2007) contended that providing resources and facilities is part of the proper organisation to help include disabled children in mainstream schools. Lacking facilities and resources in school make teachers have limited knowledge and skills in handling these children.

According to Amoako, Attia, and Dinko (2021), teachers do not have adequate support services contributing to their difficulty in collaborating with other professionals and parents in managing children with special educational needs and disabilities in the inclusive classroom. Eaton (1996) asserted that school-based support team is not well instituted internally, and these support teams are not coordinated by a member of staff, preferably someone who has received training in either life skills education, counselling or learning support. Alhassan (2014) mentioned that teachers develop a negative attitude toward inclusion because of the large class size in many schools. Kuyini and Boitumelo (2011) concluded that limited resources, facilities and lack of training for teachers act as a barrier to practising and implementing inclusive education. Ghana Education Service (2004) supported this argument that without these factors and more, implementing, achieving and practising inclusive education will be challenging. This study therefore aimed at assessing the

support services for teachers in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis.

1.2 Statement of the Problem

Over the past decades, inclusive education approaches have been proposed and accepted for the education of children with disabilities. The move toward including children with special needs in the mainstream classroom has been promoted as a reaction to segregated schooling, against children with special needs (UNESCO 1994). The argument for including children with disabilities in early childhood centres is largely hinged on human rights as well as social issues (Deku & Vanderpuye, 2017). Inclusive education more generally, has dominated public policy and social discourse and this is an attempt to make education more meaningful and accessible to children with special needs, who otherwise, would not benefit from the regular school programme. Inclusive education can therefore be conceptualised as good education for everyone and the best way to educate children with special needs (Ainscow, 2013; Deppeler, 2012).

Including children with disabilities in the general education classroom has been a goal of education reformists for numerous years. IDEA (2004) and No Child Left Behind [NCLB] (2001) emphasized that children with disabilities should have access to and demonstrate academic progress in the general education curriculum. To meet the requirements under IDEA and NCLB, educators must be prepared to meet the needs of students with varying abilities in an inclusionary classroom environment. Various forms of support provisions need to be given to the teachers to realise the needs of children with disabilities in an inclusionary school environment (Cook, Cameron, & Tankersley, 2007). However, the central focus of teaching in previous years has been

on mainstreaming and no support is given to teachers in realizing the learning needs of children with disabilities (Cook, et al. 2007).

Many general education classroom teachers in Ghana appeared not to have the professional skills to effectively manage children with special educational needs and disabilities in the inclusive classroom (Gyasi, Okrah & Anku, 2020). Most teachers in Ghana appeared to have limited knowledge concerning the education of children with disabilities and, therefore, are unable to provide the needed support for this category of people in an inclusionary school environment (Amoako, Attia, Awini & Denteh, 2021). Amoako et al. (2021) further contended that teachers are not given the needed support to assist children with disabilities in their school environment.

Information gathered from the researchers' personal experience during the researcher's interaction with some basic school teachers while on teaching practice supervision in kindergarten centres in the Kumasi Metropolis revealed that most teachers do not receive the necessary support to aid them to manage children with disabilities in their inclusionary school environment. They did not simply come to grips with children with disabilities in their classroom setting. These teachers generally assumed that children with disabilities have no spot in the general classroom setting. Some studies (Ngozi & Subbey, 2022; Perez, Lianos & Guasp, 2017; Adams, 2016; UNICEF, 2013) have been conducted on support services for teachers in managing the instructional needs of children with disabilities but none of these studies was conducted within the Kumasi Metropolis

It is imperative that teachers get some level of support provisions to aid them to manage children with special needs in inclusionary school settings. However, it appears these supports are not given to teachers in the Kumasi Metropolis. This study

endeavoured to bring awareness on support services for teachers in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis.

1.3 Purpose of the Study

The research examined the support services for teachers in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis.

1.4 Research Objectives

This study sought to find out about the following:

1. Types of disabilities among children in kindergarten centres within Kumasi Metropolis.
2. Kindergarten teacher knowledge about support services in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis.
3. The available support services for teachers in meeting the instructional needs of children with disabilities in kindergarten centres within the Kumasi Metropolis.
4. Strategies for improving teacher support services for managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis

1.5 Research Questions

To achieve the objectives of the study, these research questions were formulated to guide the research.

1. What types of disabilities exist among children in kindergarten centres within Kumasi Metropolis?

2. What knowledge do kindergarten teachers have about support services in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis?
3. What are the available teacher support services in meeting the instructional needs of children with disabilities in kindergarten centres within the Kumasi Metropolis?
4. What strategies can be employed in improving teacher support services for managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis

1.6 Significance of the Study

It is believed that the findings of the study would be beneficial to the various stakeholders such as the School Management Committee, Parent Association and parents in education, children enrolled in inclusive educational facilities and their teachers. Thus, it would help policy makers, experts and the Ghana Education Service (GES) have a better understanding of the experiences of teachers and children with disabilities within the inclusive educational set-up. It is trusted that the investigation would draw in the consideration of other interested researchers to further investigate the pilot activity of the inclusive programme.

More so, the findings from the study would inform Social Workers about the needs of children with disabilities within the inclusive setting to enable them to advocate for the rights of these children. Again, by adding to the existing literature on inclusive education, this study's findings would be very much significant, especially from the perspective of developing countries. The study finding would serve as literature for other researchers who may want to investigate the experiences of children with

disabilities under the inclusive education settings being implemented in various countries and more especially within the settings of developing countries.

1.7 Delimitations of the Study

The study was delimited to support services for teachers and how they can help in managing children with disabilities in kindergarten centres. The study involved kindergarten teachers within the Kumasi Metropolis. In spite of the fact that there are variations of disabilities among children, this study was confined to looking at only three which are common among school children in the metropolis. They are physical, hearing and visual disabilities that are mild to moderate.

1.8 Limitations of the Study

A limiting factor of this study was that some of the teachers who took part in the qualitative section of the study felt uncomfortable volunteering for the interviews because it was the first time they had done so. Nevertheless, once they were assured that their answers would be kept private and anonymous, they willingly opened up and provided every detail that was required to accomplish the goals of the research. Hence, the findings of the study were not negatively impacted by this limitation in any way.

1.9 Organisation of the Study

The study is divided into five chapters. Chapter One dealt with the general introduction of the study, background to the study, the statement of the problem, the purpose of the study, objectives of the study, and research questions, the significance of the study, delimitations and limitations of the study, operational definition of terms, organisation of the Study. Chapter Two presented on review of related literature. It provided theoretical and empirical evidence on reading and writing assessment

practices. Chapter Three presented the research methodology. It described the research design, population, sample and sampling technique, research instruments, pilot-testing, validity, reliability and trustworthiness of the data collection instruments, data collection procedures, data analysis, and ethical consideration. Chapter Four focused on results presentation and discussion of the data that was collected from the field. Lastly, Chapter Five of the study presented the summary of the research findings, conclusions based on the findings, recommendations, and made suggestions for further research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter deals with the literature review of the study. The review is discussed under the following subheadings:

1. Theoretical framework
2. Conceptual framework
3. Inclusive Education in Early Childhood Education
4. Concept of Disability
5. Types of disabilities among children in kindergarten centres
6. Teacher knowledge about support services for children with disabilities
7. Teacher support services towards the instructional needs of children with disabilities
8. Strategies for improving teacher support services towards the instructional needs of children with disabilities

2.1 Theorical Framework

2.1.1 The social model: Disability as a socially constructed phenomenon

Inspired by the activism of the British disability movement in the 1960s and the 1970s, the social model of disability developed in reaction to the limitations of the medical model of disability (D'Alessio, 2011). According to the social model which is sometimes referred to as the minority model, it is society which disables people with impairments, and therefore any meaningful solution must be directed at societal change rather than individual adjustment and rehabilitation (Barnes, Mercer & Shakespeare, 2010). Fundamental to the social model of disability is the notion that

disability is ultimately a socially constructed phenomenon. Union of the Physically Impaired against Segregation's (UPIAS) (1976), emphasise the importance of this social dimension in its definition of disability. Oliver (1981), a disabled activist and lecturer, who also coined the phrase social model of disability, stresses the need to focus on the social aspects of disability, especially how the physical and social environment impose limitations upon certain categories of people.

UPIAS (1976) draws an important conceptual distinction between the term impairment and disability. Impairment is defined as lacking part of or all of a limb, or having a defective limb, organ or mechanism of the body, while disability is defined as the disadvantage or restriction of activity caused by a contemporary social organisation which takes no or little account of people who have physical impairments and thus excludes them from participation in the mainstream of social activities (UPIAS, 1976). From this point of view, disability is a socially constructed disadvantage, which is, in a very real sense, imposed on PWDs, constituting a particular form of social oppression (UPIAS, 1976). Schipper (2006) explained the critical importance of the distinction between impairment and disability in the development of the social model, especially in terms of its relevance to different cultures.

Social model theorists argue that the term 'people with disabilities' is directly linked to the philosophy underlying the medical model and, therefore, insist that the term disabled people better reflect the societal oppression that people with impairments are faced with every day. As Purtell (2013) observed, disabled people are people who are disabled by the society they live in and by the impact of society's structures and attitudes. Purtell illustrated the social model's argument about the utility of the term

disabled people by reference to people with learning difficulties. People with learning difficulties are disabled people whose impairment is their learning difficulty. The social model is especially concerned with addressing the barriers to participation experienced by PWDs as a result of various ableist social and environmental factors in society (O'Connell, Finnerty & Egan, 2008).

The social model of disability has had a profound influence on how disability is understood in our time (Giddens, 2006). The social model has played a crucial role in shaping social policy vis-à-vis PWDs, not only in national levels but also in international level. In the South African context, the social model is reflected in the Integrated National Disability Strategy (1997), as well as the Department of Labour's Code of Good Practice (2002).

While a number of people in the disability community regard the insights of the social model as liberating, Giddens (2006) notes several points of critique that have been noted against the social approach. Firstly, some argue that the social model seemingly ignores the often-painful realities of impairment. As Shakespeare and Watson in Giddens (2006) remark, we are not just disabled people, we are also people with impairments, and to pretend otherwise is to ignore a major part of our biographies. Secondly, while many people accept the fact that they have impairments, they prefer not to be referred to as disabled. Giddens (2006), notes a recent survey of people claiming government benefits that found fewer than half the people opted to describe themselves as disabled. Lastly, medical sociologists are very skeptical of the model, as they reject the social model's distinction between impairment and disability as artificial.

From this viewpoint, the social model of disability offers a theoretical framework by which disability can be understood. The researcher uses this model to bolster argument against using disability as justification for exclusion and segregation. Hence, teachers should be sported in their services in order to well manage children with disabilities by removing unnecessary barriers which prevent children with disabilities from participating and living independently in the mainstream school environment.

2.2 Conceptual Framework

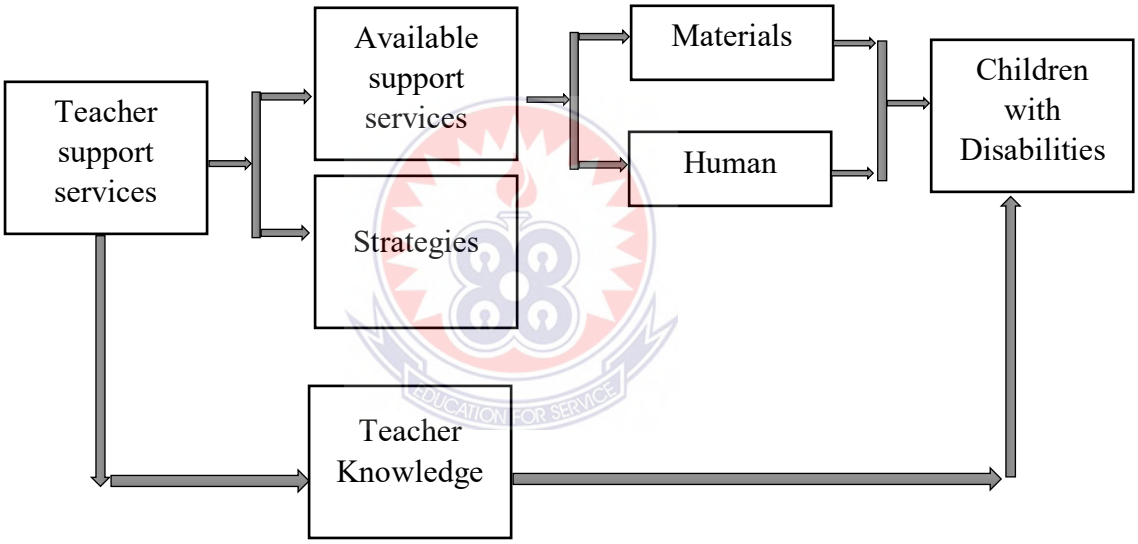

Figure 2.1: Conceptual framework for the study

Source: Researcher's construct

The study conceptualizes that managing the instructional needs of children with disabilities is much dependent on the level of support services available to teachers. Constituting the support services are its availability and the strategies adopted in delivering and improving upon the services. The available support services come in the form of materials and human. The materials include assistive technology, mobility devices, modified curriculum and other related materials (multi-sensory) that aid

teachers in managing the instructional needs of children with disabilities. The human support services include opportunities for training about disabilities (pre-service and in-service training, support from professional) include audiologist, ophthalmologist, speech-language pathologist and other personnel who may assist in managing the needs of these learners.

The presence of the support services alone does not ensure the success of managing the instructional needs of children with disabilities. It is important to adopt some strategies to ensure the success. Again, it is worthy to note that the adequacy of available support services leads to a positive outcome. However, if the available support services are inadequate, it leads to negative outcome.

In relation to the available support services and strategies adopted is teachers' knowledge on the supported services used in managing the instructional needs of children with disabilities. If teachers are well informed about these support services either through preservice or in-service trainings, it will positively improve on how the instructional needs of children with disabilities are managed. Nonetheless, if teachers have low level of knowledge on available support services, the instructional needs of children with disabilities will be poorly managed.

2.3 Inclusive Education in Early Childhood Education

Early childhood is a stage where all young children can have purposeful experiential learning and social opportunities. As an international term, early childhood denotes the period from birth to age eight (Bredekamp, 2020; Deiner, 2013; Essa, 2014) during which children receive a variety of care and educational services (Bartolo et al., 2016; Bredekamp, 2020; Deiner, 2013; Essa, 2014). Early childhood education is usually a provision, service, or practice aimed at addressing social equity and equality

and minimizes early disadvantages (OECD, 2015), and this further helps to empower all children and develop their potential (Ackah-Jnr, 2018). Early childhood is a window of opportunity for preventing potential delays and difficulties (Bartolo et al., 2016), but, due to socio-contextual differences, especially in the global South, not all children participate or are included in quality early childhood education programs. For this reason, early childhood education is sometimes marked by exclusion for many children, particularly those with disability or disadvantage.

To create equitable programs and services for all children, inclusive early childhood education (IECE) has increasingly become a major focus of national governments, education systems, and schools (Ainscow, 2020). IECE has the potential to alter the way society perceives the early education of children. It is driven by arguments that inclusion and early childhood education are inseparable. Research shows that quality early childhood education is important for all children, so commencing inclusion in early childhood is a prudent thing to do, and it is morally or ethically sound (Smith et al., 2012). Essentially, early childhood inclusion is integral to quality early childhood programs and classrooms (Guralnick & Bruder, 2016) and a means to ensuring all children have quality early growth and development. IECE is defined as the right to equal education and social experiences for all children with and without disability from birth to 8 years (Cologon, 2014; Smith et al., 2012). It is considered a best practice, process, and approach (Guralnick & Bruder, 2016) and it is committed to preserving children's right to learning, playing, developing, and living or socializing together in early childhood settings. For Guralnick and Bruder (2016), four key imperatives provide a strong framework to operationalize IECE practice: access, accommodations and feasibility, developmental progress, and social integration. Notions of IE from the global North (as opposed to the global South) neglect cultural

contexts, as in Ghana, but we believe the ultimate goal of inclusion is that all children will at least do well developmentally, educationally, and socially in inclusive early settings and programs when they are appropriately supported.

In Ghana, IE is a principal goal of the Inclusive Education Policy (Ministry of Education [MoE], 2015). Recently, the new National Teachers' Standards (MoE, 2017) recommended the use of inclusive approaches in early childhood settings. According to the 2010 Population and Housing Census, the prevalence of children with disability aged between 4 and 17 years old is 1.6% (130,000 children) of the estimated 24.6 million people. While this figure may be underestimated due to low detection rates and social stigma, enrollment of children with disability ranges from just 0.2% to 0.4% of total enrollment in Kindergarten (KG). Children with disability have lower attendance rates compared to those without disability at all levels of pre-tertiary education and the lowest attendance (MoE, 2012). Many children with disability, according to Kuyini and Abosi (2014), are excluded from regular school activities in Ghana.

2.4 Disability Defined

Disability is part of the human condition. Everyone is likely to experience it, either permanently or temporarily, at some point in their life (WHO & World Bank, 2011). People with disabilities are diverse and not defined by their disability (Al Ju'beh, 2015; WHO & World Bank, 2011). Disabilities may be visible or invisible, and onset can be at birth, or during childhood, working age years or old age. There is no single definition of disability (Mitra, 2006). Defining disability is complicated as it is 'complex, dynamic, multidimensional and contested' (WHO & World Bank, 2011, p. 3). It is not a matter of chance that different definitions occur. Different definitions

have been devised to suit different purposes. Sometimes a new definition is created based on criticism of another definition. This is, for instance, the story of the environmental definition and the social model of disability (Hughes, 2006), both of which emerged as a reaction to the functional definition, foremost among people in the disability movements in the UK and Sweden.

First, even if functional definitions are often criticized for not taking environmental aspects of disability into account, there are certain affirmative purposes of this definition. One such area is rehabilitation, which demands some kind of definition of disability that takes the body as its point of departure. Measuring needs and the kind of actions required to restore functions necessitates this kind of definition. Furthermore, there is an ongoing interest in comparing, for instance, the number of disabled people in different countries. Such censuses or surveys need to be able to "count heads", and traditionally such head counting has been conducted using functional definitions (United Nations, 2006, 2010). Thus, professions involved in rehabilitation, aids and statistics, for instance, may need definitions of disability that start from a functional understanding of the concept.

Second, as mentioned above, the purpose of the social model of disability was originally to move the gaze from the individual to the surroundings. As also mentioned, especially parts of the disability movement in the UK pointed out the push for such a definition, and the original version was proposed by one of the British disability organizations, the Union of the Physically Impaired Against Segregation (1976). Some disability researchers have also adopted this model. The social model claims that disability is a property of the environment, not of the human being. Today, most social researchers accept the notion of the environment as a causal (although

partial) agent of disability. Thus, an analysis of the society, intended to detect inaccessibilities and barriers, is dependent on a definition of disability that enables identification of such barriers. Naturally, a definition that focuses solely on the body is not suited to such purposes.

Third, the relative or environmental definition of disability has almost the same history as the social model. The environmental definition stems from the disability movement and has the same purpose as the social model, that is to move the gaze from the individual body to the environment. This approach to disability has been acknowledged by politicians and is the conceptual basis of Swedish disability policies.

Fourth, as has been stated above, the purpose of the administrative definition is to solve the distributive problems of the welfare state (Stone, 1985). Defining some people as disabled and some as not allows authorities to distribute support to some people, but at the same time provides arguments for not giving support to others. Although some people long for a society in which everyone who thinks s/he needs support gets support, the realist picture is quite the opposite. Most countries, in the EU as well as outside, are fighting the rising costs of social security. This will likely strengthen the need for definitions that clearly indicate who should receive and who should not. Thus, two important agents of the administrative definition are politicians and welfare authorities. Finally, feminist critique, among others, has stressed the importance of a subjective understanding of disability (Morris, 1991; Thomas & Woods, 2003; Wendell, 2001). Intersectionality and identity studies require definitions of disability that take the subjective experience into account. This part of disability studies has mushroomed during recent years, both in publications and at

conferences (e.g., Asch, 2004; Fredäng, 2003; McRuer, 2006; O'Neill & Hird, 2001; Omansky-Gordon & Rosenblum, 2001; Paterson & Hughes, 1999; Society for Disability Studies, 2005, 2006; Wilson, 2004). Without a subject, there is no identity construction to study. However, defining disability subjectively is not only a matter for research. Efforts are being made among disability activists and individuals to re-define disability to mean something positive. In this perspective, disability is taken into account as a positive aspect of a person's identity.

The UN Convention on the Rights of Persons with Disabilities (UNCRPD) recognised that 'disability is an evolving concept' (UNCRPD, 2006, p. 1). Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others' (UNCRPD, 2006). This fluid definition accommodates different understandings of disability or impairment (Schulze, 2010), but by defining disability as an interaction, makes clear that disability is not an attribute of the person (WHO & World Bank, 2011). An impairment on its own would not lead to disability should there be a completely inclusive and comprehensively accessible environment' (Al Ju'beh, 2015), which includes addressing attitudinal barriers such as stereotypes, prejudices and other forms of paternalistic and patronising treatment (Schulze, 2010).

2.5 Disability Issues in Ghana

Previous studies emphasize the significance of disabling barriers in Ghana. A study by Opoku et al., (2018) highlighted barriers in education, training, employment and the physical environment. Basically, people with disabilities are not getting proper education, are not being trained for proper jobs, and have a hard time getting

employed. Additionally, the physical environment has many disabling barriers, such as steps, which impedes the mobility of wheelchair users. Along these lines, Naami, (2014) highlighted architectural, transportation, information, and medical barriers. People with disabilities are also denied access to social activities, decision making, and leadership positions (Takyi et al., 2019). For instance, when Dr. Henry Seidu Danaa, a disabled lawyer, was nominated for a government position as minister for the Ministry for Chieftaincy and Religious Affairs, some local chiefs protested against his appointment, due to his disability (Sackey, 2015).

Barriers in healthcare are also a problem. For instance, people with communication disabilities are not going to learn about HIV because there are no HIV materials in accessible formats such as Braille for blind people or captioned videos in local languages for Deaf people (Evans, Adjei-Amoako, & Atim, 2016). Disability organizations have had to confront the problem of insufficient numbers of trained professionals. This problem has been confirmed in the literature, for example, by a study by Crowley et al., (2013) who found that there were only ten trained Speech Language Pathologists in Ghana in 2013. There is also a lack of trained special educators who can work with disabled children in schools. The 2013 report of "Inclusion Ghana" reported a "lack of awareness among policy makers and professionals and a lack of professional knowledge about intellectual disability, which resulted in increased risk of delayed diagnoses, secondary co-morbidities, persistent abuse, depleted social capital, and isolation" (Inclusion Ghana, 2013, p. 11).

According to Inclusion Ghana, it provided training for self-advocates with intellectual disabilities and also training for over 300 health professionals on how to provide understandable and accessible services for people with intellectual disabilities, as a

means to respond to this challenge. Amenyedzi, (2016), found that negative cultural attitudes about disability are widespread in Ghana, including in Christian churches. These attitudes often suggest that disabled people are cursed and need healing either through an exorcism or by faith healers. If they are not healed, these people are further stigmatized and excluded. Public health in Ghana has been formed, shaped and reproduced by the dynamics of colonialism. While poverty shapes access to healthcare and the provision of public health infrastructure more broadly (Badu, Agyei-Baffour, & Opoku, 2016), it also creates impairment. For instance, many of the muscular skeletal impairments in Ghana are caused by carrying water (Geere et al., 2018). Accessing skilled care is often impossible, a problem which is even worse for disabled people (Barlow & Reynolds, 2018; Crowley et al., 2013; Ganle et al., 2016).

Negative cultural attitudes are widespread. Disabled people are often exposed to cultural practices intended to heal them of their disability. If not healed, they are stigmatized, excluded, bullied, insulted, and ridiculed (Anwar, 2017). Agbenyega, (2003) stresses that cultural attitudes attribute disability to "witchcraft, sorcery, juju and magic" (p.4). Geurts and Komabu-Pomeyie, (2016) highlight oppressive cultural attitudes and stereotypes about disabled people and found that disrespect was common. Also, people with physical impairments, such as wheelchair users or amputees, and people with sensory impairments including blindness or deafness, are often assumed to have other impairments (e.g. mental illness or intellectual disability). There is lack of support from family members. Families are unwilling to provide for the needs of disabled relatives. Apart from parents, who may cater for the needs of their disabled children, other family members do not provide support. This leaves the disabled person with no option than to fend for themselves, in the case where their

parents are poor. With the lack of support from family, most persons with disabilities are dependent on the larger society for their daily bread. (Opoku et al., 2017).

2.5 Types of Disabilities

2.5.1 Physical impairment

A physical impairment might be defined as a disabling condition or other health impairment that requires adaptation. Persons with physical impairment disabilities often use assertive devices or mobility aids such as crutches, canes, wheelchairs and artificial limbs to obtain mobility (Biklen, 2000). According to Cole et al (2004) physical impairment is anything that limits the physical function of the child's body. Physical impairment can include challenges with large motor skills like walking, or small motor skills like holding objects and using scissors. A child may also have a medical disability that limits her ability to be physically active, such as a heart or breathing issue (Maulik & Darmstadt, 2007)

There are currently no reliable and representative estimates based on actual measurement of the number of children with disabilities (Filmer, 2008). Existing prevalence estimates of childhood impairment vary considerably because of differences wide range of methodologies and measurement instruments adopted (Convention on the Rights of the Child General Comment, 2006,). The limitations of census and general household surveys to capture childhood disability, the absence of registries in most low- and middle-income countries (LMICs), and poor access to culturally appropriate clinical and diagnostic services contribute to lower estimates (World Health Organization & World Bank, 2011). As a result, many children with physical impairment may neither be identified nor receive needed services (Mastropieri & Scruggs, 2004).

Evidence indicates that children with physical impairment are much less physically active than both their able-bodied counterparts (Flynt & Morton, 2004) and their peers with other disability types (Avissar, 2000). Children with physical impairment spend most of their time at school and home where they could accumulate physical activity (Booth & Ainscow, 2002).

2.5.2 Visual impairment

Visual impairment (VI) is a condition of reduced visual performance that cannot be remedied by refractive correction (spectacles or contact lenses), surgery or medical methods (DeCarlo, Woo & Woo, 2006). Consequently, it results in functional limitations of the visual system that may be characterized by irreversible vision loss, restricted visual field and decreased contrast sensitivity, increased sensitivity to glare as well as decreased ability to perform activities of daily living, such as reading or writing (Kavitha, Manumali, Praveen & Heralgi, 2015).

Corn and Lusk (2010), affirm that individuals with VI have measurable vision, yet experience difficulties accomplishing visual tasks even with the use of refractive correction. Furthermore, these individuals are sometimes capable of enhancing their abilities to accomplish visual tasks with the use of compensatory low vision aids and/or environmental adjustments (Corn & Lusk, 2010). This description of VI is useful because it considers that individuals with VI may not always display predictable clinical changes in visual function and that changes in functional vision may not always correlate to measurable changes in clinical findings. According to Corn and Lusk (2010), the World Health Organization (WHO) in 1992 added a functional dimension to the definition of VI. This definition is stated as a person with low vision is one who has impairment of visual functioning even after treatment

and/or standard refractive correction, and has VA of less than 6/18 to light perception, or a visual field of less than 10 degrees from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task (World Health Organization, 2017).

This definition refers to the visual acuity (VA) of the better eye with the best possible refractive correction. According to the International Classification of Diseases, 10th revision (ICD-10), VI may be classified into four levels, namely mild or no VI, moderate VI, severe VI and blindness (World Health Organization, 2016). Moderate and severe VI are collectively categorised as VA of less than 6/18, but equal to or better than 6/120 in the better eye with the best refractive correction (World Health Organization, 2007; 2016). When the extent of the visual field is considered, an individual with a visual field radius of no greater than 10 degrees around the central point of fixation in the better eye is placed in the third category (blindness) (World Health Organization, 2016).

2.5.3 Hearing impairment

Hearing impairments are classified into degrees based on the average hearing level for various frequencies (pitches) by decibels (volume) required to hear, and also by the ability to understand speech. Loudness of normal conversation is usually 40-60 decibels. A person is considered deaf when sound must reach at least 90 decibels (5-10 times louder than normal speech) to be heard, and even amplified speech cannot be understood, even with a hearing aid (Olusanya, Bamigboye & Somefun, 2012). Hearing impairment may be Sensorineural or conductive. Sensorineural involves damage to the nerves used in hearing (i.e., the problem is in transfer from ear to brain). Causes include ageing, exposure to noise, trauma, infection, tumours and other

disease. Conductive hearing loss is caused by damage to the ear canal and mechanical parts of the inner ear. Causes include birth defects, trauma, foreign bodies or tumours (Gopinath et al., 2012).

Hearing impairments can be found in all age groups, but loss of hearing acuity is part of the natural ageing process. The number of individuals with hearing impairments will increase with the increasing age of the population and the increase in the severity of noise exposure (Freeland, Jones & Mohammed, 2010).

2.6 Teacher Knowledge about Support Services in Managing the Instructional Needs of Children with Disabilities

In more and more countries, learners with disabilities and those experiencing diverse barriers to learning are gaining access to mainstream schools and curricula (Hayes & Bulat, 2017). It requires great effort over many years to prepare a school system as well as the schools to be inclusive contexts offering effective education (Janney & Snell, 2013). Seeing that children and communities differ greatly, there is need to find out what works for particular learners in particular schools and classroom situations. Inclusive education is thus an 'evolutionary process'. Instead of inclusion being a reform effort, schools are trying to integrate their human as well and their resources in order to offer integrated improvements to cater for all learners (Janney & Snell, 2013).

To facilitate learning opportunities of children with disabilities in early childhood centres, teachers should use appropriate teaching strategies and materials to reduce or eliminate children's deficits in specific learning areas. Teachers are to provide children with successful learning experiences regardless of their disabilities, in order to reach their goal for a successful future (Kumar & Raja, 2010). Therefore, the

teachers should have access and knowledge various support in order to assist these learners to achieve their full potentials.

Teachers' knowledge can influence many facets of their teaching practice (Ruppar, Gaffney & Dymond, 2015; Stough & Palmer, 2003). Ruppar et al. (2015) found that teachers' decisions about instruction, curriculum, and learner potential were influenced by their beliefs, self-efficacy, and expectations and knowledge they had on support services available. Stough and Palmer (2003) illustrated the powerful effect of teachers' knowledge on support services on the decisions they make during instruction. Among these experts, the more information the teachers had the more effectively they assessed students and provided instruction that met learners' needs.

DeSimone and Parmar (2006) found that knowledgeable teachers tend to use more effective teaching strategies in inclusive classrooms. Teachers who are well-informed about available support services have been shown to communicate with learners more effectively, facilitate meaningful dialogue, and provide accommodations (Mariage, Englert, & Garmon, 2000; Soto, 1997). Teachers have been shown to respond to academic and behavior issues more of learners with special educational needs effectively if they have knowledge about support services available to them (Eikeseth, 2010). The level of information teachers have on available support service to them can also impact how effectively they teach academics, such as reading, to struggling learners (Washburn, Joshi & Binks-Cantrell, 2011).

Research in South Africa has found that teachers report that they experience the implementation of inclusive practices in their classrooms as stressful and that contextual dilemmas such as the lack of formal support structures play an important role (Walton et al., 2014; Engelbrecht et al., 2016). This necessitates continuous

teacher training, classroom support and teachers' necessary skills to know how to harness support within their learners (DoBE, 2011).

According to McLeskey, Waldron and Reddy (2014), teachers continue to struggle to meet the needs of special needs children, while they are also required to maintain high quality education practices. Many mainstream teachers do not have a formal initial teacher education qualification that included training in how to respond, within mainstream classrooms, to diverse learning needs (Dreyer, Engelbrecht & Swart, 2012). They were either trained only for general mainstream education or so-called "specialised education" in separate educational settings (Dreyer, Engelbrecht & Swart, 2012). This model of initial teacher education and support for learners is based on a medical deficit approach, where specialised intervention is needed and support focuses on support by specialists in Education Support Services. The result has been that teachers believe that they are not able to provide the support needed in classrooms and that the needs of especially learners with disabilities are best met in separate classrooms because of inadequate training (Armstrong & Barton, 2008; Florian & Black-Hawkins, 2010; Florian & Rouse, 2010:190; Devecchi, Dettori, Doveston, Sedgwick & Jament, 2012; Donohue & Bornman, 2014; Dreyer et al., 2012; Geldenhuys & Wevers, 2013; Hay, 2012; Nel et al., 2013), so subsequently, the majority of learners with disabilities still attend special schools (Donohue & Bornman, 2014).

Netherton and Deal (2007) contented that teachers might have the knowledge about teaching methods and how to design the curriculum according to learners' needs, which are the key components of children's academic success. However, inadequate information and insufficient pedagogical strategies on how to integrate the assistive

technology into the ordinary curriculum is still an anxiety among teachers (Netherton & Deal, 2007). To illustrate this, a study Keetam and Alkahtani (2013) demonstrated teacher concerns about their training programs that do not provide sufficient coursework and field experience to enable them to support learners with special educational needs in mainstream classroom.

Teachers' knowledge towards assistive technology can determine the extent to which technologies are used in the process of teaching and learning (Lindeblad, et al., 2016). In order to enhance the utilization of assistive technology as an intervention, the teachers should know which techniques and strategies are useful in different kinds of learning situations, and how to use the technique as an effective intervention that can enable children to become more strategic, effective and lifelong learners (Alper & Raharinirina, 2006). However, what teachers do, and what they really know about assistive technology is dependent upon their skills, experience, knowledge and level of competence in inclusive practices (Cope & Ward, 2002). Alkahtani (2013) found that teachers do not have adequate level of knowledge and skills of using assistive technology. He then recommended that teachers should have pre-service and in-service training to increase their overall knowledge of implementing assistive technology and using universal design for learning for learners with disabilities.

Furthermore, the teaching strategies that are used to accommodate children with special needs are usually informed by the teachers' knowledge of the child's needs and their assessment of the child's strengths and weaknesses (Davis & Wilson, 1999; Cummins, Cheek & Lindsey 2004; Bell, McPhillips & Doveston, 2011). However, teachers usually do not have the requisite knowledge and skills necessary to assist the children with disabilities (Bell, McPhillips & Doveston, 2011).

2.7 Available Teacher Support Services in Meeting the Instructional Needs of Children with Disabilities

2.7.1 Support services in schools

For many people with disabilities, assistance and support are necessary condition for their participation in society. Lack of required supports services may render disabled people too reliant on non-disabled peers and other members within their environment, preventing both the disabled person and the non-disabled peers from being economically engaged and socially integrated (Mikkelsen, 2005). There is no one-size-fits-all approach of supportive services that will operate in all situations and suit all requirements. A wide range of providers and models is needed. However, the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 1989) promotes the underlying premise that services should be offered in the community, not in segregated settings (Lipsky & Gartrie 1997).

Individual-centered services are desirable because they include people in decision-making about their assistance and provide them maximal control over their lives. A sign language interpreter, for instance enables a deaf person to work in a mainstream professional environment. Many people with disabilities need assistance in order to live a happy life and to be able to engage in social, intellectual, and economic activities on an equal footing with others (California Department of Justice, 2003).

Supportive services are developmental, corrective and other support services required to assist a student with a disability to benefit from instruction. They are designed to help the student in achieving the goals of his or her instructional programme, including participation in the general educational curriculum, classroom achievement, and education with non-disabled peers (hearing peers).

According to Oppong (2003), support services are provided to learners with disabilities in order for them to have equitable, participative, and access to the mainstream school curriculum. The term includes specialised or adapted training, evaluation or assistance with effective using adaptive equipment and accommodations. According to Oppong (2003), there are three types of supporting services: equipment, personnel and materials. Learners with disabilities may attain academic success without relying on their non-disabled when all of this technology, such as computers, projectors, and acoustic listening devices, is utilised.

The availability of educational support services and resources in mainstream schools is seen as one of the school factors that tend to promote the academic success of special educational needs children. In this instance, a resource is a source of aid or support that may be drawn upon when the need arises in order to execute a task. These supports often come in the form of teaching resources. Teaching resources can be anything a teacher prepares or uses to make learning easier than it would have been without it (Tamakloe, Amedahe & Atta, 2005). Similarly, a learning resource is that which the student or learner himself/herself prepares and/or uses to make learning easier than it would have been if he or she had not prepared and used it. They are also referred to as instructional aids or devices (Nacino-Brown, Oke & Brown, 1985). According to Nacino-Brown, Oke and Brown (1985), these aids and devices make learning clearer and more interesting and include: visual materials such as three-dimensional materials like objects; printed materials like textbooks; and graphics in the form of posters, maps and diagrams. All these, in diverse ways, help make teaching and learning more efficient and beneficial for children with special educational needs.

These resources, together with support, play a crucial role in effective teaching and learning. When applied to inclusion, the need for these resources and support become even more determinative. Teachers in inclusive settings need to augment their teaching with the use of such resources. It is only then that their teaching can be meaningful and beneficial to children with special education needs. The lack of, or inadequate, provision of these, therefore, spells disaster for children with disabilities and the practice of inclusion.

Research has shown that the continuous absence of disabled children in mainstream schools is as a result of the bad perceptions and attitudes of teachers; and the lack of teaching and learning aids and support services for the proper inclusion of children with special educational need (Agbenyega et al., 2005). This predicament clearly points to the perceptions certain stakeholders of education have towards full inclusion in Ghanaian basic schools. Negative or positive vibes towards inclusive education may be dependent on what educators see to be lacking in the regular school system (Agbenyega et al., 2005). This underscores the importance of teacher support, and provision and availability of resources for inclusion to be successful.

2.7.2 Support services for teachers in inclusive schools

Teachers are a – and perhaps the – key element in a child's learning environment, so it is important that they have a clear understanding of inclusive education and a strong commitment to teaching all children (UNICEF, 2013). All too often, however, teachers lack appropriate preparation and support in teaching children with disabilities in regular schools. This is a factor in the stated unwillingness of educators in many countries to support the inclusion of children with disabilities in their classes (Forlian & Chris, 2009). For example, one study of prospective teachers of special education

in Israel found they held unhelpful preconceptions about people with disabilities, and that some discriminated between different types of disability (Tur-Kaspa, Amatzia & Tova, 2000). Resources for children with disabilities tend to be allocated to segregated schools rather than to an inclusive mainstream education system. This can prove costly as well as inappropriate (Latimier & Jan, 2011).

A review of the situation of children with disabilities in 22 European countries highlighted the lack of training of regular teachers to work with children with disabilities as a major concern. Most of the time, these learners were taught by support staff rather than certified teachers. Teacher training has proved effective in fostering commitment to inclusion. A study found that school principals who had taken more courses on disability expressed more inclusive views and shifting attitudes benefit learners; positive views on inclusion translated into less restrictive placements for specific s with disabilities (Praisner, 2003). Another study by Shade & Roger (2001) found that a course on inclusion for those studying to be teachers was effective in changing their attitudes, so that they favoured including children with mild disabilities in the classroom

The greatest opportunity appears to exist among teachers who are still fresh in the profession. A recent systematic literature review of countries as diverse as China, Cyprus, India, Iran, the Republic of Korea, the State of Palestine, the United Arab Emirates and Zimbabwe found that teachers with the least general teaching experience had more positive attitudes than those with longer service. Teachers who had received training in inclusive education had more positive attitudes than those who had received no training, and those who had the most positive attitudes were those with actual experience of inclusion (deBoer, Sip & Alexander, 2011).

Yet pre-service training rarely prepares teachers to teach inclusively. Where training exists, it is of variable quality. Although numerous toolkits exist, these are not always geared to a specific context, and so will frequently contain foreign concepts. Group learning is one example. Teachers have responded negatively to pictures of children with and without disabilities seated in groups, as this is at odds with the way learners interact in more traditional classrooms. Another concern is the lack of diversity among teaching personnel. Teachers with disabilities are quite rare and, in some settings, considerable obstacles exist for adults with disabilities to qualify as teachers. In Cambodia, for example, the law states that teachers must be "free of disabilities" (Miles & Ian, 2005).

Teachers tend to work in isolation, which means they are often unsupported in the classroom, and are often under pressure to complete a narrow syllabus imposed from above. Inclusive education requires a flexible approach to school organization, curriculum development and pupil assessment (Miles, 2012). Such flexibility would allow for the development of a more inclusive pedagogy, shifting the focus from teacher-centred to child-centred to embrace diverse learning styles (Kalyanpur, 2011).

Teachers need to be able to call on specialist help from colleagues who have greater expertise and experience of working with children with disabilities, especially children with sensory or intellectual impairments. For example, specialists can advise on the use of Braille or computer-based instruction (Schurmann, 2006). Where such specialists are relatively few, they can travel between schools as needed. Even these itinerant specialist teachers can be in short supply in such low-income areas as Sub-Saharan Africa (United Nations Children's Fund, 2020). This presents an opportunity

for appropriate support from providers of financial and technical assistance from the international to the local level.

2.8 Support Services in Meeting Instructional Needs of Children

2.8.1 Access to assistive technology

Assistive technology is an umbrella term, and the International Classification of Functioning, Disability, and Health (ICF) defined assistive products and technology as any product, instrument, equipment or technology adapted or specially designed for improving the functioning of a person with a disability (Ellis, 2016). The definition of Assistive Technology can vary slightly around the world. According to the United States U.S. Department of Education, IDEA (2004), the description of an assistive technology device is any item, piece of equipment, or product system whether acquired commercially off the shelf, modified, or customised that is used to increase, maintain or improve functional capabilities of individuals with disabilities.

While the phrase assistive technology may make us think of computers and computerized devices, assistive technology can also be very low-tech. For example, pencil-grips (the molded plastic grips that slip over a pencil) are considered assistive technology. Assistive technology that helps learners with learning disabilities includes computer programs and tablet applications that provide text-to-speech, speech-to-text, word prediction capabilities and graphic organizers. In comparison to other forms of support services, assistive technology may have a significant effect in helping learners with disabilities progress towards the goals outlined on their individual education plans (Watson, Ito, Smith, & Andersen, 2010). Assistive technology helps in two ways: it can help the student learn how to complete the task and it can help to bypass an area of difficulty.

There are also several types of assistive technology categories to be considered when choosing a device. These can include low technology (low tech) to high technology (high tech) devices. Cook and Polgar (2008) described low technology devices as ‘‘inexpensive devices that are simple to make and easy to obtain” (p. 6). Examples include head pointers, whiteboards, using pictures for communication, and modified eating utensils. An additional category of devices as, stated by Glennen and DeCoste (1997), point out strategies with no technology (no tech). They report, “No tech strategies involve no equipment, low tech strategies involve simple equipment, and high-tech strategies involve more sophisticated, usually programmable, types of equipment” (p. 379). From this perspective, any computer device can represent high technology. According to Dyal, Carpenter, and Wright (2009), a technology assistive device can be considered light tech or high tech. For example, they illustrate using special paper to help learners read, write, or use a simple pencil grip as a light tech device. A high-tech device would include computers with extended keyboards and modified screen.

High tech devices can often be cost prohibitive along with the programs needed to make the learners with disabilities successful (Viner, Singh & Shaughnessy, 2020). Due to the high costs of digital devices, such as hardware and software, it is essential to identify the assistive technology needs of the learner. This process, in some countries, might begin with an effective individual Education Plan (IEP) before an assistive technology device is chose (Viner, Singh & Shaughnessy, 2020). Once an effective IEP has been developed, it can be used as a guide in choosing the appropriate device for the learner. Finally, resources for that individual from the local school, district, state, or national agency need to be located and obtained (Viner, Singh & Shaughnessy, 2020).

Assistive technology devices can help learners to access information and be successful in the classroom. Currently, however, only 5–15 percent of children with disabilities in low-income countries have access to assistive technologies or assistive devices (Saebones et al., 2015). Furthermore, many countries may be using severely outdated technology—for example, teaching learners to write braille using slates and stylus tablets rather than braillers. In low-income countries where budgets for assistive devices are limited, teacher finds it difficult to assist learners in this regard (Saebones et al., 2015). The authors further contended that funding assistance from donor agencies supporting the education sector may be an avenue for obtaining this equipment.

2.8.2 Using itinerant teachers/special educator

In some countries, special educators support mainstream teachers in welcoming diversity within the classrooms and learning how to teach to all children (Bulat et al., 2017). The presence of specialist teachers within mainstream settings highly depends on the country's understanding of diversity and inclusion (European Agency for Special Needs and Inclusive Education, 2015; Cheshire, 2019). Yet, careful attention should be paid in these situations. The presence of special educators should by no means release mainstream teachers of their responsibility to teach all children or result in the segregation of children with disabilities within mainstream schools (Cheshire, 2019)

An itinerant teacher is a trained special educator, whose duty is to diagnose and draw up a remedial programme for the children with special needs (Subbey, 2017). In many countries where the number of trained special education teachers is limited, itinerant or visiting teachers or, in some cases, health professionals can provide support to

general education teachers. Under this model, special educators or experts who are trained in a specific type of disability travel to different inclusive schools to offer advice and mentorship and to provide technical assistance to general education teachers and schools. In this way, even schools with limited funding (i.e., where special educators cannot be present in each school) can benefit from special education expertise and knowledge. Countries that have implemented the itinerant teacher model include Kenya, Malawi, and Uganda (Lynch & McCall, 2007).

Currently, teacher preparation programs do not graduate enough special education instructors to fulfill the needs of the K-12 system. Demand has been increasing for the past twenty years and vacancies will continue to be problems for special education administrators (Billingsley 2004; Gersten et al. 2001: Miller, Brownell, and Smith 1999). Each year, colleges and universities graduate nearly 22,000 special education teachers, which is about half the number required to fill vacant positions (Katsiyannis, Zhang, and Conroy 2003). The researchers have stated that "most recent reports indicate that in 1999-2003, many positions for special education teachers were left vacant or filled by substitutes" (p.252). Because the supply is not sufficient to fill vacancies, highly qualified special education to take care are not available for all classrooms.

2.8.3 Support teacher

The role of the support teacher is to ensure the presence, participation and progress of all learners in the classroom, without exception. Ainscow (2012), citing research carried out by Takala et al. (2009) defined three different situations based on three alternative support approaches:

1. The first approach, one-to-one teaching, was considered to be effective in providing individual attention, but raised concerns for three different reasons: the pressure that could be exerted on the learners receiving support, the lack of contact between these learners and the rest, and the stigma of being separated from the ordinary context.
2. The second approach, small group teaching, was considered favourable because of the possibility of offering support in a quiet and relaxed environment, but it also raised concerns about how some learners suffered when they were removed from their peer group. They felt stigmatized and missed what was worked on in the ordinary class. Teaching in small groups did not offer the possibility of enough individual attention. To avoid this stigma and minimize difference, in research conducted in classrooms to include children with disabilities, Lindsay, Proulx, Scott, & Thomson (2014) observed the benefits of having a mixture of different children with the support teacher to do some tasks. The criteria were never the level of the children: any child could receive additional help.
3. The third approach, collaborative teaching with two teachers, was the modality with best results and most favoured by teachers. In this approach, more children were able to have access to support and it allowed them to re-main in the classroom without missing any content.

2.8.4 Counselling services

Counseling is face to face relationship between the counselor and the counselee. It is a professional service offered by a competent counselor and, therefore, denotes a professional relationship. Buku (2016) defined counseling as a relationship between a professionally trained and a competent counselor and an individual seeking help in

giving self-understanding improved decision-making behavior change, skills for problem solving and development.

Guidance and counselling services are for all learners, including those with special needs. It is the counselors' responsibility to help learners with special needs regardless of the challenges they face by using their knowledge and skills in helping all learners especially learners with special needs (ASCA 2016; Serres & Nelson 2011).

Studies from Frostad and Pijl (2007) found that learners with special needs suffer from communication problems and in understanding their peers, especially those with autism, behavior problems and intellectual disabilities. This is because they find learners with special needs have lower social skills than their peers (Greenspan & Granfield 1992; Garrison-Harrell & Kamps 1997; Pfiffner & McBurnett 1997; Scheepstra, et al. 1999; Soresi & Note 2000; Monchy et al. 2004; Frostad & Pijl, 2007). Having training and guidance of social skills from the counsellors can help learners with special needs to avoid further isolation from their peers and they should do early-stage training to ensure that they have the right skills (Frostad & Pijl, 2007). Thus, school counselors play an important role in helping learners with special needs to adapt to school environments among their peers.

The counseling services provided to children with disabilities are significantly outside the average range of general counseling. Many areas of the counseling profession in primary schools have fallen short, with a lack of understanding and appreciation (e.g., attitudes, values, beliefs), a limited repertoire of skills (e.g., techniques, strategies, interventions), and knowledge base (Kahveci, 2016). When school counselors do not provide services or develop programs to accommodate the needs of children with

disabilities, they deny these learners of their expertise and themselves of the enrichment that comes with working with children with disabilities who are challenging, deserving, and responsive (Kahveci, 2016).

A study by Azharizah and Salleh (2011) found that knowledge of guidance and counselling services for special education learners was very limited. This is consistent with a study conducted by Slee (2007), who found that school counsellors have less knowledge about special education policy and are burdened with a lot of cases.

Most studies have found that most school counsellors do not get the proper training to understand and explore the uniqueness of the issues and problems as well special needs of special education learners. Most of the SEIP teachers who are assigned to assist these learners are also not given the training, skills and techniques of systematic counselling. As a result, many school counsellors and SEIP teachers feel less confident in dealing with these special needs learners. Lack of exposure causes counsellors to experience fear and anxiety when dealing with a disabled group (Zahra, 2014).

However, the study of Norafifah and Mohamad Hashim (2017) found that there was no difference in applying guidance and counselling services to special needs and mainstream learners as expected by the school counsellors which causes them to delay assisting this group while school counsellors only needed to integrate traditional counselling approaches with clients of various cultures (Corey 2013). However, cultural factors play a role as there are cultural differences between Malaysia and Western countries. Norafifah and Mohamad (2017) added, among the constraints of providing comprehensive counselling services to special needs learners, are issues of collaboration between school counsellors and other school staff. Therefore, to be

successful in providing guidance and counselling services to special needs learners, there must be cooperation from all parties involved in the education of special needs learners.

2.8.5 Interpreting service

Sign language interpreting is a service provided by hearing people to a community of deaf and hearing people, who do not understand a common language (World Federation of the Deaf, 1993). Sign language interpreters in this context are typically hearing people who translate the voice of a speaker(s), into signed/voiced language of Deaf people into any other linguistic vocabulary for the hearing people. To demonstrate proficiency, interpreters are expected to be bi-lingual and should know a particular languages and skills required to work in different interpreting settings (World Federation of the Deaf, 1993).

Including deaf learners in a regular classroom means that they need special provisions to have accessibility socially and academically (Schick, 2005). Not one learner has the same needs as the other, which means a variety of adaptations that need to be considered by the educators (Stinson & Antia, 1999). Deaf or hard of hearing learners have different preferences for communication in the classroom. Some learners prefer oral communication but there are also learners who use a sign language interpreter, speech to text writers, a communication assistant, or a combination of these (Stinson et al., 1996).

The teacher has the key role in facilitating or limiting the communication access and participation of the D/HH student (Stinson et al., 1996). When working with a sign language interpreter in the classroom, the teacher must focus on their communication

skills and at the same time be informed with the D/HH student on the best strategies for using interpreters effectively in the classroom (Antia et al, 2009).

The need for support services, such as sign language interpreters, is universal (Lang, 2002). It is not just placing a student in a classroom; the student needs communication access, classroom modifications, and other necessary accommodations to be successful (Antia et al., 2009). These support services create the possibility for the D/HH student to participate academically and socially in a regular school setting (Cerney, 2007; Spradbrow & Power, 2000). Spradbrow and Power (2000) noted that next to the support services, the student also needs assistance to gain the necessary skills and confidence in how to educate others about their difficulties or support needs. When the D/HH student experiences this supportive environment then he or she experiences less of a 'handicap' and has more life satisfaction (Gilman, et al. 2004).

2.8.6 Orientation and mobility service

Orientation has traditionally been defined as the process of using the senses to establish one's position and relationship to other objects in the environment, whereas mobility refers to the capacity, readiness, and ability to move about in the environment (Hill, 1986). Orientation and mobility training helps a person with a visual impairment know where he or she is in space and where he or she wants to go (orientation) and how to carry out a plan to get there (mobility). Orientation and mobility services are among the related services provided to eligible learners as part of their individual education programs (IEP), with their focus being determined on the basis of an evaluation of the child by an orientation and mobility specialist. Because children exhibit a range of visual functioning, orientation and mobility instruction can

encompass a range of content. Wall-Emerson and Corn (2006) found that experts differed regarding essential orientation and mobility skills for learners with low vision compared with those for learners who are blind.

A key feature of orientation and mobility training is that it takes place in natural environments, both inside and outside the school context (Allison and Sanspree 2006; Pierangelo and Giuliani 2004; Smith and Levack 1996). Mobility specialists typically place learners in a real-world context and give them practical and age-appropriate problems to solve. Young learners may be asked to find their way to and around their school building, whereas older learners may be taught to access community services, shop, arrange for and use public transportation, and find their way around their neighborhoods and business areas. Acquiring these kinds of 'fundamental and enabling life skill(s)' (Huebner and Wiener 2005), "like the acquisition of academic and social skills, is of great importance to the social and economic independence of blind and visually impaired persons" (U.S. Department of Education 2000).

Orientation and mobility in public school settings should be broadly conceived and involve a coordinated team approach in order to meet the needs of a diverse population of children with visual impairments. The delivery of orientation and mobility services should not be limited to totally blind children. Infants and preschool children, children with multiple impairments, and children with low vision can also profit from orientation and mobility instruction (Hill, 1986). Likewise, orientation and mobility instruction should not be taught in isolation, nor should it be limited to the teaching of only formal orientation and mobility skills and techniques. Sensory skills, concept development, motor development, and environmental and community awareness are all integral components of the orientation and mobility process.

Orientation and mobility instruction should be related to and an integral part of cognitive, perceptual, social, self-help, personality, and language development (Hill, 2015).

2.8.7 Speech-language pathology service

The development of communication skills is important for all learners and can impact school success The school-based speech-language pathologist (SLP) plays an important role in education and may serve on both the special education and general education teams SLPs may serve learners directly or work with educators to address communication and language needs (Virginia Department of Education, 2018).

Effective collaboration between speech and language therapists (SLTs) and teachers is essential in meeting the needs of children with developmental language disorders in school, but it is difficult to achieve (Gallagher, Murphy & Conway, 2019). speech-language pathologists' service delivery models may have addressed many of the concerns expressed by educators (Tomes & Sanger, 1986). For example, the consultative model of service delivery should increase the communication and sharing of information between teachers and speech-language pathologists. Also, increased attempts at collaboration and co-teaching should facilitate the sharing of classroom management suggestions for learners with communication disorders and the incorporation of teachers' suggestions into the development of speech-language pathology treatment programs (Creaghead, 1993).

School Speech-Language Pathologists attend a variety of meetings with other teachers and other exceptional children speech-language pathologists at the school and district level to positively impact learner outcomes. In addition, they serve on committees at both the school and district level. They provide direct specialized instruction through

a variety of service delivery models including classroom based inclusive practices and pull out as well as services on behalf of learners through consultation and collaboration with speech-language pathologists and other professionals (Williams, 2019).

White and Spencer (2018) contended that lack of collaboration between SLTs and school staff is often perceived as a barrier to successful outcomes for children SLTs and teachers report that they value regular liaison, but lack of time often prevents this (Law et al., 2002, Baxter et al., 2009). In a small-scale study consisting of interviews with four primary-school headteachers, Leyden, Stackhouse and Szczerbinski (2011) suggested that best practice in implementing SLT strategies typically consists of a top-down model overseen by the leadership team within school, with regular dedicated time available for collaboration between SLTs and teaching staff. McKean et al., (2016) also found, in interviews with 33 participants (school staff, SLTs and other professionals such as Educational Psychologists), that collaborative practice was perceived as important. In particular, consistent relationships with the same professionals over time was felt to build trust and enable 'bridging' across professional boundaries (McKean et al., 2016). However, there is often limited funding for SLT input in schools (Pring et al., 2012; Lindsay et al., 2002), leading to a lack of opportunity for collaboration between SLTs and school staff and, therefore, reduced effectiveness of consultative models.

2.9 Strategies in Improving Teacher Support Services in Schools

Ensuring the inclusion of children with disabilities in education requires both systemic and school level change (McGregor & Vogelsberg, 1998). As with other complex change, it requires vision, skills, incentives, resources, and an action plan

(Villa, et al., 2003). One of the most important elements in an inclusive educational system is strong and continuous leadership at the national and school levels to improve teacher support services in schools such as the counselling services, assistive technology, interpreting services, orientation and mobility services, speech language pathology services amongst others. The following, if well instituted and implemented will improve the support services for teachers in schools in managing the instructional needs of children with disabilities.

2.9.1 Recognizing and addressing individual differences

Education systems need to move away from more traditional pedagogies and adopt more learner-centered approaches which recognize that each individual has an ability to learn and a specific way of learning. The curricula, teaching methods and materials, assessment and examination systems, and the management of classes all need to be accessible and flexible to support differences in learning patterns (Porter, 2001; UNESCO, 2009).

Assessment practices can facilitate or hinder inclusion (UNESCO, 2003). The need to attain academic excellence often pervades school cultures, so policies on inclusion need to ensure that all children reach their potential (Slee, 2003). Streaming into ability groups is often an obstacle to inclusion whereas mixed-ability, mixed-age classrooms can be a way forward (UNESCO, 2009).

Individualized education plans are a useful tool for children with special educational needs to help them to learn effectively in the least restrictive environments. Developed through a multidisciplinary process, they identify needs, learning goals and objectives, appropriate teaching strategies, and required accommodations and supports (McCausland, 2005). Creating an optimum learning environment will assist

children in learning and achieving their potential (UNESCO, 2009). Information and communication technologies, including assistive technologies, should be used whenever possible (UNICEF, 2013). Some students with disabilities might require accommodations such as large print, screen readers, Braille and sign language, and specialized software. Alternative formats of examination may also be needed, such as oral examinations for non-readers. Learners with difficulty in understanding as a result of intellectual impairments may need adapted teaching styles and methods. The choices regarding reasonable accommodations will depend on the available resources (Chimedza & Peters, 2001).

2.9.2 Providing additional supports

To ensure the success of inclusive education policies some children with disabilities will require access to additional support services (UNESCO, 1994). The additional costs associated with these is likely to be offset in part by savings from students in specialized institutions transferring to mainstream schools.

Schools should have access to specialist education teachers where required. In Finland the majority of schools are supported by at least one permanent special education teacher. These teachers provide assessments, develop individualized education plans, coordinate services, and provide guidance for mainstream teachers (Marjatta, Raija, & Minna, 2009). In El Salvador "support rooms" have been set-up in mainstream primary schools to provide services to students with special education needs, including those with disabilities. The services include assessments of students, instruction on an individual basis or in small groups, support for general education teachers, and speech and language therapy and similar services. Support room teachers work closely with parents, and receive a budget from the Ministry of

Education for training and salaries. In 2005 about 10% of the schools nationwide had support rooms (Boyle & Hernandez, 2006).

Teaching assistants, also known as learning support assistants, or special needs assistants are increasingly used in mainstream classrooms. Their role varies in different settings, but their main function is to support children with disabilities to participate in mainstream classrooms but they should not be regarded as substitute teachers. Their successful deployment requires effective communication and planning with the classroom teacher, a shared understanding of their role and responsibilities, and ongoing monitoring of the way support is provided (Jerwood, 1991 & Logan, 2006). There is a danger that extensive use of teaching assistants may discourage more flexible approaches and side-line disabled children in class. Special needs assistants should not hinder children with disabilities from interacting with non-disabled children or from engaging in age-appropriate activities (Watson, 1998).

Early identification and intervention can reduce the level of educational support children with disabilities may require throughout their schooling and ensure they reach their full potential (UNESCO, 2009). Children with disabilities may require access to specialist health and education professionals such as occupational therapists, physiotherapists, speech therapists, and educational psychologists to support their learning (UNESCO, 2009). A review of early childhood interventions in Europe stressed the need for proper coordination among health, education, and social services.

Making better use of existing resources to support learning is also important, particularly in poorer settings. For example, while schools in poor rural environments may have large class sizes and fewer material resources, stronger community

involvement and positive attitudes can overcome these barriers (Stubbs, 2008). Many teaching materials that significantly enhance learning processes can be locally made. Special schools, where they exist, can be valuable for disability expertise (early identification and intervention) and as training and resource centres (UNESCO, 1994). In low-income settings itinerant teachers can be a cost-effective means of addressing teacher shortages, assisting children with disabilities to develop skills such as Braille literacy, orientation and mobility and developing teaching materials.

2.9.3 Building teacher capacity

The appropriate training of mainstream teachers is crucial if they are to be confident and competent in teaching children with diverse educational needs. The principles of inclusion should be built into teacher training programmes, which should be about attitudes and values not just knowledge and skills (UNESCO, 2003). Teachers with disabilities should be encouraged as role models. In Mozambique a collaboration between a teacher training college and a national disabled people's organization, ADEMO, trains teachers to work with learners with disabilities and also provides scholarships for students with disabilities to train as teachers (Schurmann, 2006).

Several resources can assist teachers to work towards inclusive approaches for students with disabilities such as:

1. Embracing diversity: Toolkit for creating inclusive, learning friendly environments contains nine self-study booklets to assist teachers to improve their skills in diverse classroom settings (UNESCO, 2009).
2. Module 4: Using ICTs to promote education and job training for persons with disabilities in Toolkit of best practices and policy advice provides information on

how information and communication technologies can facilitate access to education for people with disabilities (UNICEF, 2013).).

3. Education in emergencies: Including everyone: INEE pocket guide to inclusive education provides support for educators working in emergency and conflict situations.

Teacher training should also be supported by other initiatives that provide teachers with opportunities to share expertise and experiences about inclusive education and to adapt and experiment with their own teaching methods in supportive environments (Grimes et al., 2009). Where segregated schools feature prominently, enabling special education teachers to make the transition to working in an inclusive system should be a priority.

2.9.4 Removing physical barriers

Principles of universal design should underlie policies of access to education. Many physical barriers are relatively straightforward to overcome: changing physical layout of classrooms can make a major difference (Ferguson, 2008). Incorporating universal design into new building plans is cheaper than making the necessary changes to an old building and adds only around 1% to the total construction cost (UNESCO, 2009).

2.9.5 Overcoming negative attitudes

The physical presence of children with disabilities in schools does not automatically ensure their participation. For participation to be meaningful and produce good learning outcomes, the ethos of the school valuing diversity and providing a safe and supportive environment is critical.

The attitudes of teachers are critical in ensuring that children with disabilities stay in school and are included in classroom activities. A study carried out to compare the attitudes of teachers towards students with disabilities in Haiti and the United States showed that teachers are more likely to change their attitudes towards inclusion if other teachers demonstrate positive attitudes and a supportive school culture exists (Dupoux, Wolman & Estrada, 2005).

2.9.6 Parents

Engaging parents with and without children with disabilities is another key component in the establishment of successful inclusive schools. It is not uncommon for parents of children with disabilities to resist school reforms that promote inclusive education because they fear that their children might not receive needed services in an inclusive setting (Daniel & King, 1997). These parents may also harbor concerns regarding their children's safety; the attitudes of other students, staff and program quality; and transportation (Hanline & Halvorsen, 1989). However, parent engagement and partnership can lead to increased acceptance of disability, improved learning, and better classroom behaviors (Edutopia, 2000), and research has shown that, as inclusive education systems become more established, parents adopt a decisively positive view of inclusive education (Miller & Phillips, 1992). Additionally, evidence suggests that increased parent engagement and partnership in the special education process leads to improved learning outcomes for students with disabilities (Stoner et al., 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter discusses the research paradigm, research approach, research design, population and sample and sampling techniques. It also discusses data collection instruments, validation of the instruments, trustworthiness of the interview, data collection procedures, data analysis procedures and ethical considerations.

3.1 Research Paradigm

Pragmatist research paradigm was adopted for the study. Creswell (2013) postulated that pragmatism is not committed to any one system of philosophy and reality, thus, makes it possible for researchers to draw from both quantitative and qualitative assumption. The study was located in this philosophical stance as it applied different approaches in data gathering and analysis to achieve the set purpose and objectives of the study.

Additionally, Creswell and Creswell (2018) stated that pragmatists do not see the world as an absolute unity which is comparable to mixed method researchers looking to many approaches for collecting and analysing data rather than subscribing to only one way. Creswell and Creswell (2018) further argued that pragmatist brings to the forefront multiple methods, different worldviews, different assumptions as well as different forms of data collection and analysis. This paradigm informed the researcher's decision in selecting the research approach, design, and data collection instruments. As such, the researcher collected and analysed both quantitative data and qualitative data in this study.

3.2 Research Approach

The approach used in this study was the mixed method research approach. A mixed method approach is characterized as research in which the investigator collects and analyzes data, integrates findings, and draws conclusions utilizing both qualitative and quantitative approaches or methods in the same study (Tashakkori & Creswell, 2007). In this study, the researcher employed both quantitative and qualitative data collection instruments in gathering data. Analyses of the quantitative and qualitative data followed suit. The reason for selecting this approach for the study was to combine research approaches to provide a more complete and comprehensive picture of the study phenomenon as advocated by Bryman (2006). The approach also gave the researcher the opportunity to answer research questions that could not be answered by quantitative or qualitative methods alone as argued by Creswell and Plano Clark (2007). This provided a greater repertoire of tools to meet the aims and objectives of the study.

3.3 Research Design

Explanatory sequential mixed methods approach was employed in this study. This approach is a two-phase mixed method with the overall purpose of using qualitative data to explain or build upon initial quantitative results (Creswell, 2018). The researcher first collected and analysed quantitative data followed by the collection and analysis of the qualitative data. The qualitative data in this study was designed in such a way that it followed from the findings of the quantitative data gathered. Much emphasis was placed on the quantitative data than the qualitative data. This approach was used because there was the need for the qualitative data to further explain significant and insignificant findings in the study (Creswell, 2018). Moreover, multiple sources or methods of data gathering increased the credibility and

dependability of the data since the strengths of one source compensate the potential weaknesses of the other (Watson & Welch-Ross, 2000).

3.4 Population

A study population refers to the entire group of people to whom researchers wish to generalise the findings of a study, including persons who did not participate in the study (Cohen, Manion & Morrison, 2011). According to the Kumasi Metropolis Education Directorate Report, (2021), there are 14 circuits within Kumasi Metropolis. This comprises 158 public kindergarten schools with 609 teachers and 460 private kindergarten schools with 1,191 teachers and this formed the target population. The accessible population were all the 609 public kindergarten teachers in the Kumasi Metropolis.

3.5 Sample and Sampling Techniques

According to Bell (2010), a sample is a proportion of the population selected for observation and analysis. Bell (2010) further explained that a sample enables the researcher to study a relatively smaller number of units in place of the target population and to obtain data that are representative of the target population. A sample of 234 kindergarten teachers was selected. According to Krejcie and Morgan (1970) sampling table, a sample of 234 will be enough to select from a population of 609. Therefore, a sample size of 234 for this study was considered large enough to produce the desired results and allow for generalisation of the findings over the entire population.

The lottery type of the simple random sampling technique was adopted in selecting the study participants. This sampling technique was adopted because it was perceived by the researcher to be more accurate in representing the population. This was

because primary interest of the study was in the representativeness of the sample for purposes of commenting on the population. Further, the use of this sampling technique helped the researcher not to be bias. In using simple random sampling technique, “Yes” and the rest “No” were written on pieces of papers. These papers were then folded and placed in a container. In each school the researcher visited, kindergarten teachers were asked to select only one of the papers. Those who selected the “Yes” were made to respond to the questionnaires. This gave a fair chance to all teachers. Nine kindergarten teachers were selected using the purposive sampling technique for the qualitative phase of the study. Kindergarten teachers with more than ten-year experience in teaching were selected to be interviewed. The researcher believed that such teachers had accumulated enough experience to be engaged with in the interview session. Sample for the interview was based on data saturation. Data saturation can be described as the point in the research process when no new information is discovered in data collection and this redundancy signals to researchers that data collection may cease (Denzin & Lincoln, 2013). Data saturation was obtained after the 10th participant was interviewed. This sample was believed by the researcher to have been ideal for the study. The reason had been that Creswell and Creswell (2018) argued that 5-25 persons can be used for conducting interviews.

3.6 Data Collection Instruments

In gathering data for the study, the researcher used both a quantitative data collection instrument which was a structured questionnaire and a qualitative data collection instrument which was a semi-structured interview guide.

3.6.1 Structured questionnaire

This is a data collection tool which consists of a set of standardised questions with a fixed scheme, which specifies the exact wording and order of the questions, for gathering information from respondents (Creswell & Creswell, 2018). Structured questionnaire was used because the study dealt with a large sample (Creswell & Creswell, 2018) and ensured respondents' anonymity allowing for complete invisibility which maximised comfort for respondents (Dadzie, 2015).

The questionnaire was made up of Part, I and II. Part I was made up of questions on the biographical data of respondents. Part II was made up of four sections. That is section A, B, C and D. Section A contained items that sought responses to the types of disabilities among children in kindergarten centres within Kumasi Metropolis. Section B had items on kindergarten teachers' knowledge about support services in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis. Section C had items on the available support services for teachers in meeting the instructional needs of children with disabilities in kindergarten centres within the Kumasi Metropolis and Section D elicited responses from respondents on the strategies for improving teacher support services for managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis. Respondents were requested to use a 5-point Likert scale to provide responses to statements provided. They were weighed as; Strongly Agree (SA)=5, Agree (A)=4, Neutral (N)=3, Disagree (D)=2 and Strongly Disagree (SD)=1.

3.6.2 Semi-structured interview guide

This is a type of interview guide in which the researcher asks participants series of pre-determined but open-ended questions. In this sense, the researcher is allowed to

ask probing questions as and when the need arises. This is done by the development of written interview guide in advance by the researcher (Yin, 2014). In this study, the researcher formulated open-ended questions that were intended to elicit data from the participants in order to get rich, substantial and relevant data on the topic under investigation (Yin, 2014).

Semi-structured interview guide was used because the researcher wanted to gather qualitative, open-ended data so as to answer the research questions 2, 3 and 4. It helped the researcher to explore participants' thoughts, feelings and beliefs about the phenomenon under investigation. Again, the use of the semi-structured interview guide allowed the researcher to have a set of premeditated questions, yet, allowed the researcher to explore new developments in the course of the interviews (Bedu-Addo, 2010). The semi-structured interview guide was developed by the researcher in consultation with the research supervisor. It was made up of four sections: Sections A, B, and C. Section A was made up of open-ended statements that focused on the kindergarten teacher knowledge about support services in managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis. Responses from this section were used to answer research question 2. Again, section B was used to ask open-ended questions related to the available support services for teachers in meeting the instructional needs of children with disabilities in kindergarten centres within the Kumasi Metropolis. Answers from this section were used to answer research question 3. Finally, section C was devoted to open-ended questions that solicited data on the strategies for improving teacher support services for managing the instructional needs of children with disabilities in kindergarten centres within Kumasi Metropolis. Data from this section were used to answer research question 4.

3.7 Validity and Reliability of the Instruments

3.7.1 Validity of the questionnaire

Validity refers to whether an instrument measures or examines what it claimed to measure or examine (Bryman, 2012). The questionnaire was taken through face and content validity procedures. The instrument was given to colleague Master of Philosophy, Early Childhood Education students and some senior colleagues to critically look out for grammatical errors, omissions and other mistakes done in the questionnaire. In ensuring content validity of the instrument, the researcher handed over the questionnaire to the supervisor for vetting. In doing so, the supervisor checked if questionnaire matched with the research objectives. Also, the supervisor checked whether the statements on the questionnaire were adequate and would be able to measure what they were supposed to measure. Again, the supervisor checked whether the statements were ambiguity free. Comments made by the supervisor were effected before the questionnaire was administered.

3.7.2 Reliability of the questionnaire

Reliability refers to how consistent a measuring device is. An instrument is said to be reliable or consistent if the measurement can produce similar results if used again in similar circumstances (Bryman, 2012). Bryman (2012), further acknowledged that piloting a questionnaire is very crucial and exposes ambiguities and other probable pitfalls. This suggests that one way to check the reliability of a questionnaire is to pilot test it. For this reason, to determine the reliability of this study, the questionnaire was pilot tested among 50 kindergarten teachers in the Asokwa Municipality.

The pilot test helped the study to clear other ambiguous and irrelevant statements from the questionnaires. After the pilot test, data were entered into the Statistical Product for Service Solution (SPSS-version 26) software. A reliability coefficient (r) of 0.80 was achieved for all the items in the questionnaire. If a Cronbach's alpha reliability coefficient value of 0.70 and beyond is obtained, it suggests that the questionnaire is reliable. This was because George and Mallery as cited in Creswell and Creswell (2018) suggested the following as interpretation of the results for Cronbach's alpha reliability coefficient: > .9 (excellent); > .8 (good); > .7 (acceptable); > .6 (questionable); > .5 (poor); and < .5 (unacceptable). Cronbach's alpha reliability coefficient was used because it was a more reliable way of measuring the internal consistency of the questionnaire than the other methods of checking the reliability of questionnaire (Creswell & Creswell, 2018).

3.8 Trustworthiness Criteria

Credibility, dependability and confirmability was checked so as to ensure the trustworthiness of the interviews as proposed by Lincoln and Guba (1985). To ensure credibility, the researcher used probing to elicit detailed information from the respondents. More so, member checks were ensured by playing the audio recordings of the interview as well as reading the field notes to respondents for their confirmation. This helped them to confirm the information they had shared. Further, dependability was granted by making sure that the study report was presented in detail. This was perceived to have served as background information for future researchers to build upon. Again, for confirmability, the researcher ensured that findings of the study were the result of the experiences and ideas of respondents rather than the characteristics and preferences of the researcher. To this end, beliefs

underpinning decisions that were made and research methods adopted were acknowledged in the study report.

3.9 Data Collection Procedures

Permission was sought from gate keepers (Municipal Director of Education and Circuit Supervisors) and school authorities (headteachers) using an introduction letter from the Head, Department of Early Childhood Education, University of Education, Winneba. After securing the permission, preparations were made to administer the instruments on the agreed date, time and venue.

3.9.1 Quantitative data collection procedure

Respondents were given explanations on the purpose of the study and the intended use of the data. Also, they were assured of confidentiality and anonymity. Respondents were encouraged not to write any identifiable information on the questionnaires. The researcher spent time with the respondents to explain to them what they did not understand on the questionnaire. Respondents were given one week to finish providing responses to the items on the questionnaire. The questionnaires were retrieved after a week of administering them. The researcher showed appreciation by thanking the respondents for completing the questionnaires.

3.9.2 Qualitative data collection procedure

Participants were given explanations on the purpose of the study and the intended use of the data. They were also assured of confidentiality and anonymity. Face-to-face interview approach was adopted. The researcher sought permission from the participants to record the interviews using a voice recorder. For participants who did not permit the researcher to record their interviews, field notes were taken as the alternative approach. Also, the voice recorder was well positioned by the researcher in

such a way that the participants' voices were well recorded for easy transcription. Similarly, it helped in eliminating issues of distorting the meaning of the raw data which could have happened if their voices were not to be clear. The researcher used the semi-structured interview guide to conduct the interviews. Interviews lasted 30 minutes for each of the participants.

3.10 Data Analysis Procedures

3.10.1 Quantitative data analysis

The data were analysed using descriptive statistics such as frequencies, percentages, mean and standard deviations. Specifically, research questions 1, 2, 3 and 4 were analysed using frequencies, percentages, means and standard deviations. Statistical Product for Service Solution (SPSS) software version 26.0 was used to aid the data analysis. Results were presented in Tables in Chapter Four.

3.10.2 Qualitative data analysis

After collecting the qualitative data through interview sessions, the researcher played back recordings to the respondents to confirm whether or not what has been recorded is the actual information they gave out during the interview sessions. Once that was done, the data were transcribed. Before analysing the data, the researcher presented to the participants the transcribed data to again confirm what has been transcribed, whether it reflects their contributions or not. The qualitative data were analysed thematically afterwards.

3.11 Ethical Considerations

An introductory letter from the Head, Department of Early Childhood Education of University of Education, Winneba, was obtained to enable approval from gate keepers and respondents. Also, informed consent was sought from the respondents after the

purpose of the study, intended use of the data and procedures of the investigation had been explained to them. Additionally, before the start of the data collection, the respondents were assured that the data would be kept confidentially. In doing so, codes were assigned to the various questionnaires and data were kept from the reach of other individuals. To ensure anonymity, participants were encouraged not to write any identifiable information (such as name of school, their' name, email address, house number and contacts) on the questionnaire. Besides, alphanumeric codes (such as Respondent A, B, C D, and so on) were assigned to the verbatim transcription of data.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Overview

This section of the study presents results accumulated using the data collection instruments, analysis of the results, interpretation of the results and discussion of findings. The quantitative data which was analysed with frequencies, percentages, mean and standard deviation using SPSS version 26 was carried out first. Of the 234 administered questionnaires to kindergarten teachers within the Kumasi Metropolis, 223 were completed and retrieved, hence, the analysis and discussion of the quantitative data are based on the 223 questionnaires received. There were 95% response rate of the questionnaire distributed. From the analysis, "SA" represents Strongly Agree, "A" represents Agree, "N" represents Neutral, "D" represents Disagree, "SD" represents Strongly Disagree, "Std" represents standard deviation and the symbol "%" represents a percentage. For the qualitative data, analysis was done thematically. Respondents' names were not used in the analysis as they were referred to as "Respondent A, B, C, D, E, F, G, H, I."

4.1 Background Information of Participants

This section presents results on the background information of the respondents. The demographic profiles on which the result was presented include the respondents' distribution by gender, age, area of specialisation, professional qualification, and the number of years of teaching at the present level.

Table 4.1: Background information of participants

		Frequency	Percent
Gender	Male	23	10.3
	Female	200	89.7
Total		**223**	**100**
Age Range	Below 20	12	5.4
	21 - 30 years	36	16.1
	31 - 40 years	114	51.1
	41 - 50 years	34	15.2
	51 - 60 years	27	12.1
Total		**223**	**100.0**
Area of Specialization	Early Childhood Education	68	30.5
	Basic education	146	65.5
	Special education	9	4.0
Total		**223**	**100.0**
Professional Qualification	Certificate	0	0.0
	Diploma	71	31.8
	Degree	76	34.1
	Post Graduate Diploma in Education	74	33.2
	Masters	2	0.9
Total		**223**	**100.0**
Number of Years of Teaching at Present Level	0 – 5 years	70	31.4
	6 – 10 years	60	26.9
	11 – 15 years	54	24.2
	16 – 20 years	16	7.2
	21 years and above	23	10.3
Total		**223**	**100.0**

Source: Field survey, 2022

Table 4.1 presents the distribution of respondents' background information. Per the results, it could be observed that 200 respondents representing 89.7% were females whiles the remaining 23 respondents representing 10.3% were males. With regards to the respondents' age, the result reveals that 12 of them representing 5.4% were below 20 years, 36 of them which represent 16.1% were between the ages of 21 to 30 years; 114 of them representing 51.1% were between the ages of 31 to 40 years; 34 of them representing 15.2% were between the ages of 41 to 50 years; 27 of the respondents representing 12.1% were between 51 and 60 years. The data again shows that for the area of specialisation for the respondents, 68 of them representing 30.5% indicated that early childhood education is their area, 146 of the respondents which represents 65.5% stated that basic education is their area and 9 of them representing 4.0% responded that special education is their area of specialisation.

Also, the results reveal that 71 of the respondents representing 31.8% had obtained Diploma in ECE as their professional qualification, 76 of them representing 34.1% had obtained a degree in ECE as their professional qualification and for the remaining 74 which represents 33.2%, their professional qualification was Post Graduate Diploma in Education. Additionally, the analysis with regards to the number of years of teaching at the present level reveals that 70 of the respondents representing 31.4% indicated that they have taught at their present level for a period of 0-5 years, and 60 of them representing 26.9% indicated that they have taught at their present level in a period of 6-10 years; 54 of them representing 24.2% have taught at their present level in a period of 11-15 years; 16 of the respondents representing 7.2% indicated that they have taught at their present level in a period of 16-20 years and 16 of them representing 10.3% indicated that they have taught at their present level for 21 years and above.

4.2 Types of disabilities among children in early childhood centres within Kumasi Metropolis

Table 4.2: Types of disabilities among children in early childhood centres within Kumasi Metropolis

Type of Disability	Present (%)
Physical impairment	32
Visual impairment	107
Hearing impairment	152
Total	**291**

Source: Statistics Office, GES, Kumasi Metropolitan, 2022

Table 4.2 suggest that 32 kindergarten children in the Kumasi Metropolis have physical impairment. Also, the data revealed that 107 kindergarten children in the Kumasi Metropolis have visual impairment. It could further be observed from Table 4.2 that 152 kindergarten children within the Kumasi Metropolis have hearing impairment.

Based on the findings of the study, it can be inferred that there are children with disabilities in kindergarten centres within the Kumasi Metropolis. Physical impairment, visual impairment and hearing impairment are reported to be present at kindergarten centres within the Kumasi Metropolis. These disabilities as identified are present in children who are in mainstream schools and could be found in all age groups. As such their needs may differ greatly from their non-disabled peers. Hence, teachers give some level of support services to manage the instructional needs of such learners within the Kumasi Metropolis. This finding of the study is corroborated by Biklen (2000), who opines that persons with physical impairment do exist in early childhood centres. These group of leaners often use assertive devices or mobility aids such as crutches, canes, wheelchairs and artificial limbs to obtain mobility. Flynt and

Morton (2004) add that evidence indicates that children with physical impairment and visual impairment are much less physically active than their able-bodied counterparts. On hearing impairment, Freeland, Jones and Mohammed (2010) confirm the study's findings with what they found in their study. According to these authors, hearing impairments can be found in all age groups including children with disabilities, but the loss of hearing acuity is part of the natural ageing process. Also, the number of individuals with hearing impairments will increase with the increasing age of the population and the increase in the severity of noise exposure.

4.3 Early childhood teacher knowledge about support services in managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis

Table 4.3 presents responses from early childhood teachers on their knowledge about the support services that are present to manage the instructional needs of children with disabilities. Respondents responded to 16 items.

Table 4.3: Early childhood teacher knowledge about support services in managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	M/Std.
I have knowledge on assistive technology as a support service	3 (1.3)	3 (1.3)	0 (0.0)	131 (58.7)	86 (38.6)	1.68/0.67
I am aware of special educators who help in meeting the instructional needs of learners with disabilities	16 (7.2)	75 (33.6)	1 (0.4)	21 (9.4)	110 (49.3)	2.40/1.53
I have knowledge on counselling services in meeting the instructional needs of learners with disabilities	99 (44.4)	103 (46.2)	0 (0.0)	15 (6.7)	6 (2.7)	4.23/0.95
I am aware of interpreting services in meeting the instructional needs of learners with disability	113 (50.7)	100 (44.8)	0 (0.0)	5 (2.2)	5 (2.2)	4.39/0.80
I am aware of mobility services as a support service	86 (38.6)	113 (50.7)	0 (0.0)	7 (3.1)	17 (7.6)	4.09/1.09
I am aware of the service of Speech-language pathology	111 (49.8)	98 (43.9)	3 (1.3)	5 (2.2)	6 (2.7)	4.36/0.84
I am aware of a support teacher in meeting the instructional needs of learners with disabilities	94 (42.2)	117 (52.5)	0 (0.0)	6 (2.7)	6 (2.7)	4.29/0.83
I believe that using appropriate teaching strategies facilitates learning opportunities for children with disabilities	113 (50.7)	83 (37.2)	0 (0.0)	27 (12.1)	0 (0.0)	4.26/0.96
To reduce the shortfalls of children with disabilities in specific learning areas, I believe developmentally appropriate teaching materials should be used	90 (40.4)	133 (59.6)	0 (0.0)	0 (0.0)	0 (0.0)	4.40/0.49
My knowledge of available support services influences my teaching practices	91 (40.8)	132 (59.2)	0 (0.0)	0 (0.0)	0 (0.0)	4.41/0.49
My knowledge on teacher support services helps me to improve the potential of my learners.	106 (47.5)	117 (52.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.48/0.50
My knowledge on teacher support services improves my decisions about instruction to meet learner needs	80 (35.9)	143 (64.1)	0 (0.0)	0 (0.0)	0 (0.0)	4.36/0.48
My knowledge on teacher support services assists me to effectively assess children	159 (71.3)	64 (28.7)	0 (0.0)	0 (0.0)	0 (0.0)	4.71/0.45
My knowledge on teacher support services helps me to effectively facilitate meaningful dialogue with learners with disabilities.	120 (53.8)	103 (46.2)	0 (0.0)	0 (0.0)	0 (0.0)	4.54/0.50
I have knowledge on teacher support services and it helps me to effectively teach literacy to learners with disabilities	131 (58.7)	92 (41.3)	0 (0.0)	0 (0.0)	0 (0.0)	4.59/0.49
I have knowledge on teacher support services and it helps me determine the extent to which technology should be used for lesson delivery	89 (39.9)	72 (32.3)	0 (0.0)	62 (27.8)	0 (0.0)	3.84/1.22

Source: Field survey, 2022

Table 4.3 reveals that 3 (1.3%) participants strongly agreed to the statement "I have knowledge of assistive technology as a support service," 3 (1.3%) other respondents agreed with the statement whiles 131 (58.7%) and 86 (38.6%) disagreed and strongly disagreed respectively to the statement. Also, 16 (7.2%) and 75 (33.6%) of the respondents strongly agreed and agreed respectively to the statement "I am aware of special educators who help in meeting the instructional needs of learners to disabilities." Twenty-one (9.4 %) and 110 (49.3%) of the respondents disagreed and strongly disagreed to the statement whiles 1 (0.4%) of them was neutral. The analysis shows that 99 (44.4%) and 103 (46.2%) respondents strongly agreed and agreed respectively to the statement "I have knowledge on counselling services in meeting the instructional needs of learners to disabilities," whiles 15 (6.7%) and 6 (2.7%) of them respectively disagreed and strongly disagreed with the statement.

It could be seen from Table 4.3 that 113 (50.7%) and 100 (44.8%) of the respondents strongly agreed and agreed to the statement "I am aware of interpreting services in meeting the instructional needs of learners with disability," but 5 (2.2%) and 5 (2.2%) of them disagreed and strongly disagreed with the statement. Eighty-six (38.6%) participants strongly agreed to the statement "I am aware of mobility services as a support service," whereas 113 (50.7%) of them agreed with the statement. However, 7 (3.1%) respondents disagreed and 17 (7.6%) strongly disagreed to the statement respectively. The analysis suggests that 111 (49.8%) and 98 (43.9%) participants strongly agree and agree respectively to the statement "I am aware of the service of speech-language pathology" but 5 (2.2%) and 6 (2.7%) participants disagree and strongly disagree respectively to the statement. Nonetheless, 3 (1.3%) of them remained neutral in their response to this statement.

For the statement "I am aware of a support teacher in meeting the instructional needs of learners with disabilities," 94 (42.2%) participants strongly agreed, 117 (52.5%) agreed, 6 (2.7%) disagreed and 6 (2.7%) strongly disagreed. The Table also indicate that 113 (50.7%) respondents strongly agreed to the statement "I believe that using appropriate teaching strategies facilitates learning opportunities for children with disabilities," and 83 (37.2%) agreed. But, 27 (12.1%) of them disagreed to the statement. The results show that 90 (40.4%) participants strongly agreed to the statement "to reduce the shortfalls of children with disabilities in specific learning areas, I believe developmentally appropriate teaching materials should be used", whereas 133 (59.6%) agreed to it.

The Table reveal that 91 (40.8%) participants strongly agreed with the statement "my knowledge of available support services influences my teaching practices," but 132 (59.2%) of them agreed to it. For the statement "my knowledge on teacher support services helps me to improve the potential of my learners," 106 (47.5%) study participants strongly agreed to the statement whiles 117 (52.5%) agreed to it. For the statement "my knowledge on teacher support services improves my decisions about instruction to meet learner needs," 80 (35.9%) strongly agreed and 143 (64.1%) agreed with it. It is illustrated in table 4.3 that 159 (71.3%) respondents strongly agreed with the statement "my knowledge on teacher support services assists me to effectively assess children," whereas 64 (28.7%) of them agreed. For the statement "my knowledge on teacher support services helps me to effectively facilitate meaningful dialogue with learners with disabilities," 120 (53.8%) and 103 (46.2%) participants strongly agreed and agreed with the statement respectively. The result reveals that 131 (58.7%) respondents indicated that they strongly agree to the statement "I have knowledge on teacher support services and it helps me to

effectively teach literacy to learners with disabilities," whiles 92 (41.3%) of them agreed. Finally, for the statement "I have knowledge on teacher support services and it helps me determine the extent to which technology should be used for lesson delivery," 89 (39.9%) participants strongly agreed, 72 (32.2%) agreed and 62 (27.8%) disagreed.

From the quantitative data collected and analysed, it was deduced that the majority of teachers at early childhood centres within the Kumasi metropolis who were sampled had an appreciable knowledge of the support services in managing the instructional needs of early graders with disabilities. After establishing this, the researcher followed up with the qualitative phase of the study which is characterized by engaging participants in interview sessions. With a semi-structured interview guide, the researcher sought to confirm the responses provided by respondents and seek more clarification on teachers' knowledge of support services to help teach children with disabilities. Presented below are some of the responses;

> *I might not know much about the support services in managing the instructional needs of children with disabilities, however, my little knowledge on it is that as a teacher it might be easier to teach children who are considered to be normal and have no disabilities. But it is not the same with children who have disabilities. It is difficult, so there is the need for certain services to help you in attending to these children and these are the teacher support services, and in this case, they are to be used to manage the instructional needs of children* (Respondent, B).

> *Support services are services rendered to the disabled child to help them emerge with a strong sense of self-worth and confidence that make teaching and learning easy* (Respondent, D).

> *Well… I have knowledge about support services used in managing the instructional needs of children with disabilities but I will say that knowledge is limited if I should compare myself to someone who did special education. I know them to be the kind of services that help a teacher as well as the child to fit well into the mainstream classroom. That is all I can say* (Respondent, F).

The researcher went ahead to seek more information on the knowledge of respondents on several identified teacher support services. On assistive technology, respondents shared the following views;

> *I know that assistive technology is a teacher support service. It is to make our work less difficult when dealing with children with various forms of disabilities. Hence, they include all the technological devices and tools used to enhance teaching and learning among children with disabilities* (Respondent, B).

> *Eerm. I will say they are the technological tools that help in managing children with disabilities in the classroom. Examples of those like hearing aids, computers, and smart boards. Generally, they help to manage things well in the classroom* (Respondent, D).

> *They are technology or things used by the disabled child to enable them perform functions that might be difficult to them (Respondent, G).*

Responses provided on kindergarten teachers' knowledge of the services of special educators as a teachers' support service include;

> *With special educators, as the name suggests are teachers who teach special children. These are teachers who have been offered intensive training to know how special children behave and learn, and how they can teach these children effectively. They know of the various strategies to teach special children and know how to handle issues should in case of matters get worse* (Respondent, A).

> *They are special education personnel who have requisite knowledge about children with variety of disabilities and knows how to handle them* (Respondent, D).

> *I know they are experts within the field that help when things are beyond us. They know more about children with disabilities and assist in that regard* (Respondent, E).

With counselling service as a support service for teachers in managing the instructional needs of children with disabilities, the kindergarten teachers shared what they know about it;

> *Counselling services are given to those who are troubled and need to speak to someone especially an expert who after listening to their issue will provide professional advice and support to aid the individual make*

> *good choices. They could be found in schools as well to provide academic advice and support to those who need it* (Respondent, C).

Another teacher responded:

> *mmmm…. It is the service that is given to children with special needs who are not coping in the mainstream classroom. So, I will say they solve the children's problems for them* (Respondent, F).

> *These are the services rendered to the disabled to provide a safe and supportive space to discuss their concern and fears* (Respondent, G).

On knowledge of interpreting services, the teachers interviewed indicated the following;

> *This service which is the interpreting service exists when the teacher or the class teacher is not knowledgeable on how to be interpreting what is said by children who are hearing impaired or do not know how to convey information to hearing-impaired children. The interpreter or the implementer of the interpreting service steps in to interpret to the teacher what the child is saying and to the child what the teacher is saying* (Respondent, D).

> *Yea, I know it is about sign language. The deaf and dumb children receive these services those services but me myself I can't give those services (Respondent, E).*

> *It's the service offered to promote the possibilities of children with hearing impairment, and speech impairment to be able to participate in the classroom activities* (Respondent, I).

Captured below are responses on kindergarten teachers' knowledge of mobility service as a teacher support service;

> *The mobility service to an extent exists solely for children with disabilities. This service assists such children to be able to move around in and out of school and make physical movement a bit easy for them. They help these children to be aware of what is in their immediate environment and how to go about them on a regular basis* (Respondent, A).

> *Yea, they are things that help the children to move freely. An example is making a wheelchair available* (Respondent, B).

> *It's the service provided to the disabled child to enable free movement to carry out certain activities to achieve the learning objectives* (Respondent, G).

The researcher interviewed respondents about their knowledge of the service of a speech-language pathologist in supporting teachers to manage the instructional needs of children with disabilities. Respondents emphasized the following;

> *The speech-language pathologist is there for all children who have problems or issues communicating clearly. Children with disabilities that prevent them from effectively explaining themselves to be heard and understood are referred to the speech-language pathologist* (Respondent, E).

> *Yea…. I think they help the children with communication issues* (Respondent, H).

> *It's a specialized person who helps the disabled child improve their reading, language and listening skills* (Respondent, I).

For responses on knowledge of a support teacher, as follows are what the teachers outlined;

> *These teachers I think in some schools are called assistant teachers. They are there to help the main teachers to teach. They are to help make the job of the main teacher easier by helping children to write, and read, setting up the class for a lesson early in the morning, and tidying the place after class. So basically, they assist the main teacher to teach* (Respondent, C).

> *Err… they are the other teachers who give support to the main teachers* (Respondent, F).

After ascertaining what the kindergarten teachers know about the support services for teachers in managing the instructional needs of children with disabilities, the research purported to find out how these services encourage teachers to manage the instructional needs of learning needs of children with disabilities. A teacher asserted that;

> *Most of the support services for teachers you have mentioned influence me. You mentioned assistive technology, support teacher, mobility service, interpreting service, counselling services, and special education teachers among others. All these services are supposed to be in place to assist me as a teacher and the school to be able to help children with disability improve their learning outcomes. Specific ones such as the interpreting services, there is no interpreter in my school and for that matter in my class so I know something small on sign*

> *language, very small, that is what I manage within the class. This makes teaching difficult. Sometimes it is difficult to deal with these children especially those with hearing impairment. Because mostly I don't understand them and they don't understand me they want to use other means to seek attention. Trust me, it is worse when they are angry or having a bad day. The presence of a special educator could have prevented most of these occurrences because they could communicate with them and calm them down* (Respondent, D).

Another teacher responded that:

> *Yea, to some considerable extent these services influence how I manage the instruction needs of children with disabilities. For instance, there is one child here who I think has a communication problem and if I have access to a speech pathology service, I think it will go long way to correct that problem so the child can fully benefit from whatever goes on in the classroom. But as it stands now, I mostly don't call him to contribute because the colleagues will laugh at him. Though I have been discouraging them from doing that sometimes you can't tell what comes over them* (Respondent, I).

According to the analysis generated both from the quantitative and qualitative data, the kindergarten teachers are seen to have considerable knowledge of all the identified teacher support services in managing the instructional needs of children with disabilities such as assistive technology, counselling service, interpreting service, mobility service, speech-language pathology and the service of a support teacher.

The study found that the teachers identified support services as the services that are in existence to help teachers assist learners with disabilities to cope well in a learning environment and that the existence of support services is to make the work of teachers quite easier. This finding is in line with the assertion of the California Department of Justice (2003), which stated that developmental, corrective, and other support services are known as "supportive services." They are needed to help a pupil with a disability benefit from instruction and are made to assist students in achieving the objectives of their educational programmes, such as participation in the general education curriculum, academic success, and interaction with peers who are not disabled.

Adding to this, Oppong (2003), stated that support services are provided to learners with disabilities for them to have equitable, participative, and access to the mainstream school curriculum.

The study revealed that the knowledge teachers have on teacher support services in managing the instructional needs of children with disabilities influences them to adopt effective methods and instructional materials that improve their teaching practices and increase the learning outcomes for children with disabilities. In line with this finding is the opinion of Kumar and Raja (2010), who indicate that teachers need to use appropriate teaching strategies to lessen or eliminate children's deficits in particular learning areas to facilitate the learning opportunities for disabled children in early childhood centres. Ruppar, Gaffney, and Dymond (2015) and Stough and Palmer (2003) support findings. In their study, they found that teachers' decisions about instruction, curriculum, and learner potential were influenced by their beliefs, self-efficacy, expectations and knowledge they had on support services available. It is deduced in the study that teachers' knowledge of the support services that help teachers to manage the instructional needs of children with disabilities influence them to know how best to assess the learning outcomes of children. Stough and Palmer (2003) supported this finding by stating that the more information the teachers have on support services available, the more effectively they assess students and provide instruction that meets learners' needs. The study establishes that the knowledge of teachers on the support services that help in managing the instructional needs of children with disabilities helps them to facilitate meaningful dialogue with these learners. This outcome lends ample support to the study of Mariage, Englert and Garmon (2000) and Soto (1997). They found that teachers who are well-informed about available support services have been shown to communicate with learners more

effectively, facilitate meaningful dialogue, and provide accommodations. Teachers with adequate knowledge of available support services for managing the instructional needs of children with disabilities tend to effectively teach literacy among these children. This is a finding of the study and Washburn, Joshi and Binks-Cantrell (2011) confirm it by arguing that the level of information teachers have on available support service to them impact how effectively they teach academics, such as reading, to struggling learners.

4.4 Support services available for teachers in meeting the instructional needs of children with disabilities in early childhood centres within the Kumasi Metropolis.

This study sought to identify the support services available for teachers to meet the instructional needs of learners with disabilities in early childhood centres. Respondents responded to 7 items.

Table 4.4: The available support services for teachers in meeting the instructional needs of children with disabilities in early childhood centres within the Kumasi Metropolis

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	M/Std.
Assistive technology is available in my school to help meet the instructional needs of learners with disabilities	6 (2.7)	8 (3.6)	0 (0.0)	116 (52.0)	93 (41.7)	1.74/0.85
There is a special educator in my school who helps in meeting the instructional needs of learners with disabilities	0 (0.0)	0 (0.0)	0 (0.0)	143 (64.1)	80 (35.9)	1.64/0.48
Counselling services are provided in my school to meet the instructional needs of learners with disabilities	0 (0.0)	79 (35.4)	0 (0.0)	64 (28.7)	80 (35.9)	2.35/1.28
Interpreting services are available in my school to help in meeting the instructional needs of learners with disability	0 (0.0)	0 (0.0)	0 (0.0)	119 (53.4)	104 (46.6)	1.53/0.50
Mobility services are provided in my school to meet the instructional needs of learners with disabilities	0 (0.0)	0 (0.0)	0 (0.0)	131 (58.7)	92 (41.3)	1.59/0.49
Speech-language pathology service is available in my school to help meet the instructional needs of learners with disabilities	0 (0.0)	0 (0.0)	0 (0.0)	140 (62.8)	83 (37.2)	1.63/0.48
A support teacher is available in my school to help meet the instructional needs of learners with disabilities	0 (0.0)	0 (0.0)	0 (0.0)	150 (67.3)	73 (32.7)	1.67/0.47

Source: Field survey, 2022

Data in Table 4.4 reveal that 6 (2.7%) and 8 (3.6%) respondents respectively strongly agreed and agreed to the statement but 116 (52.0%) and 93 (41.7%) respondents disagreed and strongly disagreed to the statement respectively. The analysis shows that 143 (64.1%) participants disagreed to the statement "there is a special educator in my school who helps in meeting the instructional needs of learners with disabilities," however, 80 (35.9%) of them strongly disagreed to the statement. For the statement

"counselling services are provided in my school to meet the instructional needs of learners with disabilities," 79 (35.4%) of the participants agreed, 64 (28.7%) disagreed and 80 (35.9%) strongly disagreed to it. The table shows that 119 (53.4%) respondents disagreed to the statement "interpreting services are available in my school to help in meeting the instructional needs of learners with disability," and 104 (46.6%) of them strongly agreed.

For the statement "mobility services are provided in my school to meet the instructional needs of learners with disabilities," 131 (58.7) participants disagreed and 92 (41.3%) strongly disagreed to it. For the statement "speech-language pathology service is available in my school to help meet the instructional needs of learners with disabilities," 140 (62.8%) of the respondents disagreed with it and 83 (37.2%) strongly disagreed to it. Finally, table 4.4 reveals that 150 (67.3%) participants disagreed to the statement "a support teacher is available in my school to help meet the instructional needs of learners with disabilities," whiles 73 (32.7%) strongly disagreed.

In the quest to confirm what teachers have stated on the questionnaire with regards to the availability of the identified teacher support services that can help manage the instructional needs of children with disabilities, the researcher for the qualitative aspect of the study interviewed selected teachers to answer relating questions. Typical responses stated include;

> *I wish to say at least one is available to me in my school, but I will be lying to you on that one. It is zero. There is none in this school, all those you mentioned, I have a bit of knowledge about them but they are not here to help me teach the children. It is a problem we have been talking about for some time now* (Respondent, A).

> *Hmmm… we are not finding it easy here. All the services I have talked about so far are not available in our school. It is counselling I sometimes offer the children because sometimes are bullied and they don't feel ok. Aside from counselling, we don't have these services available in the school* (Respondent, F).

The analysis stipulates that the support services for teachers to help manage the instructional needs of children with disabilities are not available in kindergarten centres within the Kumasi metropolis. It is noted by Tamakloe, Amedahe and Atta (2005) that the availability of educational support services and resources in mainstream schools is seen as one of the school factors that tend to promote the academic success of special educational needs children. For that matter, they need to be present.

Findings of this study identify that though the teachers have appreciable knowledge of the support services identified, such as assistive technology, mobility service, interpreting service, and counselling service amongst others, these support services are not available in schools to be accessed by teachers to help children with disabilities with it. This situation will create problems for teachers as they will not have the necessary support systems to effectively deliver lessons. Learning outcomes of children with disabilities in this context will not be encouraging as they will equally not be getting the needed instructional assistance. A study by Agbenyega et al. (2005) validates this finding. They concluded their study that support and educational support materials are essential for efficient teaching and learning. The requirement for these resources and services intensifies when it comes to inclusion. Kindergarten teachers in inclusive environments should use these resources to supplement their instruction. Only then will their instruction be relevant and helpful to children with special education needs. Therefore, the practice of inclusion and

children with disabilities face disaster if these are not provided at all or insufficiently. These resources, along with support, are essential for efficient teaching and learning.

The lack of teaching and learning aids and support services for the proper inclusion of children with special educational needs, as well as teachers' negative perceptions and attitudes, have been shown in research to be the main causes of disabled children's persistent absence from mainstream schools.

Table 4.5: Strategies for improving teacher support services for managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	M/Std.
Accessibility of teaching materials to the teacher improves teacher support services to manage the instructional needs of children with disabilities.	82 (36.8)	141 (63.2)	0 (0.0)	0 (0.0)	0 (0.0)	4.37/0.48
Providing assistant teachers to assist main special educators to improve teacher support services in managing the instructional needs of children with disabilities.	97 (43.5)	126 (56.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.43/0.49
Effective collaboration between the class teacher and assistant teacher improves teacher support services in managing the instructional needs of children with disabilities	79 (35.4)	144 (64.6)	0 (0.0)	0 (0.0)	0 (0.0)	4.35/0.47
Having a class with a manageable size of learners improves teacher support services in managing the instructional needs of children with disabilities	113 (50.7)	110 (49.3)	0 (0.0)	0 (0.0)	0 (0.0)	4.51/0.51
Including concepts of teacher support services in pre-service curriculum for training teachers improve teacher support services in managing the instructional needs of children with disabilities	68 (30.5)	155 (69.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.30/0.46
Removing physical barriers in school improve teacher support services in managing the instructional needs of children with disabilities	89 (39.9)	134 (60.1)	0 (0.0)	0 (0.0)	0 (0.0)	4.40/0.49
Providing teachers with opportunities for Continuous Professional Development improves teacher support services in managing the instructional needs of children with disabilities	74 (33.2)	149 (66.8)	0 (0.0)	0 (0.0)	0 (0.0)	4.33/0.47
Having an optimum learning environment for learners improves teacher support services in managing the instructional needs of children with disabilities	97 (43.5)	126 (56.5)	0 (0.0)	0 (0.0)	0 (0.0)	4.43/0.49
Effective collaboration between parents and special educators improves teacher support services in managing the instructional needs of children with disabilities	92 (41.3)	131 (58.7)	0 (0.0)	0 (0.0)	0 (0.0)	4.41/0.49
Appreciating the efforts of teachers help to improve teacher support services in managing the instructional needs of children with disabilities	102 (45.7)	121 (54.3)	0 (0.0)	0 (0.0)	0 (0.0)	4.46/0.49

Source: Field survey, 2022

In table 4.5, the data show that 82 (36.8%) respondents strongly agreed to the statement that "accessibility of teaching materials to the teacher improves teacher support services to manage the instructional needs of children with disabilities," whiles 141 respondents agreed to the statement. Moreover, the result reveals that 97 (43.5%) of the respondents strongly agreed to the statement "providing assistant teachers to assist main special educators to improve teacher support services in managing the instructional needs of children with disabilities." However, 126 (56.5%) respondents agreed with the statement. Again, the analysis reveals that 79 (35.4%) of the respondents strongly agreed with the statement that "effective collaboration between the class teacher and assistant teacher improves teacher support services in managing the instructional needs of children with disabilities", 144 (64.6%) of them agreed with the statement.

The analysis shows that 113 (50.7%) of the respondents strongly agreed with the statement "having a class with a manageable size of learners improves teacher support services in managing the instructional needs of children with disabilities" whereas, 110 (49.3%) respondents agreed with the statement. The results also indicate that 68 (30.5%) of the respondents agreed that "including concepts of teacher support services in the pre-service curriculum for training teachers improve teacher support services in managing the instructional needs of children with disabilities", whereas 155 (69.5%) agreed with the statement. The analysis revealed that 89 (39.9%) of the respondents rated the statement "removing physical barriers in school improve teacher support services in managing the instructional needs of children with disabilities" strongly agreed whiles 134 (60.1%) of them rated it as agreed.

The result reveals that 74 (33.2%) of the respondents strongly agreed with the statement "providing teachers with opportunities for Continuous Professional Development improves teacher support services in managing the instructional needs of children with disabilities" whiles 149 (66.8%) of them disagreed with this statement. Furthermore, it could be seen in Table 4.5 that 97 (43.5%) of the respondents agreed with the statement that "Having an optimum learning environment for learners improves teacher support services in managing the instructional needs of children with disabilities", however, 126 (56.5%) of them agreed with the statement. Again, the analysis shows that 92 (41.3%) respondents agreed with the statement "effective collaboration between parents and special educators improve teacher support services in managing the instructional needs of children with disabilities", whereas 131 (58.7%) of the respondents agreed with this statement. Finally, the analysis reveals that 102 (45.7%) respondents agreed with the statement "appreciating the efforts of teachers help to improve teacher support services in managing the instructional needs of children with disabilities", however, 121 (54.3%) of the respondents agreed with this statement.

There were items provided in the quantitative data collection instrument on the strategies for improving teacher support services in managing the instructional needs of children with disabilities in kindergarten centres of which teachers gave their responses with the majority agreeing with the statements. The researcher sought to find out from teachers, other strategies they suggest could improve teacher support services in managing the instructional needs of children with disabilities. Among the responses are;

> *Training sessions should be organized often to educate teachers on the support services and make some of these services available* (Respondent, A).

> *The most crucial thing to do to improve teacher support services for teaching children who have disabilities is to make these particular support services available. Make it accessible in schools. Teach teachers how to use them and a lot more. But, first of all, make them available* (Respondent, B).

Similarly, a respondent stated that,

> *I think the best way to improve teachers' support services is to make them available to the teachers and also take them through training in the best ways to utilise these services* (Respondent, D).

It is deduced from the study that numerous strategies can aid in improving teacher support services for managing the instructional needs of children with disabilities. The study found that strategies such as accessibility of teaching materials, provision of assistant teachers, having a manageable class size, including concepts of support services in the pre-service curriculum of teachers, removal of physical barriers, and provision of programmes for Continuous Professional Development among others help to improve teacher support services for managing the instructional needs of children with disabilities.

These findings validate the study of Marjatta, Raija and Minna (2009) they opined that here necessary, schools should have access to teachers who specialise in education. In Finland, according to the Marjatta et al, most schools have at least one permanent special education teacher on staff. These educators conduct assessments, create individualised lesson plans, organise services, and advise regular educators. Jerwood (1991) and Logan (2006) confirmed these by arguing that there is an increase in the use of teaching assistants in regular classrooms, also known as learning support assistants or special needs assistants. Although their roles vary depending on the environment, their primary duty is to enable children with disabilities to participate in

regular classes; they should not be mistaken for substitute teachers. Effective planning and coordination with the classroom teacher, a shared understanding of their roles and responsibilities, and ongoing oversight of the support system are all necessary for their successful deployment.

UNESCO (2003) corroborated the findings as it maintained that the appropriate training of mainstream teachers is crucial if they are to be confident and competent in teaching children with diverse educational needs. The principles of inclusion should be built into teacher training programmes, which should be about attitudes and values, not just knowledge and skills (UNESCO, 2003). Several studies further support this by stating that changing the physical layout of classrooms can make a significant difference in overcoming numerous physical obstacles (Ferguson, 2008). Incorporating universal design into new building plans is less expensive than making the necessary modifications to an existing structure and adds approximately 1 percent to the total construction cost (UNESCO, 2009).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This is the final chapter of the study. In this section, the summary of the study's findings, conclusions drawn from the study, recommendations of the study, limitations of the study and recommendations for further study will be presented.

5.1 Summary

This study examined the support services available to teachers to help manage the instructional needs of children with disabilities in kindergarten centres within the Kumasi metropolis.

The study employed sequential explanatory mixed-method design and was underpinned by pragmatist philosophical stands. The sample size for the study was 234 public kindergarten teachers within the Kumasi metropolis. They were selected from 609 public kindergarten teachers using the Krejcie and Morgan (1970) sampling table. Nine teachers were purposively sampled for the qualitative aspect of the study and were interviewed. In collecting the quantitative data, a questionnaire was used and was analysed with frequencies, percentages, mean, and standard deviations using SPSS version 26. The qualitative data collected through the interview using a semi-structured interview guide was analysed thematically.

It was identified in the study that physical, visual and hearing impairments present among some kindergarteners within the metropolis. Again, although teachers have knowledge of the support services that assist in teaching children with disabilities, these support services were not accessible in kindergarten schools.

5.2 Key Findings

From the study, the key findings are captured as follows;

1. It was evident from the study that there are some learners at the kindergarten level in basic schools within the Kumasi metropolis who have disabilities. The majority of the kindergarten teachers selected for the study indicated that the most common among these disabilities among kindergarten learners are physical impairment, visual impairment and hearing impairment.
2. The study found out that kindergarten teachers have an appreciable knowledge of what teacher support services are and their roles in assisting teachers to help manage the instruction needs of children with disabilities. The majority of the study participants had considerable knowledge and understanding of most of the teacher support services identified by the study. They understood these support services as the services that are to be present to help teachers make teaching and learning more effective for the benefit of the child.
3. It was established by the study that none of the teacher support services in managing the instructional needs of children with disabilities were present in kindergarten centres within Kumasi metropolis. Kindergarten teachers indicated that the teacher support services which include assistive technology, mobility service, interpreting service, support teacher, special educator, counselling service, and speech-language pathologist services are not available in their schools. The study however found out that some of the teachers provide these children with counselling services although they are not experts.
4. The study identified that there are numerous strategies for improving teacher support services for managing the instructional needs of children with disabilities in kindergarten centres. Notable among them are making teaching materials

available and accessible, providing teachers to support the main teachers, having a class with a manageable number of learners, including concepts of support services in the pre-service curriculum of student teachers, taking away all physical barriers, and providing programmes for Continuous Professional Development for teachers.

5.3 Conclusions of the Study

The research provides sufficient data to conclude that physical impairment, visual impairment, and hearing impairment are present among kindergarten-aged children in the Kumasi Metropolitan area of Kumasi. These children attend mainstream schools and study alongside children who do not have any documented disabilities.

The conclusion of the research is that kindergarten teachers have significant knowledge of the different teacher support services and are aware of the advantages associated with them for both the teacher and the child with a disability. These teacher support services include; assistive technology, mobility service, interpreting service, support teacher, special educator, counselling service, and speech-language pathologist service.

It has been revealed that mainstream kindergarten schools in Kumasi do not have access to any of the specified teacher support services, which are designed to assist teachers in successfully teaching children with disabilities and helping them improve their learning results.

The study found that in improving the support services for teachers in managing the instructional needs of children with disabilities, some strategies could be executed or implemented to enhance teacher practice and achieve higher learning effectiveness.

5.4 Recommendations

From the findings of the study, the following recommendations are made by the study;

1. The study found that some kindergarten learners within the Kumasi metropolis have physical and hearing impairments. It is recommended to the Ghana Education Service and the Metropolitan Education Directorate to introduce screening and diagnostic assessment activities to identify other children who have disabilities but have not yet been discovered to be given the needed instructional assistance.
2. Since the study identified that kindergarten teachers have much positive knowledge about teacher support services in managing the instructional needs of children with disabilities and their associated benefits, the study recommends to headteachers and lead teachers at basic schools to institute enough measures to motivate teachers to hold unto their positive views about teachers support services.
3. The study recommends to the Ministry of Education, Ghana Education Service and the Kumasi Metropolitan Education Directorate to ensure that assistive technology, mobility service, interpreting service, speech-language pathology service, support teachers and special educators are available in kindergarten schools and are easily accessible to teachers since the study found out that these teacher support services are not available in kindergarten schools within the Kumasi metropolis.
4. Finally, the study established that teacher support services can be improved by several strategies. Key strategies include having a class with a manageable number of learners, including concepts of support services in the pre-service

curriculum of student teachers, and providing programmes for Continuous Professional Development for teachers. It is therefore recommended by the study to Ghana Education Service and the Kumasi Metropolitan Education Directorate to provide teachers with adequate professionals that seek to professionally develop them to know how to handle children with disabilities.

REFERENCES

Ackah-Jnr, F. R. (2018). System and school-level resources for transforming and optimising inclusive education in early childhood settings: What Ghana can learn. *European Journal of Education Studies, 5*(6), 203–220.

Adams, M. I. (2016). Inclusive education in Ghana: An investigation into the factors that promote the academic success of special needs children at the primary school level. Unpublished MPhil Thesis.

Agbenyega, J. S. (2007). Examining teachers' concerns and attitudes to inclusive education in Ghana. *International Journal of Whole Schooling, 3*(1), 41-56.

Agbenyega, J. S. (2003). The power of labeling discourse in the construction of disability in Ghana. In *educational research, risks and dilemas* (pp. 1 - 12). Australian Association for Research in Education.

Agbenyega, J. S., Deppeler, J., & Harvey, D. (2005). Developing an instrument to measure teachers‟ attitudes toward inclusive education for students with disabilities. *Journal of Research and Development in Education, 5,* 1-10.

Ainscow, M. (2005). Looking to the future: Towards a common sense of purpose. *Australasian Journal of Special Education, 29*(2), 182- 186.

Ainscow, M. (2012). Moving knowledge around: Strategies for fostering equity within educational systems. *Journal of Educational Change* (in press).

Ainscow, M. (2013). *From special education to effective schools for all: Widening the agenda.* SAGE Publications Ltd.

Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy, 6*(1), 7–16.

Ainscow, M., & Sandill, A. (2010). Developing inclusive education systems: The role of organisational cultures and leadership. *International Journal of Inclusive Education, 14*(4), 401–416.

Al Ju'beh, K. (2015). *Disability inclusive development toolkit*. Bensheim, CBM.

Alhassan, A. R. K. (2014). *Teacher effectiveness in adapting instruction to the needs of pupils with learning difficulties in regular primary schools in Ghana*. SAGE Open. https://doi.org/10.1177/2158244013518929

Alkahtani, K. (2013). Teachers' knowledge and use of assistive technology for students with special educational needs. *Journal of Studies in Education*, *3*(2), 12-20.

Allison, C., & Sanspree, M. J. (2006). Persons with visual impairments. In R. Gargiulo (Ed.), *Special education in contemporary society* (2nd ed., pp. 480–519). Thomson Learning Corporation.

Alper, S., & Raharinirina, S. S. (2006). Assistive Technology for Individuals with Disabilities: A Review and Synthesis of the Literature. *Journal of Special Education Technology, 21*, 47 - 64.

Amenyedzi, S. (2016). *We are forgotten: the plight of persons with disability in youth ministry.* IASYM Africa Conference, Kenya.

American School Counselor Association (2003). *The ASCA national model: A framework for school counseling programs.* Alexandria, Author

American School Counselor Association (2010). Ethical standards for school counseling. Retrieved from http://www.schoolcounselor.org/asca/media/asca/Resource%20Center/Legal%20and%20Ethical%20Issues/Sample%20Documents/EthicalStandards2010.pdf

Amoako, R, Attia, I., Awini, A., & Denteh, R. (2021). Colleges of education tutors' perceptions on modification and adaptation approaches for children with special educational needs and disabilities in Ghana. *European Journal of Education Studies, 8*(5), 396-409.

Amoako, R., Attia, I & Dinko D. L. (2021). Managing children with special educational needs and disabilities: Pre-service teachers perceptions on professional-parent collaboration. *Research on Humanities and Social Sciences, 11*(20), 211-230.

Antia, S. D.; Jones, P. B.; Reed, S.; Kreimeyer, K. H. (2009). Academic Status and Progress of Deaf and Hard-of-Hearing Students in General Education Classrooms. *Journal of Deaf Studies and Deaf Education, 14(3), 293–311.* doi:10.1093/deafed/enp009

Anwar, T. (2017). *Discriminatory issues for children with special needs: The case of Ghana*. Oslo and Akershus University College of Applied Sciences.

Armstrong, F. & Barton, L. (2008). Policy, experience and change and the challenge of inclusive education: The case of England. *Policy, Experience and Change 5*(18), 5-18.

ASCA (2016). The school counsellors and learners with disabilities 55-56.

Asch, A. (2004). *Critical race theory, feminism, and disability*: Rutgers University Press.

Avissar, G. (2000). The school principal and inclusion: A cross cultural research investigation. Paper presented at the International Special Education Conference (ISEC) Including the Excluded, University of Manchester, Manchester UK.

Avoke, M. K. & Avoke S. K. (2004). *Inclusion, rehabilitation and transition services in special education*. Department of Special Education, University of Education, Winneba.

Avramidis, H. L., & Norwich, J. F. (2002). A validation study of the performance indicators and learner outcomes of Kentucky's alternate assessment for students with significant disabilities. *The Journal of the Association for Persons with Severe Handicaps, 24,* 100-110.

Azharizah, S., & Salleh, A. (2011). Kesediaan dan keperluan latihan kepada kaunselor sekolah dalam program Pendidikan Khas. *Journal of Special Education*, *1*(1), 129-141.

Badu, E., Agyei-Baffour, P., & Opoku, M. (2016). Access barriers to health care among people with disabilities in the Kumasi Metropolis of Ghana. *Canadian Journal of Disability Studies*, *5*(2), 131–151.

Barlow, K. G., & Reynolds, S. (2018). A mixed-methods study examining developmental milestones and parental experiences in Ghana. *The Open Journal of Occupational Therapy, 6*(2), 23-40.

Barnes, C., Mercer, G. & Shakespeare, T. (2010). *Exploring disability: A sociological introduction.* Polity Press.

Bartolo, P. A., Bjorck-Akesson, E., Gine, C., & Kyriazopoulou, M. (2016). Ensuring a strong start for all children: Inclusive early childhood education and care. In A. Watkins & C. Meijer (Eds.), *Implementing inclsuive education: Issues in bridging the policy-practice gap* (pp. 19–35). Emerald Publishing.

Baxter, S., Brookes, C., Bianchi, K., Rashid, K. and Hay, F. (2009) Speech and language therapists and teachers working together: exploring the issues. *Child Language Teaching and Therapy, 25*(2), 215-234.

Bayer, R., & Spitzer, R. L. (1982). Edited correspondence on the status of homosexuality in DSM-III.*J. Hx. Behav. Sci. 18*, 32–52.

Bell, S., McPhillips, T., & Doveston, M. (2011). How do teachers in Ireland and England conceptualise dyslexia? *Journal on Research on Reading, 1*(3), 305-315.

Bell, J. (2010). *Doing your research project: A guide for first-time researchers in education, health and social science*. New Delhi: Open University Press.

Biklen, D. (2000). Constructing inclusion: lessons from critical, disability narratives. *International Journal of Inclusive Education, 4*(4), 337-353.

Billingsley, B. S. (2004). Promoting teacher quality and retention in special education. *Journal of Learning Disabilities, 37*(5), 370-6.

Booth, T., & Ainscow, M. (2002). *Index for inclusion: Developing learning and participation in schools.* Centre for Studies on Inclusive Education.

Boyle, M.J. & Hernandez, C.M. (2006). An investigation of the attitudes of catholic school principals towards the inclusive of students with disabilities. *Journal of Catholic Education*, 20(1), 190-119.

Bredekamp, S. (2020). *Effective practices in early childhood education: Building a foundation* (4th ed.). Pearson Education Inc.

Bryman, A. (2006). Paradigm peace and the implications for quality. *International Journal of Social Research Methodology*, *9*, 134-150.

Bryman, A. (2012). *Social research methods* (4th ed.). OUP Oxford.

Buku, D. K. (2016). *Foundations of guidance and counselling*. Benjoy Enterprise.

Bulat, J., Dubeck, M., Green, P., Harden, K., Henny, C., Mattos, M., … Sitabkhan, Y. (2017). *What we have learned in the past decade: RTI's approach to early grade literacy instruction.* RTI Press Publication.

Cerney, J. (2007). *Deaf education in America: Voices of children from inclusion settings.* Gallaudet University Press.

Cheshire, L. 2019. *Inclusive education for persons with disabilities – Are we making progress?* Background paper prepared for the International Forum on inclusion and equity in Education – Every learner matters. UNESCO.

Chimedza, R., & Peters, S. (2001). *Disability and education in an African context: Putting theory into practice from the perspective of different voices*. College Press.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge.

Cole, C. M., Waldron, N., & Majd, M. (2004). Academic progress of students across inclusive and traditional settings. *Mental Retardation, 42*(2), 136-144.

Cologon, K. (2014). Better together: Inclusive education in the early years. In K. Cologon (Ed.), *Inclusive education in the early years* (pp. 1–26). Oxford University Press.

Convention on the Rights of the Child General Comment (2006). No. 9, The rights of children with disabilities, CRC/C/GC/9 February 2007.

Cook, A. M., & Polgar, J. M. (2008). *Cook and Hussey's assistive technologies: Principles and practice* (3rd ed.). Elsevier.

Cook, B. G., Cameron, D. L., & Tankersley, M. (2007). Inclusive teachers' attitudinal ratings of their students with disabilities. *The Journal of Special Education, 40*(4), 230–238.

Cope, C. & Ward, P. (2002). Integrating learning technology into classrooms: The importance of teacher perceptions. *Educational Technology and Society*, *5*(1), 67-74.

Corey, G. (2013). *Theory and practice of counselling and psychotherapy* (9th ed.). Belmont, CA: Brooks/Cole.

Corn, A. L., & Lusk, K. E. (2010). Perspectives on low vision. In Corn, A. L. and Erin, J. N. (Eds.), *Foundations of low vision: Clinical and functional perspectives* (2nd ed.). American Foundation for the Blind.

Creaghead, N. A. (1993). *Collaboration: Serving children with communication disabilities in the classroom*. Purdue University

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). SAGE Publication.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publication.

Creswell, J. W., & Plano-Clark, V. L. (2007). *Designing and conducting mixed methods research.* SAGE Publications.

Crowley, E., Di Nicolantonio, F., Loupakis, F. (2013). Liquid biopsy: Monitoring cancer-genetics in the blood. *Nat Rev Clin Oncol., 10*, 472–484. https://doi.org/10.1038/nrclinonc.2013.110

Culham, A., & Nuid, M. (2003). Deconstruction normalization: Clearing the way for inclusion. *Journal of Intellectual Development and Disability, 28*(1), 23-35.

Cummins C., Cheek E. H., & Lindsey J. D. (2004). The relationship between teachers' literacy beliefs and their instructional practices: a brief review of the literature for teacher educators. *Journal of Teaching & Learning in Diverse Settings, 4,* 103-110.

D'Alessio, S. (2011). *Inclusive education in Italy: A critical analysis of the policy of integrazione scolastica*. Sense Publishers.

Dadzie, E. K. (2015). Effective library provision in Ghanaian Communities: case study of Dunkwa-On-Offin Branch library. *Library Philosophy and Practice*, *1,* 13-21.

Daniel, L. G., & King, D. A. (1997). Impact of inclusion education on academic achievement, student behavior and self-esteem, and parental attitudes. *Journal of Educational Research, 91*(2), 67–80.

Davis M. M. & Wilson E. K. (1999). A title I teacher's beliefs, decision-making, and instruction at the third and seventh-grade levels. *Literacy Research Journal, 20,* 201-220.

deBoer, A., Sip J. P. & Alexander M. (2011). Regular primary schoolteachers' attitudes towards inclusive education: A review of the literature. *International Journal of Inclusive Education, 15*(3), 33-40.

DeCarlo, D., Woo, S., & Woo, G. (2006). *Patients with low vision* (2nd ed.). Elsevier.

Degener, T. (2017). *10 years of convention on the rights of persons with disabilities*. Netherlands Quarterly of Human Rights.

Deiner, P. L. (2013). *Inclusive early childhood education: Development, resources and practice* (6th ed.). Cengage Learning.

Deku, P., & Vanderpuye, I. (2008). Assessing instructional strategies: A case study of selected regular schools in Ghana. *Implication for Inclusive education. African Journal of Special Educational Needs, 5*(4), 67-78.

Deku, P., & Vanderpuye, I. (2017). Perspectives of teachers regarding inclusive education in Ghana. *International Journal of Whole Schooling, 13*(3), 39-54.

Denzin K. N. & Lincoln, S. Y. (2013). *The landscape of qualitative research*. SAGE Publications, Inc.

Department of Basic Education (2011). *Report of the task team for the review of the implementation of the NCS Final Report*. DoBE, Pretoria, South Africa.

Deppeler, J. M. (2012). Developing inclusive practices: Innovation through collaboration. In C. Boyle, & K. Topping (Eds.), *What Works in Inclusion?* (pp. 125 - 138). Open University Press.

DeSimone, J. R., & Parmar, R. S. (2006). *Survey on teaching mathematics to students with learning disabilities in middle school*. Unpublished manuscript, St. John's University.

Devecchi, C., Dettori, F., Doveston, M., Sedgwick, P. & Jament, J. (2012) Inclusive classrooms in Italy and England: the role of support teachers and teaching assistants. *European Journal of Special Needs Education, 27*(2), 171-184. 0885-6257.

Disability Studies Network (2010). Disability studies conference: 5th Biannual Disability Studies Conference, Lancaster University, UK. http://www.disability-studies.net/?content=3 (accessed February 26, 2010).

Donohue, D., & Bornman, J. (2014). The challenges of realising inclusive education in South Africa. *South African Journal of Education*, *34*(2), 1-14.

Dreyer, L. M., Engelbrecht, P. & Swart, E. (2012). Making learning support contextually responsive. *Africa Education Review, 9*(2), 270-288.

Dupoux, E., Wolman, C., & Estrada, E. (2005). Teachers' attitudes toward integration of students with disabilities in Haiti and the United States. *International Journal of Disability, Development and Education, 52*, 43-58.

Dyal, A., Carpenter, L. B., & Wright, J. V. (2009). Assistive technology: What every school leader should know. *Education, 129*(3), 556–560.

Eaton, S. E. (1996). *Dismantling desegregation: The quiet reversal of brown v. board of education.* New York: New Press.

Edutopia. (2000). Parental involvement reaps big benefits. Retrieved April 17, 2022, from http://www. edutopia.org/parent-involvement-reaps-big-benefits

Eikeseth, S. (2010). Examination of qualifications required of an EIBI professional. *European Journal of Behavior Analysis, 11*, 239–246.

Ellis, R. (2016). *Understanding second language acquisition* (2nd ed.). Oxford University Press.

Engelbrecht, P., Nel, M., Smit, S., & Deventer, M. Van. (2016). The idealism of education policies and the realities in schools: The implementation of inclusive education in South Africa. *International Journal of Inclusive Education, 20*(5), 520–535.

Essa, E. (2014). *Introduction to early childhood education* (7th ed.). Cengage Learning.

European Agency for Special Needs and Inclusive Education. (2015). *Agency position on inclusive education systems.* European Agency for Special Needs and Inclusive Education.

Evans, R., Adjei-Amoako, Y. & Atim, A. (2016). Disability and HIV: Critical intersections. In Grech, S. and Soldatic, K. (eds.), *Disability in the Global South: The critical handbook.* Springer.

Ferguson, D. L. (2008). International trends in inclusive education: The continuing challenge to teach each one and everyone. *European Journal of Special Needs Education, 23*(2), 109-120.

Filmer, D. (2008). Disability, poverty, and schooling in developing countries: results from 14 household surveys. *The World Bank Economic Review, 22*, 141-163.

Florian, L. & Rouse, M. (2010). Teachers' professional learning and inclusive practice. Pages 185-199. In *Confronting obstacles to inclusion: International responses to developing inclusive education.* Routledge.

Florian, L.D., & Black-Hawkins, K. (2010). Exploring inclusive pedagogy. *British Educational Research Journal, 37*, 813-828.

Florian, L. (2010). The concept of inclusive pedagogy. In *Transforming the role of the SENCO*, (pp. 61 – 72). Open University Press.

Flynt, S., & Morton, R. (2004). Bullying and children with disabilities. *Journal of Instructional Psychology, 31*(4), 330–334.

Forlian, T. & Chris, A. (2009). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education, 13*(2), 113-130.

Fredäng, P. (2003). *Teckenspråkiga döva: Identitetsförändringar i det svenska dövsamhället*. (Doctoral dissertation). Stehag: Gondolin.

Freeland, A., Jones, J., & Mohammed, N. K. (2010). Sensorineural deafness in Tanzanian children–is ototoxicity a significant cause? *A pilot study. International Journal of Paediatrics Otorhinolaryngology, 74,* 516–9.

Frostad, P., & Pijl, S. J. (2007). Does being friendly help in making friends? The relation between the social position and social skills of pupils with special needs in mainstream education. *European Journal of Special Needs Education 22*(1), 15-30.

Gallagher, A. L., Murphy, C., & Conway, P. F. (2019). Engaging multiple stakeholders to improve speech and language therapy services in schools: an appreciative inquiry-based study. *BMC Health Services Research, 19*, 226-246.

Ganle, J. K., Otupiri, E., Obeng, B., Kwaku Edusie, A., Ankomah, A., Adanu, R. (2016). Challenges women with disability face in accessing and using maternal healthcare services in Ghana: A qualitative study. *PLOS ONE, 11*(6), 45-55.

Garrison-Harrell, L. & Kamps, D. (1997). The effects of peer networks on social-communicative behaviors for learners with autism. *Focus on Autism and Other Developmental Disabilities, 12*(4), 241–254.

Geere, J. L., Cortobius, M., Geere, J. H., Hammer, C.C., & Hunter, P. R. (2018) Is water carriage associated with the water carrier's health? A systematic review of quantitative and qualitative evidence. *BMJ Glob Health,* 3(4), 91-200.

Geldenhuys, J. L. & Wevers, N. E. J. (2013). Ecological aspects influencing the implementation of inclusive education in mainstream primary schools in the Eastern Cape, South Africa. *South African Journal of Education, 33*(3), 1-13.

Gersten, R., Fuchs, L. S., Williams, J. P., & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of research. *Review of Educational Research, 71,* 279-320.

Geurts, K. L., & Komabu-Pomeyie, S. G. M. A. (2016). From 'Sensing Disability' to Seselelame: Non-dualistic activist orientations in twenty-first-century Accra. Disability in the GlobalSouth, *International perspectives on social policy, administration, and practice.* Springer International Publishing.

Ghana Education Service (2003). *Increasing access to quality basic edu-745cation for children with special needs: Special education project with VSO.* GES [Brochure]. Accra, Ghana

Ghana Education Service (2004). *WSD status report.* Ministry of Education.

Ghansah, E. (2011). *The role of employee retention on job performance: A case study of Accra Brewery Company Limited.* Giddens.

Giddens, A. (2006). *Sociology*. Polity, Cambridge.

Gilman, R., Easterbrooks, S. R., & Frey, M. (2004). A preliminary study of multidimensional life satisfaction among deaf/hard of hearing youth across environmental settings. *Social Indicators Research, 66*, 143–164.

Glennen, S., & DeCoste, D. C. (1997). *The handbook of augmentative and alternative communication*. Singular Publishing Group.

Gopinath, V., Mubarak, D., Priyadarshini, S., Priyadharsshini, N. M. , N., Thajuddin, P., & Velusamy, L. (2012). Biosynthesis of silver nanoparticles from *Tribulus terrestris* and its antimicrobial activity: a novel biological approach Colloids and Surfaces, *B: Biointerfaces, 96,* 69-74.

Greenspan, S. & Granfield, J. R. 1992. Reconsidering the construct of mental retardation: implication of a model of social competence. *American Journal of Mental Retardation, 96,* 442–453.

Grimes, D. S. & Parker, P. S. (2009). Imagining organizational communication as a decolonizing project: In *conversation with Broadfoot, Munshi, Mumby and Stohl. Management Communication Quarterly, 22*(3), 502-511.

Guralnick, M. J., & Bruder, M. B. (2016). Early childhood inclusion in the United States: Goals, current status, and future directions. *Infants & Young Children, 29*(3), 166–177.

Gyasi, M. N. K, Okrah, A. K. & Anku, J. S. A. (2020). Teachers' knowledge of special educational needs and disability students and their classroom management approaches. *World Journal of Education, 4,* 23-46.

Hanline, M. F., & Halvorsen, A. (1989). Parent perceptions of the integration transition process: Overcoming artificial barriers. *Exceptional Children, 55*(6), 487–492.

Hay, J. (2012). The dilemma of a theoretical framework for the training of education support services staff within inclusive education. *Journal for New Generation Sciences, 10*(2), 92-103.

Hayes, A. M., & Bulat, J. (2017). *Disabilities inclusive education systems and policies guide for low- and middle-income countries*. RTI Press Publication No. XX-0043-1707. Research Triangle Park, NC: RTI Press.

Henderson, G. & Bryan, W. (2011). *Psychosocial aspects of disability*. Charles C. Thomas, Springfield, IL

Hill, E. W. (1986). Orientation and mobility. In G.T. Scholl (Ed.), *Foundations of education for blind and visually handicapped children and youth: Theory and practice* (pp. 315–340). New York: AFB Press.

Huebner, K., & Wiener, W. (2005). Guest editorial. *Journal of Visual Impairment and Blindness, 99*, 579–584.

Hughes, J. (2006). Inclusive education for individuals with Down syndrome. *Down Syndrome News and Update, 6*(1), 1–3.

Hutchinson, N. L., & Martin, A. K. (2012). *Inclusive classrooms in Ontario schools*. Pearson Canada.

Inclusion Ghana (2013). access to health care for persons with intellectual disabilities in Ghana: Mapping the issues and reviewing the evidence. Accra, North Industrial Area

Individuals with Disabilities Education Improvement Act (IDEA, 2004). P.L. 108–446. Retrieved from: https://cec.sped.org/~/media/Files/Policy/IDEA/CRS%20IDEA%20Report.pdf

Integrated National Disability Strategy (1997). White Paper. Office on the Status of Disabled Persons, South Africa

Janney, R. & Snell, M. E. (2013). *Modifying schoolwork* (3rd ed.). Brookes.

Jerwood, L. (1991). Using special needs assistants effectively. *British Journal of Special Education, 26*(3), 127–129.

Kahveci, G. (2016). School Counseling and learners with disabilities. *International Online Journal of Primary Education, 5*(2), 1-12.

Kalyanpur, M. (2011). Paradigm and paradox: Education for all and the inclusion of children with disabilities in Cambodia. *International Journal of Inclusive Education, 15*(10), 109-120.

Katsiyannis, A., Zhang, D., & Conroy, M. A. (2003). Availability of special education teachers: Trends and issues. *Remedial and Special Education, 24*, 246-253.

Kavitha, V., Manumali, M. S., Praveen, K., & Heralgi, M. (2015). Low vision aid-A ray of hope for irreversible visual loss in the pediatric age group. *Taiwan J Ophthalmol, 5*(2), 63–67.

Kavitha, V.; Manumali, Milind S.; Praveen, K.; Heralgi, Mallikarjun M. (2015). Low vision aid—A ray of hope for irreversible visual loss in the pediatric age group. *Taiwan Journal of Ophthalmology, 5(2), 63–67.* doi:10.1016/j.tjo.2015.02.002

Keetam, D. & Alkahtani, F. (2013). Teachers knowledge and use of Assistive Technology for students with Special Educational Needs. *Journal of studies in Education, 3*(2), 65-85.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research Activities. *Educational & Psychological Measurement, 30,* 607-610.

Kumar, S. & Raja, B. (2010). Web-based technology for children with learning difficulties. *Journal of Educational Technology, 7*(1), 8-13.

Kurtts, S. A. (2006). Universal design for learning in inclusive classrooms. *Electronic Journal for Inclusive Education, 1*(10).

Kuyini, A. A. R., & Abosi, O. C. (2014). Teacher effectiveness in adapting instruction to the needs of pupils with learning difficulties in regular primary schools in Ghana. *SAGE Open, 4,* 1–16.

Kuyini, A. B. & Boitumelo, M. (2011). Student teachers' attitudes and concerns about inclusive education in Ghana and Botswana. *International Journal of Whole Schooling*, *7*(1), *1*, 77-89.

Kuyini, A. B. (2010). Tamale metro poor performance in the BECE: Implications and suggested actions. *The Ghana News Agency*. Available from www.ghanaweb.com

Lang, H. G. (2002). Higher education for deaf learners: research priorities in the new millennium. *Journal of Deaf Studies and Deaf Education, 7*(4), 267 – 287.

Latimier, C. & Jan S. (2011). *Children's rights for all: Implementation of the united nations convention on the rights of the child for children with intellectual disabilities*. Inclusion Europe, Brussels.

Law, J., Lindsay, G., Peacey, N., Gasgoigne, M., Soloff, N., Radford, J. & Band, S. (2002). Consultation as a model for providing speech and language therapy in schools: a panacea or one step too far? *Child Language Teaching and Therapy 18*(2), 145-164.

Leyden, J., Stackhouse, J. & Szczerbinski, M. (2011), Implementing a whole school approach to support speech, language and communication: Perceptions of key staff. *Child Language Teaching and Therapy, 27*, 203–222.

Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications Inc.

Lindeblad, E., Nilsson, S., Gustafson, S. & Svensson, L. (2016). Assistive technology as reading interventions for children with reading impairments with a one-year follow-up. *Disability and Rehabilitation: Assistive Technology, 12*(7), 713-724.

Lindsay, G., Soloff, N., Law, J., Band, S., Peacey, N., Gasgoine, M. & Radford, J. (2002). Speech and language therapy services to education in England and Wales. *International Journal of Language and Communication Disorders 37*(3), 273-288.

Lindsay, P. Scott, H., & Thomson, G. (2014). Exploring teachers' strategies for including children with autism spectrum disorder in mainstream classroom. *International Journal of Inclusive Education*, *18*(2), 425-450.

Lipsky, D. & Gartrie A. (1997). *Inclusion and school reform*. Paul H. Brookes Publishing Co. Inc.

Llewellyn, A., Agu, L. & Mercer, D. (2008). *Sociology for social workers*. Polity.

Logan, A. (2006). The role of the special needs assistant supporting pupils with special educational needs in Irish Mainstream Primary Schools. *Support for Learning, 21*(2), 92-99.

Lynch, P., McCall, M. (2007). The role of itinerant teachers. *Community Eye Health Journal, 20*(620), 26–27.

Mariage, T. V., Englert, C. S., & Garmon, M. A. (2000). The teacher as "more knowledgeable other" in assisting literacy learning with special needs students. *Reading & Writing Quarterly, 16*, 299-336.

Marjatta, T., Raija, P., & Minna, T. (2009). Research section: Inclusive special education: The role of special education teachers in Finland. *Focus on Autism and Other Developmental Disabilities, 36*(3), 162–173.

Mastropieri, M.A. & Scruggs, T.E. (2004). *The inclusive classroom: Strategies for effective instruction* (2nd ed.). Pearson Education, Inc.

Maul, C. A., & Singer, G. H. S. (2009). Just good different things': Specific accommodations families make to positively adapt to their children with developmental disabilities. *Topics in Early Childhood Special Education, 29*, 155-170.

Maulik, P. K., & Darmstadt, G. L. (2007). Childhood disability in low- and middle-income countries: overview of screening, prevention, services, legislation and epidemiology. *Lancet, 120*, S1-S55.

McCausland, D. (2005). *International experience in the provision of individual education plans for children with disabilities.* National Disability Authority.

McGregor, G. & Vogelsberg, R. T. (1998). *Inclusive schooling practices: Pedagogical and research foundations*, Paul H. Brookes.

McKean, C., Law, J., Laing, K., Cockerill, M., Allon-Smith, J., McCartney, E., & Forbes, J. (2016). A qualitative case study in the social capital of co-professional collaborative co-practice for children with speech, language and communication needs. *International Journal of Language & Communication Disorders, 52*(4), 514-527.

McLeskey J., Waldron N. L., & Reddy L. (2014). A case study of a highly effective, inclusive elementary school. *The Journal of Special Education, 48*(1), 59-70.

McRuer, R. (2006). *Crip theory: Cultural signs of queerness and disability*. New York University Press.

Michalko, S. (2002). *The difference that disability makes*. Temple University Press

Mikkelsen, B. (2005). *Methods for development work and research: A new guide for practitioners* (2nd ed.). Sage Publications.

Miles, S. & Ian, K. (2005). Using images to promote reflection: an action researchstudy in Zambia and Tanzania. *Journal of Research on Special Educational Needs, 9,* 129-139.

Miles, S. (2012). Education for diversity: The role of networking in resisting disabled people's marginalization in Bangladesh. *Journal of Comparative and International Education, 42*(2), 177-190.

Miller, L. J., & Phillips, S. (1992). Parental attitudes toward integration. *Topics in Early Childhood Special Education, 12*(2), 230–246.

Ministry of Education (2012). *Education strategic plan (ESP) 2010 to 2020: Policies, strategies, delivery, finance*. Government of Ghana.

Ministry of Education. (2015). *Inclusive education policy*. Government of Ghana.

Ministry of Education. (2017). *National teachers' standards for Ghana: Guidelines*. Government of Ghana.

Mitchell, D. (2008). *What really works in special and inclusive education: using evidence-based teaching strategies*. Routledge.

Mitchell, D., Morton, M. & Hornby, G. (2002). Social exclusion and education. *Journal of Integrated Care, 10*(3), 5- 15.

Mitra, S. (2006). The capability approach and disability. *Journal of Disability Policy Studies, 16*(4), 236–247.

Mittler, P. (2000). *Working towards inclusive education: Social context*. David Fulton.

Monchy, M. de, Pijl, S. J. & Zandberg, T. 2004. Discrepancies in judging social inclusion and bullying of pupils with behaviour problems. *European Journal of Special Needs Education, 19*(3), 317–330.

Morris, J. (1991). *Pride against prejudice: Transforming attitudes to disability*. The Women's Press.

Naami, A. 2014. Breaking the barriers: Ghanaians' perspectives about the social model. *Disability, CBR & Inclusive Development*, *25*(1), 21–39.

Nacino-Brown, R. M., Oke, F. E., & Brown, D. P. (1985). *Curriculum and instruction: An introduction to methods of teaching.* MacMillan.

Nel, M., Engelbrecht, P., Nel, N. M. & Tlale, L. D. N. (2013). South African teachers' views of collaboration within an inclusive education system. *International Journal of Inclusive Education, 18*(9), 903-917.

Netherton, D., & Deal, W. (2007). Assistive technology in the classroom. *Technology Teacher, 66*(1), 10-15.

Ngozi C. & Subbey, M. (2022). Teacher resources available to facilitate inclusive educational practices in pre-schools within Obio-Akpor in Nigeria**.** *International Journal of Research and Innovation in Social Science, 6*(1), 15-30.

No Child Left Behind Act of 2001. (2001). P.L.107-110, 115 stat. 1425.

Nolinske, T. L. (1999). Creating an inclusive learning environment. *Journal of Teaching Excellence, 11*(4), 305-315.

Norafifah, B. & Mohamad, H. O. (2017). Keterlibatan dan kompetensi kaunseling multibudaya guru bimbangan dan kauseling sekolah terhadap Murid Berkeperluan Khas. *Journal Home Page, 2*(1), 99-103.

O'Connell, C., Finnerty, J. & Egan, O. (2008). *Hidden voices, combat poverty agency.* Poverty Research Initiative.

Ocloo, M. A., & Subbey, M. (2008). Perception of basic education school teachers towards inclusive education in the Hohoe District of Ghana. *International Journal of Inclusive Education, 12*(5-6), 639-650.

OECD (2006). *OECD Annual Report 2006.* OECD Publishing.

OECD (2010). *Are the new millennium learners making the Grade? Technology use and educational performance in PISA 2006*. OECD.

OECD. (2015). Skills for social progress: The power of social and emotional skills. *https://www.keepeek.com/Digital-Asset-Management/oecd/education/skills-for-socialprogress_9789264226159-en#page1*

Oliver, M. (1981).A new model of the social work role in relation to disabilityy', in J. Campling (Ed.), *The handicapped person: A new perspective for social workers* (pp. 19–32). RADAR.

Olusanya, B. O., Bamigboye, B. A. & Somefun, A. O. (2012). Permanent hearing loss among professional spice grinders in an urban community in Southwest Nigeria. *J Urban Health* 89, 185–195.

Omansky-Gordon, B., & Rosenblum, K. E. (2001). Bringing disability into the sociological Frame: A comparison of disability with race, sex, and sexual orientation statuses. *Disability & Society, 16*, 19 - 25.

O'Neill, T., & Hird, M. J. (2001). *Double damnation: Gay disabled men and the negotiation of masculinity.* Backett-Milburn.

Opoku, M., Agbenyega, P., Mprah, W. K., Mckenzie, J., & Badu, E. (2017). Decade of Inclusive Education in Ghana: Perspectives of educators. *Journal of Social Inclusion*, *8*(1), 4-20.

Oppong, A. M. (2003). *Understanding and effectively educating the special needs student.* Department of Special Education, University of Education, Winneba.

Paterson, K., & Hughes, B. (1999). Disability studies and phenomenology: The carnal politics of everyday life. *Disability and Society, 14,* 597-610.

Pérez, J. S, Llanos, M. N., & Guasp, J. J. (2017). Inclusive practices: the role of the support teacher. *Aula Abierta*, *46*(2), 49-55.

Peters, S. (2003). *Inclusive education: Achieving education for all by including those with Disabilities and Special Education Needs*. Prepared for the World Bank Disability group, April 30, 2003.

Pfiffner, L. J. & McBurnett, K. (1997). Social skills training with parent generalization: treatment effects for children with attention deficit disorder. *Journal of Consulting and Clinical Psychology, 65*(5), 749–757.

Pierangelo, R., & Giulani, G. A. (2004). *Transition services in special education.* Pearson Education.

Porter, G. L., & Smith, D. (2011). *Exploring inclusive practices through professional enquiry.* Sense Publishers.

Porter, G. L. (2001). Disability and inclusive education: A paper prepared for the Inter- American Development Bank Seminar on Inclusion and Disability, Santiago, Chile, March 16, 2001.

Praisner, C. L. (2003). Attitudes of elementary school principals toward the inclusion of students with disabilities. *Exceptional Children, 69*(2), 14-21.

Praisner, C.L. (2003). Attitudes of elementary schools principals toward the inclusion of students with disabilities. *Exceptional Journal of Inclusive Education*, 18(5), 535-552.

Pring, T., Flood, E., Dodd, B. & Joffe, V. (2012). The working practices and clinical experiences of paediatric speech and language therapists: a national UK survey. *International Journal of Language and Communication Disorders, 47*(6), 696-708.

Purtell, R. (2013). Music and the social model of disability. In J. Williams (ed.), *Music and the social model: An occupational therapist's approach to music with people labelled as having learning disabilities* (pp. 26–32). Jessica Kingsley.

Reiter, S., & Vitani T. (2007). Inclusion of pupils with autism: The effect of an intervention program on the regular pupils' burnout, attitudes and quality of mediation. *Autism, 11*(4) 321–333.

Rohwerder, B. (2015). *Disability inclusion: Topic guide*. GSDRC, University of Birmingham.

Ruppar, A. L., Gaffney, J. S., & Dymond, S. K. (2015). Influences on teachers' decisions about literacy for secondary students with severe disabilities. *Exceptional Children, 81*, 209-226

Sackey, E., 2015. Disability and political participation in Ghana: An alternative perspective. *Scandinavian Journal of Disability Research*, *17*(4), 366–381.

Saebones, A. M., Bieler, R. B., Baboo, N., Banham, L., Singal, N., Howgego, C., McClain-Nhlapo, C. V., Riis-Hansen, T. C., & Dansie, G. A. (2015). T*owards a disability inclusive education: Background paper for the Oslo Summit on Education for Development.* Retrieved September 12, 2016, from https://www.usaid.gov/sites/ default/files/documents/1865/Oslo_Ed_Summit_ DisabilityInclusive_Ed.pdf

Sandall, R.S., Schwartz, I.S., Chou, H-Y., Horn, E., Joseph, G., Lieber, J., Odom, S., Wolery, R., & Hemmeter, M. (2008). *Building blocks for teaching preschoolers with special needs* (2nd ed.). Paul H. Brookes Publishing Co.

Sandall, S.R., Schwartz, I.S., & Joseph, G.E. (2001). A building blocks model for effective instruction in inclusive early childhood settings. *Young Exceptional Children, 4*, 3 - 9.

Scheepstra, A. J. M., Nakken, H. & Pijl, S. J. (1999). Contacts with classmates: The social position of pupils with Down's syndrome in Dutch mainstream education. *European Journal of Special Needs Education*, *14*(3), 212–220.

Schick, B. (2005). Look who's being left behind: Educational interpreters and access to education for deaf and hard-of-hearing learners. *Journal of Deaf Studies and Deaf Education, 11*(1), 3-20.

Schipper, J. (2006). *Disability studies and the Hebrew Bible*. T & T Clark.

Schulze, M. (2010). Understanding the UN convention on the rights of persons with disabilities. Handicap International. *http://www.hiproweb.org/uploads/tx_hidrtdocs/HICRPDManual2010.pdf*

Schurmann, E. (2006). *Training disabled teachers in Mozambique*. Taylor and Francis Group.

Seale, J. (2006). *E-learning and disability in higher education*. Routledge.

Serres A. S & Nelson A. J. (2011). *Professional school counselor*. Routledge.

Shade, R. A., & Roger S. (2001). General education and special education pre-service teachers' attitudes towards inclusion. *Preventing School Failure, 46*(1), 41-50.

Slee, R. (2007). *Inclusive education.* Paper presented at the Workshop for Teachers and Specialist Workers, Massey University College of Education

Smith, M., & Levack, N. (1996). *Teaching learners with visual and multiple impairments*. Austin, TX: Texas School for the Blind and Visually Impaired.

Smith, T. E. C., Polloway, E. A., Patton, J. R., & Dowdy, C. A. (2012). *Teaching students with special needs in inclusive settings* (6th ed.). Pearson Education Inc.

Soresi, S. & Nota, L. (2000). A social skill training for persons with Down's syndrome. *European Psychologist, 5*(1), 34–43

Soto, G. (1997). Special education teacher attitudes toward AAC: Preliminary survey. *Augmentative and Alternative Communication, 13,* 186-196.

Soukakou P. E. (2012). Measuring quality in inclusive preschool classrooms: Development and validation of the Inclusive Classroom Profile (ICP). *Early Childhood Research Quarterly*, *27*(3), 478-488.

Spasovski, O. (2010). Principles of the inclusive education and the role of teachers and in-school professional staff. https://doi.org/10.5281/zenodo.28338 *J Spec Educ Rehab., 11*(1-2), 67-86.

Spasovski, O. (2010). Principles of the inclusive education and the role of teachers and in-school professional staff. *Journal of Special Education and Rehabilitation*, *11*(1). https://doi.org/10.5281/zenodo.28338

Spradbrow, G. & Power D. (2000). Slipping through the cracks? the support needs of hard of hearing learners in a University Program'. Presented at the 19th ICED Congress.

Steele M. C. (2011). Foreword: Pursuing effective integrated education. *Journal of Social Issues, 67*(3), 431–434.

Stinson, M. & Antia S. (1999). Considerations in educating deaf and hard-of-hearing learners in inclusive settings. *Journal of Deaf Studies and Deaf Education, 2*, 163-174.

Stinson, M., Yufang, L., Saur, R. & Long, G. (1996). Deaf college learners' perceptions of communication in mainstream classes. *Journal of Deaf Studies and Deaf Education, 1,* 40-51.

Stone, A. D. (1985). *The disabled state*. Macmillan.

Stoner, J. B., Bock, S. J., Thompson, J. R., Angell, M. E., Heyl, B. S., & Crowley, E. P. (2005). Welcome to our world: Parent perceptions of interactions between parents of young children with ASD and education professionals. *Focus on Autism and Other Developmental Disabilities, 20*(1), 39–51.

Stough, L. M., & Palmer, D. J. (2003). Special thinking in special settings: A qualitative study of expert special educators. *Journal of Special Education, 36*(4), 206-222.

Stubbs, S. (2008). *Inclusive education where there are few resources*. Atlas Aliance.

Subbey, M. (2017). Effect of training on teacher knowledge about teaching in pilot inclusive classrooms in Ghana. *Journal of Education, 13*(1), 81.

Takala, M., Pirttimaa, R. & Törmänen, M. (2009). Inclusive special education: the role of special education teachers in Finland. *British Journal of Special Education, 36*(3), 162 – 173.

Takyi, S. A, Amponsah, O., Asibey, M. O., Ayambire, R. A. (2019). *An overview of Ghana's educational system and its implication for educational equity. International Journal of Leadership in Education,* 12 (2) *1–26.* doi:10.1080/13603124.2019.1613565

Tamakloe, E. K., Amedahe, F. K., & Atta, E. T. (2005). *Principles and methods of teaching*. Ghana University Press.

Tashakkori, A., & Creswell, J. W. (2007). The new era of mixed methods. *Journal of Mixed Methods Research, 1*, 3-7.

Thomas, D. & Woods, H. (2003). *Working with people with learning disabilities*. Jessica Kingsley Publishers.

Tomes, L., & Sanger, D. D. (1986). Attitudes of interdisciplinary team members toward speech language services in public schools. *Language, Speech, and Hearing Services in Schools, 17*, 230-240.

Tur-Kaspa, H., Amatzia W. & Tova, M. (2000). A multidimensional study of special education students' attitudes towards people with disabilities: A focus on deafness. *European Journal of Special Needs Education, 15*(1), 175-185.

U.S. Department of Education. (2000, June 8). Educating blind and visually impaired learners; policy guidance. *Federal Register, 65* (111), 36585–36594.

UN (2016). General comment No. 4 – Article 24: Right to inclusive education. CRPD/C/GC/4. Retrieved from: https://www.ohchr.org/en/hrbodies/crpd/pages/gc.aspx

UN Convention on the Rights of Persons with Disabilities (UNCRPD, 2006)

UN Conventions on the Rights of Persons with Disabilities (CRPD, 2006). New York. Retrieved from: http://www.un.org/disabilities/documents/convention/convoptprot-e.pd

UNESCO (2003). *Promoting the convention for the safeguarding of the intangible cultural heritage.* UNESCO

UNESCO (2012) *Shaping the Education of Tomorrow: 2012 Full-Length Report on the UN Decade of Education for Sustainable Development*. UNESCO

UNESCO (2009). *Inclusion of children and disabilities: the early childhood imperative.* UNESCO Policy Brief on Early Childhood.

UNESCO (2009). *Reaching the marginalized: How to approach Inclusive Education. UNESCO International Conference*, Düsseldorf, Germany, 10-11 September 2009

UNICEF (2003). *Inclusive education initiatives for children with disabilities: Lessons from the East Asia and Pacific Regions*. East Asia and Pacific Regional Office, Thailand.

UNICEF (2013). *State of the World's Children: Children with disabilities.* Paris, UNICEF.

Union of the Physically Impaired Against Segregation (1976). *The Union of the Physically Impaired Against Segregation and the Disability Alliance discuss fundamental principles of disability: Being a summary of the discussion held on 22nd November, 1975 and containing commentaries from each organisation*. London: Union of the Physically Impaired Against Segregation.

United Nations (2006). *Convention on the rights of persons with disabilities and optional protocol.* Retrieved on 14th January, 2021 from http:// www.un.org/ disabilities/documents/ convention/convoptprot- e.pdf

United Nations (2010) *The General Assembly at its Sixty-Fifth Session adopted the resolution.* Realization of MDGs for Persons with Disabilities for 2015 and Beyond.

UNESCO (1994). The Salamanca Statement and Framework for Action on Special Needs Education. Paris: UNESCO.

United Nations Children's Fund (2020). Promoting the Rights of children with disabilities. *Innocentia Digest, 13*(30), 1134-1140.

United Nations Educational, Scientific and Cultural Organization [UNESCO] (1994). *The Salamanca statement and framework for action on special needs education*. UNESCO.

Villa, R. A., P. M., Van Le Tac, S., Muc, N. T. M., Ryan, C., Weill, T., & Thousand, J. S. (2003). Inclusion in Vietnam: More than a decade of implementation. *Research & Practice for Persons with Severe Disabilities, 28*(1), 77-90.

Viner, M., Singh, A., & Shaughnessy, M. F. (2020). *Assistive technology to help learners with disabilities*. IGI Global.

United Nations. (1989). Convention on the Rights of the Child. *Treaty Series*, *1577*, 3.

Virginia Department of Education (2018). *Speech-language pathology services in schools: guidelines for best practice.* Richmond press.

Wall-Emerson, R. & Corn, A. L. (2006). Orientation and mobility instructional content for children and youths: A Delphi study. *Journal of Visual Impairment and Blindness, 100*, 331–342.

Walton, C. C., Mowszowski, L., Lewis, S. J., & Naismith, S. L. (2014). Stuck in the mud: time for change in the implementation of cognitive training research in ageing? *Front. Aging Neurosci., 6*, 43.

Washburn, E. K., Joshi, R., & Binks-Cantrell, E. S. (2011). Teacher knowledge of basic language concepts and dyslexia. *Dyslexia, 17,* 165-183

Watson, A. H., Ito, M., Smith, R. O., & Andersen, L. T. (2010). Effect of assistive technology in a public school setting. *American Journal of Occupational Therapy, 64,* 18-29.

Watson, D. F. (1998). *Introduction. Journal for the Study of the New Testament, 20(70), 69–70.*

Watson, N., & Welch-Ross, M. K. (2000). Measuring phenomenal accuracy: An empirical evaluation of a phenomenological method. *Journal of Constructivist Psychology, 13*(3), 181-198.

Wendell, S. (2001). Unhealthy disabled: Treating chronic illnesses as disabilities. *Hypatia, 16*, 17 - 33.

White, S. & Spencer, S. (2018). A school-commissioned model of speech and language therapy. *Child Language Teaching and Therapy, 34*(2), 123-130..

Williams, J. M. (2019). *School Speech-Language Pathologist: Evaluation Process*. Bluffmont Lane.

Willis, J. (2007). *Foundations of qualitative research: Interpretive and critical approaches.* SAGE Publications, Inc.

Wilson, J. (2004). Defining 'special needs. *European Journal of Special Needs*, *17*(1), 61-66.

World Federation of the Deaf, (1993). *Scientific commission on sign language'. report on the status of sign language*. Helsinki, Finland: Miktor.

World Health Organization & World Bank. (2011). World report on disability. Geneva, Switzerland: World Health Organization. Retrieved October 7, 2016, from *http://www.who.int /disabilities/world_report/2011/report.pdf*

World Health Organization (2016). *Monitoring health for the SDGs, sustainable development goals.* World Health Organization

World Health Organization (WHO) (2017). Depression. *Fact sheet.* Available online at: http://www.who.int/mediacentre/factsheets/fs369/en/

Yin, R. K. (2014). *Case study research design and methods* (5th ed.). Sage Publications Inc.

Zahra, A. J. C. (2014). Enabling counsellors: An exploration of the social construction of disability among maltese counsellors. (Tesis Master yang tidak diterbitkan). University of Leeds, England.

Mitchell, D., Morton, M., &. Hornby, G (2002) Social Exclusion and Education. *Journal of Integrated Care*, 10 (3), 5- 15.

Creswell, J. W., & Creswell, J. D. (2018). Research design: qualitative, quantitative, and mixed methods approach. Los Angeles: SAGE.

APPENDICES

APPENDIX A

Questionnaire for Teachers

UNIVERSITY OF EDUCATION, WINNEBA

FACULTY OF EDUCATIONAL STUDIES

DEPARTMENT OF EARLY CHILDHOOD EDUCATION

Dear Respondent,

I am a final year student, pursuing Master of Philosophy in Early Childhood Education at the University of Education, Winneba. I humbly require you to assist me in the data collection stage of my thesis which is on the topic "Teacher Support Services for Managing the Instructional Needs of Children with Disabilities in Early Childhood Centres within Kumasi Metropolis". In doing so, I kindly request that you provide appropriate responses to the statements and items provided in this questionnaire.

This questionnaire is solely meant to be used for academic purposes and to aid complete the researcher's thesis, hence you are promised of confidentiality of responses you will give. You are required to tick (√) where appropriate.

Thank you

PART I

DEMOGRAPHIC DATA OF PARTICIPANTS

1. **Gender**

a. Male [ ]

b. Female [ ]

2. **Age Range**

a. Below 20 [ ]

b. 21 – 30 [ ]

c. 31 – 40 [ ]

d. 41 – 50 [ ]

e. 51 – 60 [ ]

3. **Area of Specialisation**

a. Early Childhood Education [ ]

b. Basic Education [ ]

c. Special Education [ ]

d. Other (specify)……...

4. **Professional Qualification**

a. Certificate in ECE [ ]

b. Diploma in ECE [ ]

c. Degree in ECE [ ]

d. Post Graduate Diploma in Education [ ]

e. Masters in ECE [ ]

f. Other (specify)……

5. Number of years of teaching at present level

a. 0 – 5 years [ ]

b. 6 – 10 years [ ]

c. 11 – 15 years [ ]

d. 16 – 20 years [ ]

e. 21 years and above [ ]

PART II

SECTION A: Types of disabilities among children in early childhood centres within Kumasi Metropolis.

The table below is a checklist which presents data on the "types of disabilities among children in early childhood centres within Kumasi Metropolis". Kindly read each statement carefully and indicate whether or not the type of disability is present or absent among the children you teach by ticking (√).

S/N	Type of Disability	Present	Absent
6.	Physical impairment		
7.	Learning disorder		
8.	Visual impairment		
9.	Hearing impairment		
10.	Intellectual impairment		
11.	Speech impairment		
12.	Dyslexia		
13.	Dysgraphia		
14.	Dyscalculia		
15.	Attention Deficit Hyperactivity Disorder		

SECTION B: Early childhood teacher knowledge about support services in managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis.

The table below presents data on "Early childhood teacher knowledge about support services in managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis". Kindly read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) 5=Strongly Agree (SA), 4=Agree (A), 3=Neutral (N), 2=Disagree (D), and 1=Strongly Disagree (SD).

S/N	Statement	SA 5	A 4	N 3	D 2	SD 1
16.	I have knowledge on assistive technology as a support service					
17.	I am aware of special educators who help in meeting the instructional needs of learners with disabilities					
18.	I have knowledge on counselling services in meeting the instructional needs of learners with disabilities					
19.	I am aware of interpreting services in meeting the instructional needs of learners with disability					
20.	I am aware of mobility services as a support service					
21.	I'm aware of the service of Speech-language pathology					
22.	I'm aware of a support teacher in meeting the instructional needs of learners with disabilities					
23.	I believe that using appropriate teaching strategies facilitates learning opportunities for children with disabilities.					
24.	To reduce the shortfalls of children with disabilities in specific learning areas, I believe developmentally appropriate teaching materials should be used.					
25.	My knowledge of available support services influences my teaching practices.					
26.	My knowledge on teacher support services helps me to improve the potential of my learners.					
27.	My knowledge on teacher support services improves my decisions about instruction to meet learner needs.					
28.	My knowledge on teacher support services assists me to effectively assess children					

29.	My knowledge on teacher support services helps me to effectively facilitate meaningful dialogue with learners with disabilities.					
30.	I have knowledge on teacher support services and it helps me to effectively teach literacy to learners with disabilities					
31.	I have knowledge on teacher support services and it helps me determine the extent to which technology should be used for lesson delivery					

SECTION C: The available support services for teachers in meeting the instructional needs of children with disabilities in early childhood centres within the Kumasi Metropolis.

The table below presents data on "The support services for teachers in meeting the instructional needs of children with disabilities in early childhood centres within the Kumasi Metropolis". Kindly read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) (√) 5=Strongly Agree (SA), 4=Agree (A), 3=Neutral (N), 2=Disagree (D), and 1=Strongly Disagree (SD).

S/N	Statement	SA 5	A 4	N 3	D 2	SD 1
32.	Assistive technology is available in my school to help meet the instructional needs of learners with disabilities					
33.	There is a special educator in my school who helps in meeting the instructional needs of learners with disabilities					
34.	Counselling services are provided in my school to meet the instructional needs of learners with disabilities					
35.	Interpreting services are available in my school to help in meeting the instructional needs of learners with disability					
36.	Mobility services are provided in my school to meet the instructional needs of learners with disabilities					
37.	Speech-language pathology service is available in my school to help meet the instructional needs of learners with disabilities					
38.	A support teacher is available in my school to help meet the instructional needs of learners with disabilities					

SECTION D: Strategies for improving teacher support services for managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis.

The table below presents data on "Strategies for improving teacher support services for managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis". Kindly read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) (√) 5=Strongly Agree (SA), 4=Agree (A), 3=Neutral (N), 2=Disagree (D), and 1=Strongly Disagree (SD).

S/N	Statement	SA 5	A 4	N 3	D 2	SD 1
39.	Accessibility of teaching materials to the teacher improves teacher support services to manage the instructional needs of children with disabilities.					
40.	Providing assistant teachers to assist main special educators to improve teacher support services in managing the instructional needs of children with disabilities.					
41.	Effective collaboration between the class teacher and assistant teacher improves teacher support services in managing the instructional needs of children with disabilities					
42.	Having a class with a manageable size of learners improves teacher support services in managing the instructional needs of children with disabilities					
43.	Including concepts of teacher support services in pre-service curriculum for training teachers improve teacher support services in managing the instructional needs of children with disabilities					
44.	Removing physical barriers in school improve teacher support services in managing the instructional needs of children with disabilities					
45.	Providing teachers with opportunities for Continuous Professional Development improves teacher support services in managing the instructional needs of children					

	with disabilities					
46.	Having an optimum learning environment for learners improves teacher support services in managing the instructional needs of children with disabilities					
47.	Effective collaboration between parents and special educators improves teacher support services in managing the instructional needs of children with disabilities					
48.	Appreciating the efforts of teachers help to improve teacher support services in managing the instructional needs of children with disabilities					

I am grateful for your time and cooperation.

APPENDIX B

Interview Guide

UNIVERSITY OF EDUCATION, WINNEBA

FACULTY OF EDUCATIONAL STUDIES

DEPARTMENT OF EARLY CHILDHOOD EDUCATION

TEACHER SUPPORT SERVICES FOR MANAGING THE INSTRUCTIONAL NEEDS OF CHILDREN WITH DISABILITIES IN EARLY CHILDHOOD CENTRES WITHIN KUMASI METROPOLIS

SEMI-STRUCTURED INTERVIEW GUIDE FOR TEACHERS

SECTION A

Early childhood teacher knowledge about support services in managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis

1. How well are you informed about support services in managing instructional needs of children with disabilities?
2. How much knowledge do you have teacher support services in managing the instructional needs of children with disabilities?
   a. Assistive technology
   b. Special educators
   c. Counselling service
   d. Interpreting service
   e. Mobility service
   f. Speech-language pathologist

g. Support teacher

3. Do these services influence how you manage the instructional needs of learning needs of children with disabilities? Give details by making to specific support services and how they influence you

SECTION B

The available support services for teachers in meeting the instructional needs of children with disabilities in early childhood centres within the Kumasi Metropolis.

4. What support services are available to you in meeting the instructional needs of children with disabilities?
5. How easy is it to access these services?
6. Share with me some of the challenges you face in accessing these services

SECTION C

Strategies for improving teacher support services for managing the instructional needs of children with disabilities in early childhood centres within Kumasi Metropolis

7. What strategies will improve teachers support services for managing the instructional needs of children with disabilities?

APPENDIX C

Introductory Letter

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES
DEPARTMENT OF EARLY CHILDHOOD EDUCATION

FES/DECE/L1

28th June, 2022

The Director
Metro Education Service
Box 1918
Kumasi

Dear Sir/Madam

INTRODUCTORY LETTER

We write to introduce to you **Ms. Akua Twumwaah Oduro** with index number **200030443** who is an M. Phil student in the above department. She was admitted in 2019/2020 academic year and has successfully completed her course work and is to embark on her thesis on the topic: ***"Teacher support services for managing the instructional needs of children with disabilities in early childhood centres withing Kumasi Metropolis".***

Ms. Oduro is to collect data for her thesis, and we would be most grateful if she could be given the needed assistance.

Thank you.

Yours faithfully,

Samuel Oppong Frimpong, Ph. D
Ag. Head of Department

www.uew.edu.gh