EDUCATIONAL SUPPORT SYSTEMS FOR LEARNERS WITH AUTISM SPECTRUM DISORDERS WITHIN INCLUSIVE SETTINGS IN SELECTED REGIONS IN TANZANIA

MIRIAM LOIVOTOKI LAISER

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Open University of Tanzania, a thesis titled: **"Educational Support Systems for Learners with Autism Spectrum Disorders within Inclusive Settings in The Selected Regions in Tanzania"** in fulfilment of the requirements for the degree of Doctor of Philosophy of the Open University of Tanzania.

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Dr. Theresia J. Shavega

(Supervisor)

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Date

…………………………………

Dr. Mohamed S. Msoroka

(Supervisor)

…………………….………..

Date

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DEDICATION

I dedicate this work to my husband Mr Elisha Edson Msengi and my parents, my mother Ms. Ruth Loth Mollel and my father, the late Mr Loivotoki Mevalari Laiser.

ACKNOWLEDGEMENTS

ABSTRACT

Inclusive education for all kinds of learners is now becoming a norm in many countries. However, evidence indicates a gap in the policy and implementation of quality inclusive education for learners with autism spectrum disorders. The lack of clear national policies, coupled with the complexity of the condition, has thwarted the good intentions of many countries, such as Tanzania, in the implementation of inclusive education. The key question among stakeholders has been how to go about including these learners in elementary schools while at the same time ensuring access, participation and achievement in education. To respond to that question, this study assessed the educational support systems for learners with autism spectrum disorders (ASD) within inclusive elementary schools in the selected regions in Tanzania. The study employed the interpretivist research paradigm, qualitative approach and multiple case-study design. Interviews, focus group discussions, non-participant observations and documentary review methods were used to collect data from 41 respondents from 7 schools in 5 regions of Tanzania. Data were analysed thematically, aided by Nvivo 12 software. The findings revealed a lack of clear statements about inclusive education in the 2014 Education and Training Policy. There is a lack of Educational Support Resources and Assessment Centres (ESRAC) in the regions. The study concludes that Tanzania has a long way to go to ensure access, participation and achievement in education for learners with autism. The study recommends differentiated curriculum and assessments, particularly in the national examinations provided by the National Examinations Council of Tanzania (NECTA).

Keywords: *Inclusive Education, Autism Spectrum Disorders, Educational Support.*

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ADDM   Autism and Developmental Disability Monitoring

ADHD   Attention Deficit Hyperactivity Disorder

AIM   Autism Inclusion Model

ASD   Autism Spectrum Disorders

CDC   Centre for Diseases Control and Prevention

CRPD   Convention on Rights of the Persons with Disabilities

DSM   Diagnostic and Statistical Manual

EFA   Education for All

ESRAC   Educational Support Resource and Assessment Centre

ETP   Education and Training Policy

FBA   Functional Behaviour Assessment

IEP   Individualised Educational Plans

II   Intellectual Impairment

NECTA   National Examination Council of Tanzania

NSIE   National Strategy for Inclusive Education

NDD   Neurodevelopmental Disabilities

SEN   Special Educational Needs

SDG   Sustainable Development Goals

TEACCH   Treatment and Education of Autistic and Communication Related

           Handicapped Children.

UNESCO   United Nations Education Social and Cultural Organisation

URT   United Republic of Tanzania

WHO   World Health Organisation

ZDP   Zone of Proximal Development

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the preliminary information of the study on the assessments of educational support systems for learners with autism spectrum disorders in elementary schools in Tanzania. The main focus is on the background of the study and the statement of the problem. It also includes the study purposes, research objectives and research questions. Significance of the study, delimitations and the limitation of the study has also been presented.

1.2 Background to the Study

The enactment of the Salamanca Statement in the 1994 and later on the sustainable development goal number 4 (SDG 4) has brought about a paradigm shift in education. Now more than ever large numbers of learners with autism spectrum disorders (ASD) are enrolled in the mainstream schools (Lindsay et al., 2014). The question remains as to whether these schools are equipped enough to handle the complex needs of learners with autism spectrum disorders.

Recent studies have pointed out that children with ASD benefit much by being included in the mainstream schools, in an arrangement that is now commonly known as "Inclusive Education" (Briskman, et al., 2020). This practice has proven to be working not only for the future outcomes of the learners with autism spectrum disorders, but also for the development of the inclusive mind-set to other children. This setting is believed to have significant contribution towards the development of inclusive societies in the future (Briskman, et al., 2020; Dissertations, 2020;

European Agency for Development in Special Needs Education, 2011; Gavaldá & Qinyi, 2012; Msangi, 2017; Waddington & Reed, 2017).

The world leaders, educational stakeholders and government officials formulated and adopted the Salamanca Statement which emphasises that education for children with special needs should be provided within inclusive schools, laying out the standards for schools as follows:

> *Schools should accommodate all children regardless of the physical, intellectual, social, emotional, linguistic, or other conditions. This should include the disabled, street and working children, the gifted, children from remote and nomadic populations, ethnic and cultural minorities and children from other disadvantaged and marginalised groups* (UNESCO, 1994).

In compliance with the above international agreement, the government of Tanzania demonstrated its commitment through the enactment of the Persons with Disability Act of 2010. In the section 27 and subsection 1 of the Act, it is stipulated clearly that: "Persons with disabilities in all ages and gender shall have the same rights to education, training in inclusive setting and the benefits of research as other citizens" (URT, 2010). The act further stipulates that: children with special educational needs should attend ordinary public or private schools; such children should be provided with appropriate support relevant to their kind of disability.

Learners with Autism Spectrum Disorders are entitled by the act to other necessary learning service from a qualified teacher or a teacher assigned for the purpose (URT, 2010; URT, 1977; URT 2021). Despite the well intentions stipulated in these international statements and their local reflections in the Tanzanian national acts and strategies, still, communities have continued to experience exclusion of children with

disabilities in schools. Children with autism spectrum disorders are more affected than those with other disabilities.

Scholars have been researching on the challenges that hinder effective inclusion; the issue of inadequate support for special learners, such as children with autism spectrum disorders which has been mentioned several times (Edward, 2015; Gavaldá & Qinyi, 2012; Mapunda et al., 2017; Mnyanyi, 2010; Stack et al., 2016; Tungaraza, 2020; Tungaraza, 2014). The challenge of autism inclusion in the mainstream schools of Tanzania appears in line with other special educational needs (SEN) and other Neurodevelopmental Disorders (NDD). These challenges are mentioned to be linked with the school environment, negative attitude towards the condition displayed by teachers, administrators and other students. Other challenges includes unfriendly school environment, rigid curriculum as well as lack of support that learners with autism receive while at school (Edward, 2015; Hippensteel, 2008; J. Kurth & Mastergeorge, 2009; Lindsay et al., 2013; Majoko, 2017, 2018; Mwendo et al., 2011; Myers et al., 2007; Thomas, 2004).

Other factors that have been mentioned to contribute to poor inclusion of learners with autism are related to the perceptions of other learners and teachers towards the condition, as well as inadequate understanding of the condition. Also lack of training to teachers on how to manage the self-stimulatory, repetitive and sensory issues of learners with autism as well as lack of inclusion mind-set within the school community (Busiku & Matafwali, 2022; Dunn, et al., 2004; Edward, 2015; Gavaldá & Qinyi, 2012; Hippensteel, 2008; Hugo & Hedegaard, 2020). Lack of family involvement in the educational programmes of these learners coupled with

inadequate knowledge on how to appropriately support these individuals at home and school have been reported as barriers to effective inclusion for learners with autism in the mainstream schools.

Studies conducted by Busiku and Matafwali (2022) and Edward (2015) in Tanzania, have highlighted the need of multisectoral collaboration in the provision of educational support and care for individuals with autism spectrum disorders for effective inclusion in the mainstream schools. Another study conducted by Kurth and Mastergeorge (2009) indicated that the primary challenges of autism inclusion are associated with the low understanding of the condition by the school staff, lack of structural support, resources and funding as well as absence of parents-teacher collaborative approach to the education process. Inability to translate theory into practice as well as lack of school capacities to provide effective educational programmes for children with autism.

The comparative study done in Tanzania and Other Countries by Hippensteel (2008) indicated that schools in Tanzania feel pressure to attract students who will perform well in examinations. Also, teachers feel pressure to advance the performance levels of students in their classes and as a result, many classroom teachers dislike teaching children with autism spectrum disorders and experience high levels of stress when faced with such children.

This need influenced the thinking of the current researcher to come up with the idea for this study. This study was set out to assess the educational support systems for learners with autism and highlight the challenges experienced by educational

stakeholders in the implementation of inclusive education for learners with autism. Lastly, the study was set out to generate the model for appropriate educational support systems for learners with autism spectrum disorders in elementary schools.

1.3 Statement of the Problem

The world leaders, educational stakeholders and government officials formulated and adopted the Salamanca Statement, which emphasises that education for learners with special needs should be provided within inclusive schools, categorically mentioning that schools should accommodate all learners regardless of their physical, intellectual, social, emotional, linguistic, or other conditions (UNESCO, 1994). In compliance with the above international agreement, the government of Tanzania demonstrated its commitment through the enactment of the Persons with Disability Act of 2010. In section 27 and subsection 1 of the Act, it is stipulated clearly that children with special educational needs should attend ordinary public or private schools; such children should be provided with appropriate support relevant to their kind of disability. Learners with Autism Spectrum Disorders are entitled by the act to other necessary learning services from a qualified teacher or a teacher assigned for the purpose (URT, 2010; URT, 1977, 2021b).

Despite the well intentions stipulated in these international statements and their local reflections on the Tanzanian national acts and strategies, still, communities have continued to experience the exclusion of children with disabilities in schools. Children with autism spectrum disorders are more affected than those with other disabilities (Manji, 2018a). Environmental and attitudinal barriers have been hindering the full and effective participation of persons with disabilities such as

autism spectrum disorders (ASD) in Schools. The social mode of disability expounds that it is the society and the inaccessible social structures which render people disabled. It further urges that a state of disability happens when a person's physical and mental characteristics clash with inaccessible systems and structures (Oliver, 2013).

There has been a persistent gap in the implementation of inclusive education for learners with autism and other neurodevelopmental disabilities in Tanzania. A notable achievement has been observed in the inclusion of learners with other disabilities, such as hearing impairments, visual impairments and physical disabilities (Tungaraza, 2020). Currently, there is no study known to the researcher which delved into the appropriate educational support systems and structures for children with autism within the Tanzanian inclusive schools. Most of the studies in Tanzania have focused on the inclusion of other kinds of special learners (Mapunda et al., 2017; Mnyanyi, 2010; Tungaraza, 2020); none of them has delved into the learners with autism. Several studies have exposed the challenges of providing quality education for learners with autism (Edward, 2015). Hence, the current study intended to bridge that gap by assessing the current situation and proposing a relevant environment, curriculum, pedagogy and other special services needed to be put in place as educational support systems for children with autism spectrum disorders within the inclusive setting in Tanzania.

To ensure access, participation and achievement in inclusive education for learners with autism, there are necessary systemic, environmental and pedagogical structures that are needed to be put in place. Hence, the current study assesses the educational support systems for learners with autism spectrum disorders in inclusive elementary

schools. It also proposes a relevant environment, curriculum, pedagogy and other special services which are needed to be in place as educational support systems for learners with autism spectrum disorders within the inclusive elementary schools in Tanzania.

1.4 Objective of the Study

The main objective of this research was to assess the educational support systems for learners with autism spectrum disorders in inclusive elementary schools in the selected regions in Tanzania.

1.5 Specific Research Objectives

i. To assess the provisional support for children with autism in inclusive schools as stated in the key educational authority documents.

ii. To examine the implementation of the current education policy regarding children with autism in pre-primary and primary schools.

iii. To identify the systems and structures needed to enhance learning outcomes for children with autism in inclusive pre-primary and primary schools.

iv. To highlight the challenges experienced by educational stakeholders in the implementation of inclusive education for children with autism in pre-primary and primary schools.

v. To propose a framework for educational support systems for learners with autism in inclusive elementary schools.

1.6 Research Questions

1.6.1 Main Research Question

What are the appropriate educational support systems needed in order to provide

effective inclusive education for children with autism spectrum disorders within the mainstream schools in Tanzania?

1.6.2 Subsidiary Research Questions

a) What is the current education and training policy provision with regard to the needs of children with autism in inclusive schools?

b) How do the stakeholders perceive the implementation practise in inclusive schools as reflected in the policy on children with autism?

c) What are the opinions of stakeholders regarding appropriate support systems and structures needed to enhance learning outcomes for children with autism spectrum disorders in the Tanzanian inclusive schools?

d) What are the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism spectrum disorders in Tanzania pre-primary and primary schools?

e) How does the framework of educational support for learners with autism in inclusive elementary schools supposed to look like, as per stakeholders' opinions?

1.7 Significance of the Study

Several studies have been done about autism spectrum disorders in the developed countries. But there are very few studies that have been done in Africa and particularly Tanzania. Much has been written on the medical aspect of autism spectrum disorders, where autism is treated as a health-related issue. There is a gap on the impacts of autism on the educational aspect of an individual. This study looks at autism from an educational perspective. The focus is on the solutions to enable

learners with autism to get the most educational outputs while schooling in the inclusive educational setting. By doing this study, the researcher intended to fill the gap within the body of knowledge. Policy makers might also be able to use it to refine the special education policy. This study might also influence the design of the educational programmes by revealing and generating structures and support systems which are needed to be in place in the inclusive schools to enhance learning outcomes for learners with autism.

The findings of the study are expected to bring about the solution on how best children with autism can be supported in Tanzanian inclusive schools. It was expected that the findings on the appropriate educational support for children with autism have been clearly stipulated showing the structures and systems (in terms of the environment, curriculum, pedagogy, special services and interventions) required to enhance the learning and ultimately increase the educational output for children with autism.

1.8 Limitations and Delimitations of the Study

1.8.1 Limitations of the study

This study had some limitations, such as some of the learners with autism spectrum disorders who were selected to participate in the study, were not able to explain themselves in details. They gave very short answers to open ended interview questions. Some were not in the mood to talk, and kept quiet throughout the interview. To address these limitations, the researcher kept on adding other learners with autism to the study, in the hope of finding those who were more willing to talk, and those who could express themselves a bit better. Thus, the selection of learners

with autism was based on the convenient sampling until data saturation point was reached. To enhance participants' engagement, the researcher requested teachers who are teaching learners with autism to administer the interview questions using the language that these learners will understand. Also, the researcher employed prompts to help learners with autism understand the questions being asked.

Also, some of these learners were finding it hard to comprehend information presented verbally without pictures; hence the researcher had to differentiate the interview and focus group discussion questions into a very simple and straight forward language which learners with autism could comprehend. The use of convenient sampling to obtain participants due to the limitations stated above, seems to favour only those who were willing and able to provide the required information. This pose limitation in the generalisability of the findings as the participants might not be representative of the population being studied.

Another limitation arose due to the design of this study; collecting data in multiple cases poses the challenge of inconsistency in data quality and the variations in the participants' responses across cases. Analysing data from multiple cases was also complex particularly during comparing and contrasting findings across different contexts. There was also the risk of potential bias for the researcher during selecting participants and interpreting responses from diverse cases due to the diversity of contexts, socio economic differences and resource availability. To overcome these limitations, the researcher took advantage of triangulation methods in data collection, by using documentary review and non-participants' observations methods to verify the information provided during interview. Also the strategy of prolonged

engagement during field visits helps the researcher to obtain the depth of the experiences and events as they occurred in the natural setting.

1.8.2 Delimitations of the Study

This study confined itself to the assessment of the educational support systems for learners with autism spectrum disorders in the inclusive pre-primary and primary schools in Tanzania. The systems under this study included the policy, curriculum, human resources and other pedagogical structures necessary for successful schooling of all learners. The elementary schools were selected because it is at this age level (3 to 12) that the symptoms of the autism spectrum disorders are mostly evident. Also, the inclusion of learners with special educational needs in the early childhood and primary school years is mentioned to be the most effective intervention strategy in order for them to gain the skills required to survive and thrive at the upper levels of education. This age and level of education is critical because it is where the foundation for future success in social life and employment integrations are laid down.

The 5 regions of Tanzania (Mbeya, Dar es Salaam, Dodoma, Iringa and Tanga) were selected in order to get the realities of the situation from the big cities and the rural and semi-urban areas. Autism inclusion in elementary schools is an issue that portrays the level of community awareness, understanding and acceptance of the condition. Hence, it was necessary to get the picture of this situation from different geographical locations and socio-economic backgrounds. The study included both public and private schools in order to obtain the realities of the situations from different contexts, and the diversity of availability of resources, materials and school cultures. The selection of few regions and focus on elementary schools suggests

limited generalisations of the findings, as they may not be applicable to other parts of Tanzania and other age groups or educational levels outside the target group studied.

1.9 Operational Definitions

The following terminologies have appeared consistently in this study, and below is their definition as applicable in the context of this study.

Autism Spectrum Disorders (ASD): - Refers to a developmental disability, which can cause significant social, communication and behavioural challenges. People with ASD may communicate, interact, behave, and learn in ways that are different from most other people. The learning, thinking and problem-solving abilities of people with ASD can range from gifted to severely challenged. Whenever the word autism spectrum disorder appears in this study, this definition is applicable throughout this study.

Inclusion: Refers to the practice or policy of providing equal access to opportunities and resources for people who might otherwise be excluded or marginalised. These are such as those who have physical or mental disabilities and members of other minority groups.

Inclusive environment: Refers to an environment that welcomes, protects and educates all children regardless of gender, physical, intellectual, economic, linguistic, or different abilities.

Inclusive Education: Refers to an approach which transforms the education system, including its structure, policies, practices, and human resources, to accommodate all learners in the mainstream education by addressing and responding to learners' diverse needs. It involves adaptation and modification of curriculum content,

teaching and learning materials, pedagogy and environment to ensure access and participation of all learners, whenever the word "inclusive education" has been used in this study, this definition is applicable.

Policy: - As it has been used in this study, the word policy refers to all authority documents issued by the government of Tanzania and the Ministry of Education which guides the provision of education for all learners. This includes the Education and Training Policy (ETP) 2014, The People with Disabilities Policy, the Disability Act, The National Strategy for Inclusive Education (NSIE) and The National Examinations Regulations issued by the National Examinations Council of Tanzania (NECTA).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the literature on educational support systems for learners with autism spectrum disorders in elementary schools. It highlights the empirical studies related to the systems and structures that need to be put in place in order to provide effective inclusive education for learners with autism, the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism, and the theory behind the study. Finally, the chapter presents the disability framework/model that informed the study, a summary of the literature reviewed as well as the gaps identified.

2.2 Theoretical Literature Review

This study is informed by the Social Model of Disability, which was coined by the disabled academic Mike Oliver in 1983. The details of this model are explained below.

Social Model of Disability

The social model of disability proposes that a person's disadvantage is the combination of personal traits and the social setting. It expounds that "disability' is brought about through the influence of two factors: one is a person's physical or mental traits, and the second is the surrounding environment, which is at least partly constructed by others (Burchardt, 2004; Thomas, 2004). According to the social model of disability, both factors must be present before the "disability" condition can surface. It insists on the social origins of impairments and the sociology of

impairment (Hughes & Peterson, 1997).

The social model of disability was chosen to inform this study because of its relevance as a key tool in the analysis of cultural representation of disability. This model has become the conceptual analysis in challenging stereotypes and archetypes of disabled people by revealing how conventional structures reinforce the oppression of disabled people (Oliver, 2013; Thomas, 2004). These qualities of the social model of disability make it fit to guide this study on the assessment of the educational support systems in inclusive education for learners with autism in the elementary schools of Tanzania. It guided the author to delve into the subject by exposing the systemic barriers to inclusive education for learners with autism and the reasonable accommodations/adjustments required to effectively include learners with autism in elementary schools. The social model of disability focuses on the changes required in society in order to help individuals with disability live and thrive in our communities. The changes it advocates are in terms of attitudes, social support, information, physical structures as well as reasonable accommodation in the education policies and practices to remove barriers for learners who have diversity of needs in the school systems (Oliver, 2013).

2.3 Empirical Literature Review

2.3.1 Provisional Support for Children with Autism in Inclusive Schools as Stated in the Educational Policies around the World

Many countries have responded positively to the idea of inclusive education, while others are still in the learning and rethinking stage. An exploratory study conducted in Portugal revealed a significant step taken by this country towards making

inclusive education a reality. It was found that Portugal achieved 98% inclusion in the year 2020/2021 (Alves, et al., 2020; Cruz et al., 2023). This achievement is associated with the launching of a new inclusive education policy and new education act reforms in 2018 with the focus on "mainstream" all learners with "disabilities" and "special education needs (SEN)". Within the Portugal education policy, there is a clear statement which says that education in Portugal is going to be offered in an inclusive environment, where every student, regardless of their personal and social situation, finds responses to their potential, expectations, and needs, and develops a level of education that creates full participation, a sense of belonging, and equity, thus contributing to social inclusion and cohesion. This study was conducted in a developed country; hence, it does not portray the realities of the situation in middle- and low-income countries such as Tanzania.

Another best practice of clear policy provision has been indicated in a scoping review study conducted by Robin Van Kessel and others in the four small European Union States (Van Kessel et al., 2020), where Malta has enacted a new inclusive education policy. In Malta, autism has been clearly explained within the inclusive education policy, and the support services entitled to learners with autism have been indicated. The inclusive education policy in Malta recognises that every child is an individual, and it seeks to maximise the learners' potential.

The policy categorically explained the measure to empower educators and parents to meet the individual education needs of the child with autism. It is geared towards facilitating appropriate educational support systems for these learners in an inclusive environment. Adding to that, in Malta, there have been established a national early

screening programme for autism as a means to identify possible developmental delays, learning difficulties and special educational needs related to autism. Thus, they can offer support to these learners early before starting kindergarten (Van Kessel et al., 2020). This study was conducted in a developed country with an advanced high-income economy. Hence, there was a need to conduct a study which could expose the realities in the middle of a low-income economy such as Tanzania.

The national policies and strategies in Tanzania, just like many other countries of the world, have declared inclusive education as a norm. However, all these countries maintain special schools (segregated schools) and mainstream schools (integrated schools). This kind of arrangement is also applicable in the United Kingdom and is termed as a twin-track system (Kwari, 2020). In his critical analysis study, Kwari summed up that full inclusion might be challenging to achieve although it is a noble cause in theory. This is due to the fact that most students have complex and severe disabilities and challenging behaviours that make meeting their needs within mainstream classes almost impossible.

It is said that the implementation of inclusive education for learners with autism has preceded research. This is due to the fact that currently, there is still limited literature that has delved into the subject. Most of the studies indicated above were conducted in the western countries, and very few from the African perspective, Tanzania included. This gap necessitated the need to conduct an inclusive education provision and practise assessment study for low and middle-income economy countries such as Tanzania. Hippensteel (2008) conducted a comparative study to review the inclusive practices in special education in seven countries (United States, Brazil, Ireland, New

Zealand, Costa Rica, China and Tanzania). The findings indicated that educational provision to students with disabilities is not a top government priority in any of the seven countries, and the situation is even worse in developing countries like Tanzania.

The additional cost of educating students with disabilities makes the option of including them in mainstream classes the only feasible choice currently, however flawed and imperfect it seems. Hippensteel further revealed that most of the special schools and programmes for students with special needs in Tanzania are funded by external non-governmental organisations, which makes the "ideal models" or the "Western models" of inclusion unrealistic. Hippensteel's study did not expose the systems and structures that can work for inclusive schools in developing countries such as Tanzania based on the current resources that these countries possess. Hence, this justified the need to conduct this current study.

There is little to no information available on the nationwide services offered to children with autism in Tanzania (Manji, 2018a). This situation is similar in many low-income countries, as reported in a situational analysis study by Tekola and others (2016) in Ethiopia. Tekola explored service provision for children with autism and their families in Ethiopia and highlighted stakeholders' views on the best approaches to further develop services. The findings indicated that the diagnostic and educational services for children with autism are scarce, and they are mainly located in Ethiopia's capital city, with little provision in rural areas. Tekola's finding resonates with the information provided in the study conducted by Manji and Hogan (2013), which pointed out that autism diagnosis and intervention services in Tanzania are mainly available in the big cities such as Dar-es-Salaam, Mwanza, and

the northern regions of Tanzania.

No services are available in the rural areas. Participants upturned the lack of culturally and contextually appropriate autism instruments as an urgent issue to address (Harrison et al., 2014, 2016; Tekola et al., 2016). Manji (2018) suggested approaches which would help improve the service provision and expansion for individuals with autism. These include service decentralisation, mental health training as well as investing in autism awareness initiatives. All these studies have looked at autism with the medical eye, hence explored and exposed solutions in the medical field. The current study intended to bridge that gap by looking at autism as a social and educational issue and proposing solutions applicable in the educational setting.

2.3.2 Implementation of Inclusive Education to Learners with Autism

Kurth and Mastergeorge (2010) did a comparative study to assess the impact of inclusive and self-contained education on the academic achievements of adolescents with autism in Northern California. The findings revealed significant differences between the groups (inclusion versus self-contained) in the academic achievement measures. No association was reported between placements in inclusion and self-contained on global measures of intelligence and adaptive behaviours. Kurth and Mastergeorge's results indicated significantly higher scores on tests of achievement, abstract skills, and inferential skills for students who were included in general education. The findings concluded that inclusion was academically beneficial to students with autism. However, the study did not look at the implication of the instructional support and the instructional activities on student learning and thus necessitated the current study to address this gap.

In the effort to examine factors that promote the inclusion of learners with autism spectrum disorders (ASD) in mainstream schools, Gavaldá and Qinyi (2012) conducted a review study in Catalonia (Spain). Gavalda and Qinyi revealed four important factors to be considered for effective autism inclusion which are the individual characteristics/needs of students with ASD, schools, teachers and support services together with family collaboration. Concerning the characteristics of learners with ASD, they indicated that the severity of disability could serve as a tool for judging whether a student can be included in the mainstream or not. These include students' functional skills in terms of social skills, communication and language skills, stereotypical behaviour and other individual abilities.

The nature of the school environment such as the management awareness and support on autism inclusion, supportive peer interactions, the small class sizes (student-teacher ratio) as well as the teachers' training, attitude and support. Other factors are high family involvement, specialised professional training, early and intensive intervention as well as structured and continuous assessment of student progress and consistent application of the curriculum through planned teaching. Gavalda and Qinyi however didn't explain how and when do other professionals such as speech therapists, occupational therapists and behavioural psychologists can provide support to students, teachers and parents in order to have the comprehensive support services in schools for learners with autism.

Another qualitative study conducted by Strogilos, et al., (2021) delved on the level and types of differentiation in curriculum, instructions and assessments in order to achieve effective inclusion for learners with special educational needs. Strogilos and

others further elaborated on the idea of differentiated methods and systems required for appropriate implementation of inclusive education in the study conducted in three primary Singaporean Schools. Data were collected using semi-structured interviews, descriptive observations; lesson plans and focus group discussions.

The findings indicated that teachers had a limited understanding of differentiated instructions as ability-driven approach, which mainly requires modification in the teaching content based on teachers' perception of student readiness. There was an overreliance on the use of instructional modifications and a lack of curricular and alternative modifications, which they deemed as inadequate and unfair for students. Also, contextual constraints such as class size, a common standardised curriculum and national examinations, were found to be a significant barrier that was affecting the types of curriculum modifications used. Participants proposed an "exam-free" pedagogy to enhance diversity in modifications. This study implies a need to consider the contextual features that impact upon the quality of learner-centred instructions internationally, hence the need for this current study.

Similar to this, is a meta-analysis study conducted by Strogilos and others (Strogilos et al., 2023) to assess the models of co-teaching methods used in the implementation of inclusive education for learners with special educational needs in the mainstream classrooms. The purpose of the study was to compare academic achievement of learners with special education needs in co-taught classes for achievement of learners with special learning needs in special education settings. Results indicated a moderate effect size (g=0.47) for students in co-taught settings compared to students in special education settings. Although the findings support learners with special

learning needs for academic achievements in co-taught classes, more information is still needed to identify what distinguishes the characteristics of learners with special learning needs in co-taught classes versus special education classes as well as instruction differentiation in each setting.

In the effort to improve the education provision for learners with special educational needs, Greece introduced a parallel-support teaching approach to facilitate smooth learning in the inclusive classes. A quantitative study conducted by Mavropalias and Anastasiou (2016) was done to assess its practicability and effectiveness in the provision of inclusive education for learners with special education needs. Survey was conducted to 236 specials educations teachers involved in the Parallel Support Programme in Greece. The findings revealed that Parallel support was similar to one teach, one assist co-teaching approach and it consisted of a static model, which typically provided services to one or two students with disabilities.

The findings elaborated that Parallel Support was a compromise between highly demanding collaborative approach and a pre-existing low collaboration school culture. However, this study did not show the interplay of other factors which facilitate effective inclusive schooling apart from co-teaching model, hence the need for a study which could capture other factors that enhance the learning outcomes for learners with special needs in inclusive classes.

Although many scholars have reported an association between autism inclusion in the mainstream classes with a significant improvements in the academic achievements, social skills and adaptive behaviours (Briskman et al., 2020;

Mwakalinga, 2012; Vander Wiele, 2011), a mixed approach study conducted by Waddington and Reed (2017) in the United Kingdom indicated a contrary discourse where by participants suggested that mainstream children with autism had no greater academic success than children in the special provision. The findings suggested that a number of other specific factors were responsible for promoting success, such as provision of speech and language therapy in schools, as well as the impact of learning support to assistants. These antagonistic findings called for further research in this line in order to justify the propositions brought forward.

A mixed research study was conducted in Istanbul, Turkey by Yumak and Macaroglu (2010) to assess teachers and administrators' perceptions regarding teaching students with autism in the mainstream classes. Yumak and Macaroglu revealed that there were differing opinions regarding as to whether learners with autism should be included or not. The reason behind being the additional work load associated with having learners with autism in the mainstream classes is that many teachers would not like to take this extra work load with many considering it as a burden. Speaking of taking them to special schools, Yumak and Macaroglu affirmed that special schools are not enough to accommodate all learners with autism and thus make inclusion a necessity.

The issue of teachers training, regular support and capacity building remained to be the number one need when it came to effective inclusion of learners with autism in the mainstream schools as it was a mentioned by Yumak and Macaroglu in this study. This study has painted the picture of the situation in the European-Asian perspective, which is quite different from the realities in Sub-Saharan Africa, hence

prompting a need to conduct a similar study and get the perspectives of teachers regarding the appropriate educational support systems for learners with autism in inclusive settings to get the picture in the African context such as Tanzania.

2.3.3 The Systems and Structures Needed to Enhance Learning Outcomes for Children with Autism in Inclusive Pre-Primary and Primary Schools

The situation of inclusive education for children with autism looks a little bit promising in the country of Kenya. Mwendo (2011) revealed that there were specific policies for inclusive education in Kenya. The schools that were implementing inclusion for children with autism had environmental adaptations and classroom modification to suit the diverse needs of learners with autism. Mwendo reported a good collaboration between the school and families of children with autism. However, she revealed that there was no curriculum suitable for learners with autism something that was found to hinder effective inclusion of learners with autism in schools. Just as with other studies reviewed, this one also did not specify the kind of reasonable accommodations that were needed in the curriculum for learners with autism. This gap necessitated a study to delve deep into the area of ideal model (framework) that would incorporate all the reasonable accommodations needed for effective inclusion of learners with autism.

Several scholars have been working to identify systems and structures needed to be put in place in the mainstream schools so that they can fully include learners with autism. However, most of these studies addressed the topic in the western countries none of them was done in Tanzania. Reagan (2012) conducted a survey in Rochester, New York as a master's thesis looking at what should be put in place for mainstream

schools to effectively include learners with autism. Reagan indicated that; the first and foremost was adequate training to teachers on inclusive education for children with autism. He concurred that when teachers are well equipped and receive regular in-service trainings on the subject of autism, it serves to change their attitudes to these learners and increase their confidence levels in addressing the complex needs of individuals with autism in classes.

Other structures mentioned in this study included strong collaborations between multiple stakeholders in the field of autism as well as the positive teacher-student relationship. The other one was modification of the lesson content as well as the pedagogy which included the use of multi-sensory teaching techniques to address a variety of learning styles such as auditory, visual, tactile, gustatory as well as proprioceptive. The need to conduct Functional Behavioural Assessment (FBA) as well as having in place a plan for sensory interventions and choosing appropriate replacement behaviours to serve the purpose of the stereotypic/repetitive behaviours of the learners with autism were also needed. Reagan concluded by proposing the use of other evidence-based strategy such as TEACCH (Treatment and Education of Autistic and Communication Related Handicapped Children). Just like other literatures cited previously, this one also was conducted in a western and developed country, whose realities differ from the ones in the sub-Saharan Africa, hence the need to conduct a study that would paint a picture of educational support systems for learners with autism in developing countries such as Tanzania.

While exploring teachers' experiences concerning what works well and areas that needs improvements in terms of systems and structures for effective inclusion of

learners with autism in Zimbabwe, Majoko (2017) conducted a phenomenological study to 24 Zimbabwean Primary School teachers to assess their experiences regarding the inclusion of learners with autism spectrum disorders in the mainstream primary schools.

The study established that, in-school and out-of-school support systems and resources, including the Psychological Services and Special Needs Education Department, teacher assistants, parents and educational psychologists working together with teachers to support learners with autism in the mainstream classes served as an effective structure for successful inclusion. Despite the relevant findings brought forward through this study, the participants were exclusively teachers, and the study was conducted in the early childhood classes only. Thus, the need to incorporate the voices of other key stakeholders such as learners with and without autism as well as parents of learners with autism primary schools was thought necessary and made possible through this current study.

The scrutiny of structures and systems that need to be put in place for effective inclusion of learners with autism in Tanzania, is highlighted in the work done by Staker (2016)who conducted an ethnographic study in Moshi, Tanzania which highlighted that Tanzania lacked the medical infrastructure and social support necessary to create the environment of acceptance of autism spectrum disorder. This served as the first stumbling block towards effective inclusion of learners with autism in the mainstream schools of Tanzania. Lack of awareness of the condition was reported to make many parents of children with autism stay longer than it was necessary at the denial stage and delay taking their children to school or other

centres to receive early and appropriate interventions.

This gap is consistent with the findings highlighted by Manji (2018) and also Harrison, et al., (2016), whereby the issue of establishing appropriate channels to create awareness of the condition through informal ways such as media and religious gatherings was proposed. However, this study focused on the lived experiences of individuals with autism within a general community, hence justifying the need for the current study to narrow down on the educational support systems for learners with autism within inclusive elementary schools.

2.3.4 Challenges Experienced by Educational Stakeholders in the Implementation of Inclusive Education for Learners with Autism in the Mainstream Schools

Several issues have been thwarting the efforts made by educational stakeholders in the implementation of inclusive education for learners with autism spectrum disorders. A phenomenological study conducted by Edward (2015) which looked at the teachers' knowledge and perceived challenges in teaching learners with autism spectrum disorders, found out that teachers' lack of knowledge on autism spectrum disorders was the main challenge hindering their effective inclusion. The study further expounded that, this challenge was due to lack of in-service training for teachers, something which would have equipped them with skills needed to effectively handle these learners in the classrooms. This study focused only on the challenges hindering effective inclusion of learners with autism. However, stakeholders would be much benefit from the study by getting solutions on the appropriate education support systems for learners with autism in inclusive settings,

hence the need for this current study.

Sally, et al., (2013) conducted an in-depth interview with 13 educators in a study which highlighted educators' challenges of including learners with autism spectrum disorders in the mainstream classroom and the findings revealed that teachers were having challenges in understanding and managing behaviour, there were also issues related to socio-structural barriers where by the school policy was not supportive of inclusive education, lack of training and resources allocation to facilitate the smooth implementation of inclusive education as well as lack of knowledge and acceptance of the condition among the parents and other school staff. The participants for this study were only teachers, although there could be other key stakeholders such as parents of learners with autism as well as learners with and without autism who were directly affected by autism inclusion. This gap warranted the need for the current study to incorporate the perspective of other key stakeholders.

Mwendo et al. (2011) conducted a case study research at a City primary school in Nairobi Province in Kenya; the school is the first to practice inclusive education for learners with autism spectrum disorders in Kenya. The study looked at challenges facing teachers in the implementation of inclusive education for learners with autism spectrum disorders. The findings indicated that, even though there was a certain level of accommodations and adaptations done by teachers in the process of teaching and learning, there was a lack of a differentiated curriculum for learners with autism spectrum disorders. Just like other similar studies on inclusive education for learners with autism, this one also did not consider the perspective of parents, learners without autism and learners with autism, and it solely sought the opinions of

teachers, school administrators and occupational therapists. Thus, the current study came to fill that gap by incorporating the opinions of parents and learners with and without autism.

Another qualitative study was conducted by Emam and Farrell (2009) who looked at the tensions experienced by teachers and their views of supporting pupils with autism spectrum disorders in the mainstream classrooms. The findings indicated that the tension experienced by teachers was due to their difficulties in social and emotional understanding. The study furthers recommended for more awareness about the condition and continuous training to teachers on how to handle these learners. Despite the relevant findings and recommendations brought forth in this study, there are two gaps identified; firstly, the study was conducted in the United Kingdom, hence the need to have a study which would expose the realities of developing countries such as Tanzania. Secondly, this study also collected data from teachers only, thus a need to conduct the current study which would incorporate the perceptions and opinions of other stakeholders such as learners with and without autism as well as parents of learners with autism.

2.3.5 Framework for Educational Support Systems for Learners With Autism In Inclusive Schools

In the effort to ensure smooth and effective inclusion of students with autism spectrum disorders in the mainstream schools, Simpson and Boer-ott (2003) came up with what they called Autism Spectrum Disorder Inclusion Collaboration Model. This model gives guidelines and supports that can facilitate the successful inclusion of children and youth with autism and related disabilities. The model is guided by

three philosophical assumptions which are intentional planned peer contact time, presence of appropriate support and resources as well as the general educators' willingness to support learners with autism. The key factor in this Model is Collaboration.

The five components of this model are interwoven and are meant to work together, not in isolation. The components are environmental and curricular modifications, general education classroom support and instructional methods, attitudinal and social support, coordinated team commitment, recurrent evaluation of inclusion procedures and the home-school collaboration. This model shades some light on the very key aspects of effective autism inclusion process; however, the authors based their assumptions on the western context and portrays ideal environments of schools in the Kansas State of the United States which does not reflect the realities in the ground in our schools in Tanzania, hence necessitating the researcher to focus on this current research and come up with the model (framework) that could work in the Tanzanian context.

A study conducted by Busiku and Matafwali (2022) in Zambia looked at the management strategies and parental involvement for children with autism spectrum disorders in the mainstream classes. The researchers of this study employed descriptive qualitative study. The sample consisted of 30 participants; 12 school administrators, 12 teachers and 6 parents. Interview guides and observation checklists were used to collect the data which were analysed thematically. The findings indicated that teachers were using individualised and group approaches to teach learners with autism in the mainstream classes. They were also employing a

combination of management strategies such as use of real sensory objects, music, ADL, ABC therapy, time-outs, games and counselling to enhance learning, communication, social and behavioural development.

It was noted that parental involvement was minimal due to lack of knowledge. There were notable challenges to the effective management due to lack of specialised professionals in schools, lack of resources and materials, poor assessment methods, lack of pre-service training, communication barriers, large student to teacher ratio, as well as lack of multi-disciplinary approach in service provision. However, this study did not single out the best management strategy out of all that they had observed. This remained to be the main problem in autism inclusion in schools and was the motivation behind conducting this current study.

Thwala conducted a qualitative study in (2019) to explore effective strategies that teachers were using in including learners with autism in the mainstream classrooms in Eswatini. Through the use of focus group discussions, individual interviews and observation methods, data were collected from the participants who were purposely selected due to their extensive experiences in teaching learners with autism. Teachers reported to use various strategies such as pictography, learner fixations, routine, motivation and sitting arrangement. The issue of teachers' knowledge on the effective use of these strategies echoes back, just as it has been consistently mentioned by other scholars (Edward, 2015; Hippensteel, 2008; Mwendo et al., 2011).

Frequent workshops and in-service trainings to teachers were recommended by the participants. However, there was a consistent demand to develop assessment tools

that were contextualised to reflect the local realities in our societies thus ensuring effective inclusion of learners with autism as well as acquiring positive results out of their schooling experiences. Hence, this current study came to address this gap by looking at the best way to integrate these strategies, support, structures and systems already in place and the ones that would be proposed, together in forming a model (framework) that could be used to inform policy makers and implementers on the way to go as we all seek to effectively include learners with autism in the mainstream schools of Tanzania.

2.4 Framework for Disability Inclusion

To guide this study, the researcher was informed by the belief that education is a result of sharing learning and growing up together with others. This study assumes that for a child with autism to acquire the desired cognitive development, the following features depicted in the diagram below need to be considered. Such features include supportive policies and government directives, adequate financing of quality education, investing in human resources and close follow-up on the implementation of policies in schools. It also requires appropriate systems, and structures to enhance the learning outcomes for learners with autism as well as implementation of evidence-based practices. This study was guided by the Model/Framework for providing early intervention and quality education for young learners with disabilities (Kasprzak et al., 2020).
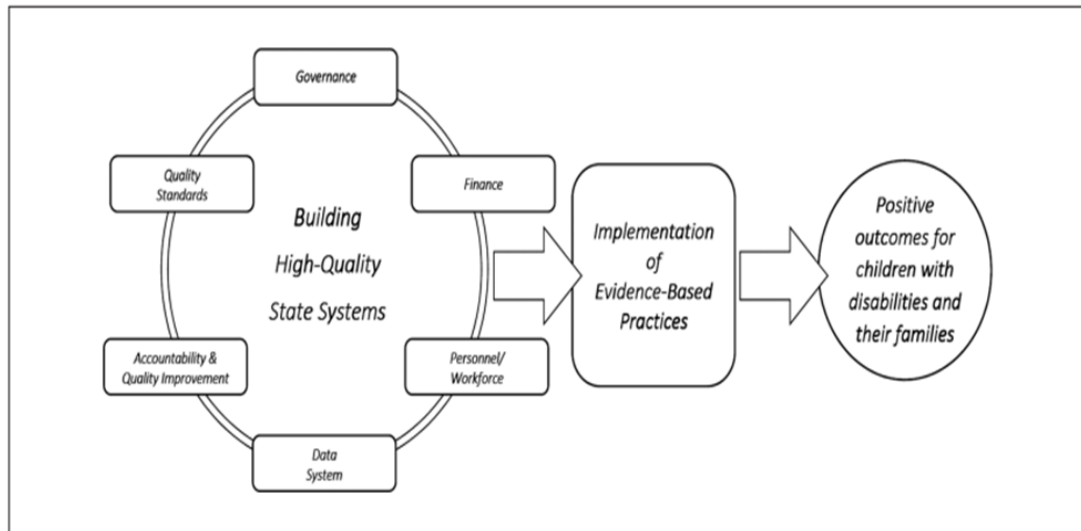
Figure 2.1: Framework on the Provision of Quality Inclusive Education for Learners with Special Educational Needs

Source: Kasprzak, et al., (2020).

The adapted framework includes six components: governance, quality standards, accountability and quality improvements, data systems, personnel/workforce and finance. The assumption is that once there are clearly stipulated policies regarding access to quality inclusive education for learners with autism in pre-primary and primary schools of Tanzania, a budgetary allocation for systems improvements and regular follow-up by education quality assurers will be ensured. This will ultimately safeguard the provision of quality inclusive education to learners with autism.

Arguably, this can be ascertained through effective implementation and close monitoring at the regional, district and ward levels to ensure policy compliance in both government and private schools. Also, the policy provision will ensure that the budgetary allocation at all levels has systems and structures in place to enhance learning outcomes for children with autism in pre-primary and primary schools in Tanzania. However, for all that to happen in harmony in schools, the presence of

clearly stipulated policy will help to serve as a road map towards the attainment of quality inclusive education for all learners by showing how all the key components under study are supposed to work together. The model/framework will display the flow of events and activities in the provision of educational support for learners with special educational needs (SEN) and disabilities such as autism in pre-schools and primary schools of Tanzania.

2.5 Literature Synthesis and Literature Gap

2.5.1 Literature Synthesis

The study focused on the social model of disability as the theoretical underpinning guiding this study. The social mode of disability expounds that; it is the society and the inaccessible social structures which render people disabled. It further argues that a state of disability happens when a person's physical and mental characteristics clash with inaccessible systems and structures (Oliver, 2013). The study also reviewed empirical literature by highlighting the policies and practices of inclusive education as they have been done in other countries. Evidence-based practices regarding the systems and structures needed to enhance learning outcomes for learners with autism spectrum disorders as well as the challenges facing educational stakeholders in the implementation of inclusive education were expounded.

Based on the literature reviewed, it was observed that the majority of the studies were conducted in Europe and other parts of the world. However, it was learnt that very few studies had been conducted in Tanzania. Also, most of the studies that were conducted included teachers only as participants of the studies. Despite the fact that teachers are the central players in inclusive education, there was a need to get the

perspective of other key stakeholders, such as parents and learners. Hence, this study aimed to address this gap.

2.5.2 Literature Gap

Following the literature review, several research gaps were identified, For example, studies conducted by Lindsay et al. (2014), Matos (2016), Roberts and Simpson (2016), and Vander Wiele (2011) highlighted the issue of inclusive education for learners with autism spectrum disorders, but a central focus of these studies was on teachers' perspectives, teachers' strategies and challenges experienced by educators in including these learners in mainstream classrooms. As it was found, fewer studies had incorporated the perspectives of learners with autism spectrum disorders as well as parents in the provision of inclusive education for learners with autism spectrum disorders. Although the opinion of teachers remained valid, this current study addressed this research gap. It includes the opinion of learners with autism spectrum disorders as well as those by parents of children with autism on the educational support systems for these learners in the inclusive elementary schools of Tanzania.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methodological applications this study used are discussed. Issues on research paradigm, approach, design, study area, population size, sampling techniques and data collection methods are part of this section. Also, the chapter discusses the data analysis procedures which were followed by this study.

3.2 Research Paradigm

This study employed interpretivist research paradigm. The interpretivist research paradigm believes that human behaviour is multi-layered (subjective), and it cannot be determined by pre-defined probabilistic models (Creswell, 2007; Mackenzie & Knipe, 1983; Ritchie & Lewis, 2003). This is opposed to the positivist research paradigm, which is governed by objectivity, measurability, predictability, probability, controllability, and control laws that can predict human behaviour (Mackenzie & Knipe, 1983). Also, the interpretivist research paradigm believes in studying human behaviour in the daily life settings rather than in a controlled environment (Mackenzie & Knipe, 1983).

The choice of an interpretivist research paradigm, instead of the positivist or pragmatism, was contributed to by the social nature of this study. The appropriate schooling for learners with autism is the subject that requires an investigation to be carried out in a naturalistic setting (real-life setting). All the objectives and research questions of this study and the nature of the information the researcher collected, are all inclined to the qualitative approach, and thus, the interpretivist paradigm became

a perfect fit.

3.3 Research Approach

This study employed pure qualitative research approach. The primary conceptual reason for choosing the qualitative approach was because it provides greater depth of response and therefore, greater understanding than that which could be acquired through quantitative approach. In addition, the qualitative research enabled the researcher to tie together the cluster of behaviours related to a given decision or action taken by a researched community (Creswell, 2007). Other pragmatic reasons for using qualitative research included the fact that there is a room for flexibility. Also, it provided the direct link with the target population whereby the researcher had the opportunity to view and experience the target group directly (Rwegoshora, 2014). As explained in the research paradigm, this study sought information from the social setting as the qualitative research methods are used to understand social phenomenon from emic (insiders') perspective (Rwegoshora, 2014). Hence, in this study, qualitative approach allowed the researcher to gain culturally specific information about the values, feelings, emotions, opinions and behaviours related with autism spectrum disorders from participants' social context (Creswell, 2007; Ritchie & Lewis, 2003; Rwegoshora, 2014).

3.4 Research Design

Due to the nature of the problem and the data that the researcher collected, this study employed multiple-case study research design. Case study design is an in-depth exploration from multiple perspectives of the complexity and uniqueness of a particular project, policy, institution, programme or system in a real life (Mohajan,

2018). Case study design can be single or multiple case studies. Multiple case study is defined as the study that examines several cases. The multiple case study design which was employed in this study is referred to as the Parallel Study. The Parallel study is one among the nine types of multiple case studies and it is defined as the one whereby the cases are all happening and being studied concurrently (Mohajan, 2018). The choice of multiple case study design to this study was based on the strength of this design in its ability to provide multiplicity of perspectives (Ritchie & Lewis, 2003). This made it possible for multiple data collection methods and gave room for the phenomenon to be studied on its context from multiple sources (Creswell, 2007; Ritchie & Lewis, 2003; Rwegoshora, 2014).

All cases were purposively selected based on their experiences in including learners with autism in elementary school. The regions were purposively selected to ensure the mixture of both urban and rural settings and the schools were purposively selected to ensure the representation of both public and private schools to ensure multiplicity of experiences and perspectives based on the different cultures and resource availability.

3.5 Study Area

This study explored the situation from multiple sources and finally proposed solutions that might be applicable in the different socio-economic contexts across the country. The study was conducted in seven inclusive schools from five regions of Tanzania (Dar es Salaam, Iringa, Mbeya, Tanga and Dodoma). These regions and schools were purposefully selected based on their history and experience in including learners with autism and other special educational needs. The wider choice

of regions helped the researcher to get information on the reality of the situation from diverse geographical locations, including the major cities as well as small towns. The schools were purposively selected to ensure the representation of both public and private schools, in both rural and urban settings. In order to upheld the principle of ethical considerations in research by ensuring the anonymity of research participants pseudonyms have been used when making reference to the schools and regions which were involved in the study, are indicated in Table 3.1.

Table 3.1: Respondents' Schools Condition and Position

Respondents' Schools by Condition and Position			
SCHOOLS			
Public Owned	3	Rural Settings	2
Privately Owned	4	Urban Settings	5
TOTAL	**7**		**7**

Source: Research data, (2022).

Table 3.1 indicates that three schools are publicly owned and four schools are privately owned. Also, two schools are located in the rural settings and five schools are located in the urban settings. This representation helped to explain the similarities and differences in terms of provisional support in schools for learners with ASD in the two socio-economic backgrounds, as well as the effect of culture and diversity of resource availability across schools.

3.6 Number of Students with Autism Spectrum Disorders per School

This study focused on learners with autism spectrum disorders who were present in the seven schools involved in this study. However, due to geographical locations as well as socioeconomic status of the families and the schools within the study area,

not all learners had a formal diagnosis to indicate their condition. The information provided here was retrieved from teachers and parents. The overlap in symptoms and characteristics of autism spectrum disorders and other related conditions made the researcher group them as Neurodevelopmental Disabilities (NDD) and/or intellectual impairments whenever such data were not clear from the participants. For the four schools (Lion, Zebra, Elephant and Hippo), which exclusively include learners with autism, all learners had official diagnoses, as the schools do make arrangements to have the learners diagnosed by a medical practitioner before enrolling them. The number of learners with ASD and other NDD conditions per school is presented in Table 3.2.

Table 3.2: Number of Learners with Autism per School

Number of learners with Autism Spectrum Disorders per School				
SCHOOL PSEUDONYM	REGION	TYPE OF SCHOOL	TOTAL NUMBER OF LEARNERS WITH AUTISM AND OTHER NDD	LEARNERS WITH OFFICIAL AUTISM DIAGNOSIS
LION	MBEYA	INCLUSIVE	2	2
ZEBRA	IRINGA	INCLUSIVE	12	12
ELEPHANT	MBEYA	INCLUSIVE	50	50
GIRRAFFE	TANGA	SPECIAL	48	20
HYENA	IRINGA	INCLUSIVE	98	15
RHINO	DODOMA	INCLUSIVE	0	0
HIPPO	DAR ES SALAA	SPECIAL	83	83
TOTAL			293	182

Source: Research data, (2022).

Table 3.2 indicates the number of learners with ASD and other related NDDs in each school. The two groups (ASD and NDD or II) were counted together due to the fact that the majority of learners with Neurodevelopmental diversities in the schools involved in this study were not officially diagnosed. Four schools, LION, ZEBRA, ELEPHANT, and HIPPO, are inclusive schools that deal solely with learners with

autism spectrum disorders. Hence, they have arrangements to ensure all the learners are screened for autism by medical practitioners and receive an official diagnosis before they enroll them. Thus, all learners within these schools had official Autism diagnoses.

The remaining three schools, GIRRAFE, HYENA and RHINO, do have a mixture of learners with autism and some with other NDDs, and some did not have an official diagnosis as such. Thus, it was not possible to explain exactly the type and the severity level of their condition (be it ASD, Intellectual Impairment (II) or other NDD such as ADHD, Learning Disabilities (Dyslexia, Dysgraphia or Dyscalculia). So, those who did not have an official diagnosis were grouped as learners with Cognitive Disabilities or Neurodevelopmental Disabilities (NDD) as a group. The numbers in Table 2 may not represent the prevalence of the condition in the mentioned regions because some of the schools, especially those with large numbers of these learners, such as HYENA in IRINGA, GIRRAFFE in TANGA, are boarding schools, and learners come from different regions.

3.7 Population, Sample and Sampling Procedures

3.7.1 Target Population

The target population for this study included all teachers and special education teachers from all the seven schools under study, parents of all learners with autism, and all students who had been enrolled in all these seven schools at different levels, both with and without autism. For each school, the population were all special education teachers, all parents who had children with and without autism and all students with and without autism.

3.7.2 Sample Size

In this study, a total of 41 participants participated in the study. This included 14 special education teachers, 22 students (9 with autism spectrum disorders and 13 without ASD) and five parents of children with autism spectrum disorders. The sample size of 41 was attained after reaching the level of data saturation. This sample size is summarised in Table 3.3.

Table 3.3: Respondents' Characteristics

Respondents Characteristics				
	Teachers	Students	Parents	TOTAL
Male	5	12	2	13
Female	9	8	3	20
Total	14	22	5	41

Source: Research data (2022).

3.7.3 Sampling techniques

To ensure a high degree of accuracy, a small number of persons from the large population was obtained through sampling techniques (Creswell, 2007; Ritchie & Lewis, 2003). In this study, the non-probability sampling methods were employed to obtain the participants for the study. The sampling methods included purposive sampling, snowball sampling and convenient sampling. The choice of non-probability sampling methods over probability sampling methods was based on the primary goal of qualitative research. The goal of qualitative research is to explore in-depth experiences and perspectives which often require selecting participants based on specific characteristics rather than random selection. This makes the non-probability sampling methods more suitable.

With these three sampling techniques, the researcher used several factors to different groups of the participants. The schools which participated in this study were

obtained purposively based on their history in including learners with autism spectrum disorders. The teachers were obtained through their track record in teaching learners with autism spectrum disorders in the respective schools. To obtain the teachers, the researcher requested for the heads of schools to point out two teachers in their schools who had experience in teaching learners with autism spectrum disorders. Every head of school gave the researcher two names of the teachers in their schools that had the mentioned qualifications. The process of obtaining parents to participate in the study followed the same procedure as with the teachers who participated. For the parents, the researcher requested heads of schools to select two parents who had children with autism spectrum disorders and who were willing to share their personal stories with the researcher, regarding their children's schooling.

The process of obtaining parents who had children with autism to participate in the study was not an easy one. Some parents were not willing to share their stories, or even to show up for interviews for fear of stigma. In this circumstance, the researcher employed the convenient sampling method, whereby the parents who were willing to participate were the ones interviewed. In the end, the researcher interviewed five parents out of the fourteen parents as it had initially been planned, however the data saturation point was already reached.

Convenient sampling was also used to obtain the students with autism to participate in the study. For students with autism spectrum disorders, the researcher requested the teachers who were teaching them to choose those capable of explaining themselves verbally with minimal support/prompts. Due to this qualification, the

researcher got such participants in only three schools out of the seven schools which participated in the study. The other four schools did not have learners with autism who were capable of engaging themselves meaningfully in the interview and explain themselves verbally due to age and severity of the condition. To attain data saturation, the researcher got seven students with autism from the three schools out of seven schools which participated in the study.

The seven students were obtained after several trials the researcher made to interview several others who were brought by the teachers but were not able to respond verbally; some were shy due to unfamiliarity with the researcher. To overcome this situation, when the researcher obtained the seven students who were able to explain themselves verbally, she opted to give the teachers who were teaching these learners in schools to interview them. Also, she mixed other learners without autism to make them participate in the focus group discussions so as to obtain the perspective of learners without autism on what it takes to have diversity of learners within inclusive classrooms. Also the mixture helps to make those with autism spectrum disorders be more comfortable and relaxed enough to participate well in the discussion. The learners who did not have autism spectrum disorders who participated in the study were obtained purposively due to their rapport with the learners with autism who were involved in the focus group discussions.

3.8 Methods of Data Collection

Quality and rigour in research practice have more to do with choosing the right research tools for the job (Ritchie & Lewis, 2003). In the context of this study, the researcher wanted to align with other pragmatists in believing in the value of

choosing the most appropriate research methods to address the research questions in this study. With that in mind, this study employed four methods commonly used by qualitative researchers. These methods are: non-participant observation, semi-structured interviews, focus group discussions and documentary review. All these four methods were selected based on their suitability in the collection of the required information pertaining to this study (Creswell, 2007).

3.8.1 Non-Participant Observation

Non-participant observation method was selected for this study because it was developed to study phenomena in naturally occurring settings. This method is particularly useful for studies which investigate a 'process' which involves several players (Rwegoshora, 2014). Non-participant observation was used as a means to validate other evidences. It was relevant to this study as it helped the researcher to observe the interaction between the school community and other involved stakeholders in the learning process of learners with autism in inclusive education settings without taking an active role in the school community.

The researcher conducted two field visits to the respective schools, and spent three hours in each visit. Using the observation checklist, the researcher visited the classrooms whereby teaching and learning processes were ongoing, as well as during recess when children were playing outside the classrooms. This was done in order to verify the information provided during interviews and focus group discussions. The items in the observation checklist included the following:

i. Learning environments for learners with autism as reflected in the;

   a) school environment

b) pedagogy

c) Individualised Education Plans (IEP)

d) assessments

e) Transitions from one class/activity to another

f) Extracurricular activities

ii. Interaction between learners with autism and the teachers, other support staff/ therapists, parents and other children around the school.

iii. Special support for learners with autism within school, at home and around the community (on the way from home to school and back)

Based on the above itemised observation checklist, the researcher recorded field notes in the data collection note book indicating how things were done in each school under this study, according to how they transpired during the field visits.

3.8.2 Semi-Structured Interviews

Individual interviews are probably the most widely used method in qualitative research (Ritchie & Lewis, 2003). The most salient feature of interviews is the ability to provide an undiluted focus on the individual. In this study, individual interviews were used in order to allow a detailed investigation of people's personal perspectives. In this study, semi-structured interviews helped to obtain an in-depth understanding of the personal context within which the research phenomena were located. Through interviews, the researcher obtained detailed coverage of the subject matter (Creswell, 2007; Ritchie & Lewis, 2003; Rwegoshora, 2014). This was easily attained due to the flexible nature of the semi-structured interviews, "which allowed the use of prompts to encourage participants to consider the question further whenever

they faced difficulties or provided only brief responses" (Msoroka, 2018, p. 110).

In this study, the researcher conducted 21 interviews, each lasting between 30 minutes and 45 minutes. This included one-to-one interviews with 14 teachers from the seven schools involved in this study. For each school, two interviews with teachers were conducted. Also, five interviews with parents from the five schools were conducted. The researcher could not get parents for interviews from the other two schools involved in this study. The two schools which did not have parents for interviews were the Rhino School in Dodoma, which did not have any child with autism enrolled at the moment, and the Zebra School in Iringa where no parent was willing to participate in the study. The interviews were conducted at the site where the interviewees worked and lived. For parents who could not make it to the interview site due to other commitments, the interview was conducted through a phone call, and the conversation was recorded with consent from the participant.

For all the 14 teachers, the interviews were conducted in the school offices. For the two students whose data were collected through interviews, the interviews were conducted in the classrooms during break time. For the four parents who were able to come to school, the interviews were conducted at the school premises. The appointment with the parents was made a week earlier through the heads of schools. On the day of interviews, the parents came to school and the interviews were carried out in the teachers' offices in the respective schools. The rooms where the interviews were conducted were quiet, with no interference. This ensured the privacy and confidentiality of the conversation for all interviewees. Hence, it facilitated smooth interviews and the voice recording process.

All the interviews were recorded by using the voice recorder with the consent obtained from the participants. For one parent whose physical availability was limited and who could not come to school for the interview, the researcher conducted a telephone interview and requested permission to record the conversation (Amundsen et al., 2017). The researcher asked questions pertaining to the policy provisions, systems, and structures that needed to be put in place in order to effectively include learners with autism in the elementary schools. In the two incidences, there was a need for additional time. In that regard, the researcher requested another scheduled meeting. The participants for interviews were special educational teachers, parents/caregivers and two students with autism who were selected until the data saturation point was reached, based on the research questions and the objectives of this study.

3.8.3 Focus Group Discussions

Focus group discussions were chosen for this study due to their potential to provide the avenue for the participants to interact, ask questions to each other as well as re-evaluate and reconsider their understanding and experiences with learners with autism in the inclusive education setting (Ritchie & Lewis, 2003). In these discussions, the researcher collected information related to the reasonable accommodations needed in the policies, school environment, curriculum, pedagogy and special services in order to help learners with autism thrive in inclusive schools. They also helped the researcher understand the gap between what people can say and what they can actually do (Rwegoshora, 2014). The focus group discussions were used to collect data from the students who were diagnosed with autism and had the

experience of schooling in inclusive elementary schools.

Other participants were students who did not have autism but were schooling together with those who had autism. The decision to mix the two groups of learners was because the research questions probed the perspectives and experiences of other learners without autism on including learners with autism in mainstream classrooms. Three focus group discussions were conducted in the three regions and three schools. The first focus group discussion was conducted at the Rhino School in Dodoma, and it comprised 10 students; seven of them did not have any disability, while three had autism spectrum disorder. The second focus group discussion was conducted at the Elephant inclusive school in Mbeya. The group comprised six students; four of them did not have any disability, while two had autism spectrum disorders. The third and last focus group discussion was conducted at the Lion School in Mbeya, where four students who participated formed a group. Among them, two students had autism spectrum disorders, but the two other students did not have any disability. Each focus group discussion lasted for about 30 to 45 minutes.

The focus group discussions were conducted inside the classrooms during break time. The rooms were quiet enough to allow for audio/voice recording without distractions in all three groups. The teachers who were teaching learners with autism led the focus group discussions and asked the questions according to the focus group discussion prompts prepared before the data collection. With this approach, it was possible to reach more participants with autism spectrum disorders and provide a comfortable atmosphere for them to give answers to the questions asked until data saturation was reached.

The focus group discussions were conducted in the three schools out of the four schools which participated in this study. This was due to the fact that the Rhino School did not have any learners with autism enrolled at the moment of this study, but they had extensive experience in having these learners in the past. Also, Giraffe School was a special school with all the learners having Neurodevelopmental Disability whose severity levels at the moment of this study did not allow them to engage in meaningful discussions for a prolonged period of time. Hyena and Elephant Schools were both inclusive Schools with learners below the age of five years, and despite several attempts made to try to engage them in the discussions, there was no success due to their young age, hence, no focus group discussions were conducted in these schools.

3.8.4 Documentary Review

Documentary research is a reflexive process in which the researcher confronts the moral underpinnings of social inquiry (Ahmed, 2010). In this study, the documents which were analysed included the Education and Training Policy of 2014 (URT, 2014) and the Persons with Disabilities Act of 2010 (URT, 2010). Others were the National Strategy for inclusive education for 2022 to 2026 (URT, 2022) as well as the National Examinations Council (NECTA) examinations guidelines, preliminary provision of 2016 (URT, 2016). These documents were necessary for providing evidence to answer the research questions for this study.

The selection of documents to be reviewed followed the principles of systematic literature review process. The inclusion criteria included; the focus on inclusive/special education, the document addressing matters of elementary schools

(pre-primary and primary level), and the document has to be a government report/circular that has already been rolled out for use. The exclusion criteria included all documents that were focusing on other areas outside education, documents that have no focus on inclusion/special education and the documents that were addressing other levels of education such as secondary or higher learning. The documents were imported in the Nvivo 12 software and they were analysed thematically. Themes were developed according to the research objectives and the inquiry was guided by the research questions. Data obtained from thematic analysis of the documents were also presented according to themes as reflected by the research objectives.

3.9 Data Analysis

Interview responses were recorded by using audio-recording devices and later on, they were transcribed verbatim by the researcher. Then, they were edited and imported into the Nvivo 12 computer software, where they were classified, coded and later analysed by using thematic analysis method (Saldana, 2009). Thematic analysis is a method of identifying, analysing, and reporting patterns (themes) within data commonly used in qualitative and descriptive research (Ary et al., 2009). It also goes further and interprets various aspects of the research topic. A theme captures something important about data in relation to the research question; it represents some patterned response or meaning within the data set. The significance of a theme is not necessarily dependent on quantifiable measures, but in terms of whether it captures something important in relation to the overall research question (Braun & Clarke, 2006).

The themes were identified through the theoretical or deductive or "top down" way as they were driven by the researcher's theoretical interest in the topic. Hence, the data were coded according to the pre-existing theoretical coding frame and the researcher's analytical preconceptions. This kind of coding is more explicitly analyst-driven. This style of coding was chosen because the researcher coded for quite specific research questions, hence mapped onto the more theoretical approach. The researcher employed the six phases of thematic analysis proposed by Braun and Clarke (2006). Some of these phases are similar to the phases of other qualitative research, hence not all unique to thematic analysis. These are: (i) Familiarise oneself with the data, (ii) Generate initial codes, (iii) Search for themes, (iv) Review themes, (v) Define and Naming themes, and (vi) write the report. The detailed explanations of the six phases as were conducted by the researcher are explained here below:

i.   Familiarization with the data

This is a stage where the transcription of the verbal and audio data took place. The audio data were transcribed into written form in order to conduct a thematic analysis. The process of transcription, was an excellent way for the researcher to familiarise herself with the data. The transcription was the key phase in the process of data analysis within this interpretative qualitative methodology. It was a period where meanings were created and not simply a mechanical work of putting spoken sounds on paper. The researcher took time to check the transcripts thoroughly against the original audio recordings for accuracy. The data set were read more than once before the researcher began coding. This process began during data collection, where the researcher noticed, and observed patterns of meaning and issues of potential interest

in the data. The process made the researcher make constant movements back and forward between the data set and the field to collect more of what was missing or gather more evidence to justify the existing data. At this phase, the researcher organised the data according to the research objectives and import them as files within the *Nvivo 12 plus* software ready for coding.

ii. Generation of Initial Codes

After reading and becoming familiar with the data, at this stage, the researcher generated initial list of ideas about what was in the data and what was interesting about them. She also produced the initial codes from the data. Codes identify a feature of the data that appears interesting to the researcher. It refers to the most basic segment, or raw element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon.

In this study, the process of coding involved organising data into meaningful groups; however, the coded data differed from the units of analysis (themes) because themes were broader than codes. The coding process was carried out using the *Nvivo 12 plus* software. While coding, the researcher was guided by the research questions in her mind. She coded by naming and tagging the selections of text within each data item. The researcher coded for as many potential themes as possible and she coded extracts of data inclusively. The individual extracts of data were coded in as many different themes as they could fit into.

iii. Searching for themes

After all the data were initially coded and the researcher had a long list of different codes which were identified in the data set, she re-focused the analysis at the broader

level of themes, rather than codes. She sorted different codes into potential themes, and organised all the relevant coded data extracts within the identified themes which were about 12 to 21 of them under each objective. At this stage, she also thought about the relationship between codes, between themes and between different levels of themes. Some initial codes were taken to form the main themes and sub-themes. Others, whose relevance could not be established, were discarded.

iv. Reviewing themes

After devising the 21 themes from the previous phase, at this phase, the researcher focused on refining these themes. It was evident that some themes did not have enough data to support them or the data were too diverse. Also, other themes appeared to collapse into each other, for example two separate themes joined to form one theme. There were other themes which were broken down into separate themes at this phase. The researcher read thoroughly all the organised extracts for each theme to review and refine them. She remained with 6 to 7 themes under each objective. These were enough to establish a thematic map and they fitted together to tell the overall story about the data.

v. Defining and naming themes

At this phase, the researcher acquired a satisfactory thematic map of the data; hence, she proceeded to define and further refine the final 6 to 7 themes that remained for analysis, and she analysed the data within them. She identified the essence of what each theme was about and determined the aspects of data each theme captured. The researcher organised the themes with the accompanying narrative, and made sure to not just paraphrase the content of the data extracts but to identify what was

interesting about them and why. A detailed analysis for each individual theme was conducted and identified the story that each theme was telling. Consideration was made on how well the themes fitted into the broader overall story are told about the data in relation to the research questions. As part of refinement, she established those themes with sub-themes and assigned the working name for each theme.

vi. Production of the report

After having the fully worked-out themes, at this phase, the researcher did the final analysis and write-up of the report. She made the analysis and the write-up including data extracts to provide a concise, coherent, logical, non-repetitive and interesting account of the story the data told within and across the themes. Using data extracts, she provided sufficient evidence of the themes within the data. The documentary review was also carried out thematically using the *Nvivo 12 plus* software, where all the documents were imported into the Nvivo software and treated as cases. Thereby, she analysed the collected that thematically by following the six phase analysis explained above.

3.10 Trustworthiness of the Study

In qualitative research, trustworthiness is defined as the ways in which qualitative researchers ensure that transferability, credibility, dependability and confirmability are evident in their research (Given, 2008). To maintain high trustworthiness in a qualitative study, Guba (1988) suggested four criteria to ensure valid interpretation of data. These are truth value, applicability, consistency, and neutrality. Truth value is measured by credibility, applicability is established with transferability (Lincoln & Guba, 1988). In this study, the researcher ensured trustworthiness of the study by

employing several strategies proposed by Guba which are characterised by the four criteria of "trustworthiness" which are credibility, transferability, dependability and confirmability. The detailed activities carried out by the researcher to ensure these are as explained below.

To ensure credibility of the study, the researcher employed prolonged engagement, persistent observation, member checking and triangulation. Through prolonged engagement, the researcher spent about three days in each research site to collect enough data. The multiple days also enabled the researcher to determine and overcome participant prejudice toward them and establish a warm and trustful relationship. The persistent observation strategy also enabled the researcher to understand and explain the study phenomenon deeply. After data collection, the researcher shared the raw data and the analysis documents with other peer researchers to check whether she understood the participants correctly and to ensure that there were no misunderstandings or biases. Also, the researcher employed four different research tools (non-participant observation, interview, focus group discussion and documentary review) during data collection as well as data sources and participants. This helped to cross-check the information and to ensure consistency in data interpretation.

In order to ensure transferability, the researcher employed thick description, reflexivity and purposeful sampling strategies. Through thick description, the researcher recorded in details all the steps and procedure employed during the study. She also kept a research diary where she documented the research notes and the reflection of the thoughts she had on each stage. The reflections helped to trace how

she collected, interpreted and analysed the data and later documented in the methodology section in detail as they transpired throughout the research process.

To ensure dependability of the study, the researcher employed the reflexivity, overlap method and audit trial. The overlap method is the same as the triangulation where by the researcher used multiple sources of data and employed multiple methods during data collection. In audit trial, the researcher documented each stage of the research, from the research questions, data collection, data analysis and data interpretation in details in order to show and explain the rigor of the study.

In order to ensure confirmability, the researcher employed triangulation, external audit and peer debriefing. In peer debriefing, the researcher shared the raw data of the research with an experienced independent researcher experienced in qualitative research on education. At the end of the analysis, both researchers went through the results, compared and discussed them in light of the research questions, until they agreed on the findings. This helped to discover things that were overlooked and give room for re-analysis of data. In the external audit, the researcher consulted a group of experts to criticise and evaluate the study from a different perspective. This helped to reduce possible failures, especially in the data analysis and interpretation process. By using triangulation of data sources and methods, as well as searching for rival explanations, the researcher was able to cross-check the data and interpretations to ensure consistency and flow.

3.11 Ethical Considerations

In a research context, ethics is explained as the way in which the research is conducted in the right way – ethical research conduct (Amundsen et al., 2017). It is

expected that the individual participants' well-being has been prioritised above all other interests in order for the research to be considered ethical (Amundsen & Msoroka, 2019; Creswell, 2007; Msoroka & Amundsen, 2018). Ethical considerations are pertinent to all research undertakings, particularly qualitative research, whose unstructured nature always raises issues that are not always anticipated (Amundsen et al., 2017; Ritchie & Lewis, 2003).

In order to ensure compliance with the universal principle of ethics, the researcher obtained informed consent from the participants and abided by the principle of anonymity and confidentiality of those taking part in the research (Amundsen & Msoroka, 2019; Ritchie & Lewis, 2003; Rwegoshora, 2014). For children below 18 years of age and those individuals with cognitive disabilities, such as learners with autism, consent to participate in the study was sought from parents, teachers, and carers. Before giving their consent, participants were told the purpose of the research and that the information they were giving would only be used for the purpose of research and not otherwise. They were also told that their identity would not be disclosed anyhow throughout the research process.

In order to obtain approval from the Human Research Ethics Committee (HREC), the researcher followed the procedures outlined by the Open University of Tanzania through which the data collection clearance letter was obtained from the Director of Postgraduate studies at The Open University of Tanzania and sent to all the Regional Administrative Secretaries of the five regions under study. The Regional Administrative Secretaries issued the Research Permit, which was taken through the District Executive Directors of all the districts under study, who also issued the

approval that was sent forth to the School Principals through the Ward Educational Officers in all the wards under study before the researcher embarking on the research.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

In this chapter, the findings gathered through the documentary search, in-depth interviews, focus-group discussions and the non-participant observation method are presented. These involve the four objectives: provisional support for children with autism in inclusive schools as stated in the current educational policy and other relevant documents. Implementation of the current education policy regarding children with autism in pre-primary and primary schools. Systems and structures needed to enhance learning outcomes for children with autism in inclusive pre-primary and primary schools. Likewise, the appropriate model for educational support systems for children with autism in inclusive pre-primary and primary schools.

4.2 Presentation of the Findings

The study assessed the educational support systems for learners with autism spectrum disorders in the inclusive elementary schools of Tanzania. Four objectives guided the information search in this study. They included the analysis of the provisional support for learners with autism in inclusive schools as stated in the current educational policy and an examination of the implementation of the current education policy regarding children with autism in pre-primary and primary schools.

Others are the identification of the systems and structures needed to enhance learning outcomes for children with autism in inclusive pre-primary and primary schools and the proposition of the appropriate model for educational support systems for children with autism in inclusive pre-primary and primary schools. In this study,

the data from the reviewed documents such as the National Strategy for Inclusive Education [NSIE, 2017 and NSIE, 2021] (URT, 2017; 2021), National Examination Council of Tanzania (NECTA) Examination guideline (NECTA, 2016) were analysed thematically. Also, the participants' data were collected by using in-depth interviews, Focus Group Discussion as well as Non-Participant Observation methods.

The collected data were recorded using a voice record, and later on, they were transcribed verbatim and translated from Swahili to English. The interview transcripts, observation narratives, field notes, and key policy documents were later uploaded to Nvivo Software 12 for analysis. The analysis was preceded by the development of themes and sub-themes that were inductively generated from nodes/codes in the software. The themes and sub-themes were generated inductively by reflecting on the key characteristic symptoms of autism, and the evidence-based practices suggested through literature for early intervention in schools. After the themes had been developed, they were grouped under each objective together with their accompanying respondents' voices and presented as follows:

4.2.1 Provisional Support for Children with Autism in Inclusive Schools – Reflections from the Key Authority Documents

The first objective of this study sought to analyse the provisional support for children with autism in inclusive schools as stated in the current educational policy. The documentary analysis was conducted, involving several key documents, which were: (i) The Education and Training Policy of 2014 (ii) The Persons with Disability Act of 2010 (iii) The National Examinations Council of Tanzania (NECTA) examination

regulations of 2016 and (iv) The National Strategy for Inclusive Education (NSIE) of 2021). A word search analysis was done through the Nvivo software in all documents, as well as the thematic analysis to identify the key issues addressed by these documents with regard to inclusive education, reasonable accommodation, modifications, adaptations and differentiations in curriculum, instructions and assessments. The themes were developed inductively from reading the documents and recording the key issues as they appeared. The results are indicated in each document below.

4.2.1.1 Education and Training Policy 2014

The documentary search conducted in the educational and training policy identified that the provision was addressed in general for all learners. However, no record of specific provisions for learners with autism spectrum disorders was mentioned in the United Republic of Tanzania (2014). The word search results from Nvivo 12 indicated that there was no mention of the word "inclusive education" in the entire document. One would assume that, if Tanzania ratified the United Nations Convention on the Rights of People with Disabilities in 2009, which clearly stipulates in Article 24, the need for countries to implement inclusive education to ensure access to quality and equitable education for all (Degener, 2017).

Then, this commitment should have been reflected in key documents such as the Education and Training Policy. The word cloud search pictorial image of the keywords in the Education and Training policy is indicated in Figure 4.2.

Figure 4.1: Visual Image of the Word Cloud from the Education and Training Policy of 2014.
Source:The United Republic of Tanzania (2014).

The visual image of the word cloud above indicates that from a search made in the entire Education and Training Policy of 2014, scanning the 1000 words that have appeared most frequently in the entire document, there is nowhere the word "Inclusive Education" has been mentioned in the entire document. The two words that have appeared with the almost similar frequency are the words "Training" and "Education". This can be revealed by looking at how bolded, large and centred, they have appeared in the word cloud image.

According to the Nvivo word cloud query summary, the frequency of appearance of the word "access" and "equity" which are the representative words in the field of disability and other minority inclusion in education, have appeared with the percentage of 1.41%. This is the lowest percentage of all the words that have been mentioned in the document. With this finding, one would argue that inclusive education has not been given the due weight in Tanzania. This may have implication in the type of measures, or provisions in place to safe guard its effective

implementation in schools.

Education and Training Policy is the key authority document which governs the budgetary allocations and other related frameworks to ensure effective implementation at the grassroots level. The fact that this document has not indicated anything with regard to the provision of inclusive education for learners with special educational needs is a statement which can be reflected in the gap in the implementation of inclusive education in Tanzania Elementary Schools. This fact has been affirmed several times within the National Strategy for Inclusive Education NSIE, 2021/2022-2025/2026 (URT, 2021b) where it has been indicated that:

> *"...while the Education and Training Policy (ETP) (2014) and the National Education Act, (NEA) No. 25 of 1978 and its related amendments without partiality provides for right to education, **none categorically mentions or endorses inclusive education**. Going forward, for the inclusive education approach to become a norm in Tanzania, it is crucial that key policy and legislative instruments guiding the provision of education in the country centrally integrate it"*. (Emphasis mine) (NSIE 2022-2026, page 34).

The findings revealed that key education policy and legislative instruments such as the Education and Training Policy (ETP) (2014) and the National Education Act, do not categorically mention the word "Inclusive Education". This can be translated at the level of commitment and the journey that Tanzania is yet to travel in order to realise the global philosophy of inclusive, equitable and quality access to education for all.

4.2.1.2 Persons with Disabilities Act, 2010

The persons with disabilities Act 2010 (The United Republic of Tanzania, 2010) was included in the documentary search for this study because it is one of the authority

documents enshrining the rights of people with disabilities in all spheres of life. In the article 27 of this act, it speaks about the education and training for persons with disabilities. In the subsections 1, 2, 3 and 4 of Article 27 it is indicated:

> 27. -(1) Persons with disabilities in all ages and gender shall have same rights to education, training in inclusive settings and the benefits of research as other citizens. (2) Every child with a disability shall have equal rights in relation to admission to the public or private schools. (3) Every child with disability shall attend an ordinary public or private school except where a need for special communication is required. (4) A child provided for in subsection (3) shall be provided with appropriate disability related support services or other necessary learning service from a qualified teacher or a teacher assigned for that (URT, 2010, p 24).

This provision stipulates the mandatory access to inclusive education and availability of related support services for learners with special learning needs. Article (1) has mentioned clearly the right to inclusive education for learners with special learning needs such as autism spectrum disorders. It has stipulated their equal rights to admission to the public or private schools. This Act stresses the need for these learners to attend ordinary schools. It insists that there should be reasonable accommodations, indicated as the appropriate disability related support services availed for such kind of learners.

This suggests that learners who need differentiated curriculum, instructions and assessments like those who have autism spectrum disorders, should be provided with such services. Subsection 3 of the article 27 of the Disability Act also speaks on the need for these learners to be provided with other necessary learning service from qualified teachers or a teacher assigned for that. This indicates that teachers who teach learners with special learning needs such as autism spectrum disorders should be provided with the appropriate, relevant and adequate knowledge on how to

manage and support these learners within the normal or "mainstream" classrooms.

4.2.1.3 NECTA Examinations Guidelines, 2016

The National Examinations Council of Tanzania (NECTA) is the authority body in charge of the coordination of the formative assessments and administering the summative and the national examination assessments in the elementary schools and secondary schools in Tanzania. In 2016, NECTA released the subsidiary law and the preliminary provision for the examinations regulations guidelines. In order to get the comprehensive picture of the education support provision for learners with autism spectrum disorders in elementary schools of Tanzania, it was critical to analyse this important document. The documentary search revealed that there was a section dedicated to what we could term as reasonable accommodations for learners with disabilities during examinations. This is found in part IV of the guideline, under the title "General Provisions" which is in the subsection 29 part 1 up to 4: Special treatments for candidates with special needs. In this regard, the guideline has indicated that:

> 29.-(1) A private candidate with special needs or head of school that has candidates with special needs, may apply to the Executive Secretary for provisions of special services, arrangement or supporting gears for candidates with special needs during the examination. (2) A visual impaired candidate shall - (a) be provided with special examination room; and (b) dictate the answers to an amanuensis or type on a standard typewriter; (3) A visual impaired candidate may be allowed to sit for mathematics and science subject examinations in a manner as shall be prescribed by the Minister. (4) A candidate with a disability which slows down his writing speed in the examinations shall be offered with addition of twenty minutes in every hour for Mathematics and ten minutes in each hour for other subjects (NECTA, 2016, p. 31).

The provision stated in the subsection 29 above can be taken as the differentiated assessment or reasonable accommodation made by NECTA to enable learners with

special needs to access the examinations and get the support and the environmental modifications which is suitable to their needs. However, due to the diverse sensory and learning needs of learners with autism spectrum disorders, one may argue that this provision is too limited to reflect the realities of these learners that are experienced within the schools. Part 1 of the subsection 29 states that the head of school with special learners should apply for the reasonable accommodation and differentiation required by the learners during the examination.

This statement may serve as a roadblock for accessibility of the examination due to the high number of learners with autism spectrum disorders in schools and their complex and diverse needs in terms of learning, sensory and other behavioural conditions. It would have been more appropriate for NECTA to have a stand-alone differentiated curriculum and a known differentiated assessment for such learners to remove the barriers to access to national examinations for these learners. Also, there is a need to have clear stipulations on the reasonable accommodations for learners with ASD and other co-occurring conditions such as dyslexia and dysgraphia, just as they have made it clear for other types of disabilities in part 2, 3 and 4 of the sub-section 29. The reasonable accommodation for such learners may include things like oral and hands-on examinations instead of paper and pen examinations. It may also include picture and videos instead of written texts.

4.2.1.4 National Strategy for Inclusive Education (NSIE 2022-2026)

National Strategy for Inclusive Education (NSIE) has been serving as a guiding tool in matters of inclusive education since 2009. There have been three versions of NSIE, each building up on the success of the other, while improving and

incorporating new items resulting to empirical findings and the demands of the ever-changing society. The first one was in use from 2009 to 2017, followed by the NSIE 2018 to 2021 (URT, 2017) and the current NSIE 2022 to 2026 (URT, 2021b). The previous NSIE lagged behind in the implementation due to government approval process which took longer than expected; it was officially operational at the end of 2019, a year after its inception.

The current NSIE was officially launched in January 2022. Within it, there is an action plan and a road map to effective implementation of inclusive education in Tanzania. Due to the fact that the National Education Act (NEA) and the Education and Training Policy (ETP) (2014) have not categorically mentioned Inclusive Education, NSIE serves as the framework and government directive in matters of inclusive education in Tanzania. Thematic analysis of this important document was carried out through Nvivo. The themes developed during the analysis are: vision and mission of the NSIE 2022-2026 as indicated in this important document. Benefits of Inclusive education, are reasonable accommodations, differentiated assessments, transition plans as well as the implementation gaps in Inclusive Education for learners with autism spectrum disorders in Tanzania.

Mission, Vision and Strategic Objectives for NSIE (2022-2026)

The vision of NSIE (2022-2026) (URT, 2021b) is to have an education system which ensures full participation of all learners. Its mission is to strengthen the education system through awareness rising, advocacy, capacity building, policy review, infrastructure improvement and resource mobilisation to enable learners with special education needs to participate effectively in inclusive education settings to reach

their full potential. The strategic goal of NSIE (2022-2026) is to use inclusive education as the foundation to build on the inclusive society. The key objectives of NSIE (2022-2026) are five (5). These are: first of all, to ensure that the education policy, legislation and guidelines are informed by inclusive values and practices.

Second, to ensure equitable access and participation of learners with diverse needs and provision of quality inclusive education promoted at all levels. Third, to promote inclusive culture among policy makers, education practitioners and community members. Fourth, to improve coordination and collaboration among education stakeholders in delivering inclusive education; and finally, to improve quality assurance, monitoring and evaluation mechanism informed by proper data management from schools, education institutions and stakeholders in the implementation of the strategy.

It was the interest of this study to highlight what inclusive education means as it has been indicated in the document. According to NSIE (2022-2026):

> *"It is a system of education in which all learners are enrolled, actively participate and achieve in regular educational settings and other educational programmes regardless of their diverse backgrounds and abilities, without discrimination, through minimisation of barriers and maximisation of resources. The inclusive education approach therefore involves transformation of policies, legislations, regulations, processes, structures, infrastructure, practices and human resources to support accommodation of all learners to learn together wherever possible, regardless of any difficulties or differences they may have"* (URT, 2021, p 3).

According to NSIE, the main goal of inclusive education is to address the issue of inequality, social justice, and human rights. It expounds on the need to develop an education system which continually adapts to the needs of individual learners, rather

than the learners to adapt to the education system. It insists on the learners to be included not only in the classroom but also in the "quality learning". The strategy continues to stress on the ideology of inclusion by stating that:

> *"Inclusion in education constitutes a way of thinking, perceiving, feeling and a pattern of basic assumptions which consider all learners especially those with disabilities and special educational needs not as outsiders who have no right to education, or need isolated educational arrangements, or who need to be integrated, but rather as inherent members who already belong, and are a part of the educational community, and a part of the society at large"* (URT, 2021, p 54).

The National Strategy for Inclusive education in Tanzania, explains the need to respond to the learners' diverse needs by establishing that "Inclusive Education: is seen as…a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities, and reducing exclusion from education and from within education (URT, 2021, p. 68)".

Through the definition put forward by the NSIE (2022-2026), one can establish that, inclusive education system is the one which embraces diversity of learners, adapt by responding to the learners needs, remove all the barriers in terms of structures, thinking, attitudes and curriculum. This is in order to ensure accessibility and maximum participation of all learners in education

Reasonable accommodations as indicated in the NSIE (2022-2026)

One of the key features of the education system which adapts the needs of the learners is the provision of reasonable accommodation and adaptations in the curriculum, instructions and the environment. This increases access and participation of all learners with diverse needs, such as those with autism spectrum disorders. According to URT (2021, p. 63).

> *"Accommodation is a type of adaptation that creates a personal learning environment for a child by altering instruction, classroom environment, assessment, and/or other materials and attributes in order to provide a learner with special educational needs and equal opportunity to participate in class activities and demonstrate knowledge and skills. Accommodative classroom constitutes a classroom in which all learners, irrespective of their abilities or skills are welcomed holistically".*

The strategy stipulates the commitments of the government of Tanzania to optimally realise the educational potential of persons with learning difficulties. This has been done by explaining the types of reasonable accommodation needed in the lesson plans. It has specified specific lessons delivery skills required for these learners, remedial teaching and exposed the discriminatory practices that should be avoided. It indicates clearly that in order to ensure full access and maximum participation of learners with disabilities in inclusive education settings, they may require support services, adapted curriculum, adapted teaching and learning materials and methods, assistive devices and in some cases, personal assistance. The strategy categorically mentions the need for reasonable accommodation for learners with autism spectrum disorders (ASD) while addressing the issue of "whole person approach" by stating that:

> *"This approach implies the provision of support and reasonable accommodation and early intervention to learners with special educational needs so that they can fulfil their potential. There should be a personalised educational response, rather than expecting the learners to fit the system. There is issuing of directives to relevant curriculum development institute"* (URT, 2021, p. 41).

Differentiated Assessment provisions

The National Strategy for Inclusive Education (2022-2026) (URT, 2021) has shown serious commitment to advocate for curriculum and assessments adaptations, modifications and differentiations to appropriately support learners with diverse

learning abilities such as those with autism spectrum disorders. The fact that this spectrum (ASD) encompasses individuals with varied levels of ability within the broad spectrum (from those who are severely challenged to the one who are gifted and talented, also known as those with savant abilities). The NSIE (2022-2026) has been categorically and explicit about the need of the relevant authorities to work on the necessary changes and accommodations to reflect the realities of these learners.

The strategy has explained the need to have adaptation which involves changes in the curriculum, teaching and learning strategies, learning materials and assessment methods to meet the needs of learners with Special Educational Needs (SEN). Adaptation involves changes in the way instruction and assessment are carried out to allow a learner equal opportunity to demonstrate mastery of concepts and achieve the desired learning outcomes. The strategy has defined assessment as a continuous process of gathering relevant information or data about a child, interpreting them, and making an instructional decision for the provision of educational services. The assessment should be geared towards the identification of children with challenges in learning and suggest intervention measures to overcome those challenges. Addressing the issue of lack of differentiation assessments in Tanzania, the NSIE (2022-2026) states:

> *"Tanzania has conventionally used especially ordinary level national examination results as a basis of identifying gifted and talented learners. That approach is recognised as having several limitations including exclusive reliance on the academic performance and limited support for continuation post advance level"* (URT, 2021, p.17).

According to NSIE (2022-2026), this approach is delaying the process of identification of gifted and talented learners. Also, it overly relies on the academic

criteria and leaving out other areas of giftedness such as arts, music, sports, leadership, and other creative areas. NSIE (2022-2026) has also highlighted the issue of lack of smooth transition from school to vocational and tertiary levels and those gifted in other non-academic areas due to the limitation in the differentiations in assessment. As it was indicated in the document:

> *"Work to ensure learners with special educational needs receive the support to ensure the effective transition from learning at school to vocational, tertiary, and higher education, and finally to work. Learners' capacities and confidence are developed and receive reasonable accommodation and equality regarding assessment, examination, and certification of their capacities and attainments on an equal basis with others"* (URT, 2021 p. 42).

One of the commitments in the realisation of differentiated curriculum and assessments which has been indicated in the action plans of NSIE (2022-2026) is to issue a circular that guides educational institutions to review regulative instruments (including assessment and examination guidelines) to integrate inclusive education at all levels of education and assessments.

Implementation Gaps in Inclusive education according to NSIE 2022-2026

While reviewing the implementation of the NSIE (2017-2021), it was indicated that most of the itemised activities were not implemented (URT, 2021). This has a negative connotation in the efforts to realise inclusive education approach in Tanzania. The reasons behind poor implementation of the strategy were mentioned to be: poor dissemination of the document in the regions, as well as the delay of the translation of the document in Kiswahili to be used by the general public. Other reasons include inadequate and inconsistent knowledge on inclusive education among key educational officers from the regional, district and ward levels. Other

restraining forces that have been mentioned to thwart the efforts of inclusive education in Tanzania are:

> *"Widespread structural poverty and associated challenges, prevalent environmental, infrastructural and communication barriers, unknown exact number and specific needs of people with SEN, limited financial resources available for Inclusive Education compared to need, limited inclusive education awareness among decision makers, most education sector actors, community members and parents lack of effective inclusive education coordinating mechanism, persistent structural discrimination of people with SEN, inadequate number of educators trained on Inclusive Education.*
>
> *The National Education Act does not categorically provide for Inclusive Education, The Tanzania Education and Training Policy (2014) and the National Education Act No. 25 of 1978 and its subsequent amendments recognises and provides for the right to education but does not categorically provide for inclusive education. Also, at any particular time, both the exact number of individuals with SEN and their specific needs are unknown, while in any specific educational settings, they may only be a handful. Except for only a few SEN categories (e.g. learners from nomadic or seminomadic families and most of the refugee learners), individuals in the rest of the categories are unevenly dispersed across a vast country unidentified or hidden"* (URT, 2021, p. 29).

In order to make inclusive education a reality in Tanzania, NSIE (2022-206) has categorically mentioned the need to have an explicitly inclusive supportive education policy, legislation and guidelines. Also, there must be an improved coordination and collaboration among stakeholders in delivering inclusive education. According to NSIE, coordination is not only a growing policy challenge but a huge practical one in delivery of inclusive education in Tanzania. It has been established that:

> *"The epicentre of the challenge is that on one hand, there are multiple public sector actors (PMO, MoEST, PoRALG, MoHCDEC, MoFP, and MoHA to mention a few), each with certain roles to play in some aspect of the delivery of inclusive education, some with overlapping mandate and competitive relations and most with parallel lines of accountability and they do not necessarily consult each other; and on the other, in the education sector, there are*

dispersed non-state actors with diverse specialisations. Actualisation of the inclusive education approach requires the close cooperation of the relevant public actors, non-state actors and development partners" (URT, 2021, p 56).

4.2.2 Implementation of the Current Education Policy Regarding Children with Autism in Pre-Primary and Primary Schools

This objective sought to answer the question of how schools were implementing inclusive education as stated in the key authority documents highlighted in the first objective and see how the government commitment was being reflected in the actual implementation at the school level. Through the Nvivo, participants' interview feedback was inductively grouped into themes and subthemes and the findings are represented below.

4.2.2.1 Educational Support Resource and Assessment Centres (ESRAC)

While stipulating the government commitment in this regard, the NSIE 2022-2026 has indicated a goal to construct and equip new national and regional educational support resource and assessment centres (ESRAC) (URT, 2021b). It is indicated that this is a critical service designed to give a wider response in the identification of children who might experience barriers to learning, and provision of support to learners with special educational needs in schools and communities. The goal of ESRAC is to maximise learning outcomes through training of personnel as well as resourcing of teaching and learning materials.

While responding on how the schools practice reflects the policy stipulations and government commitments regarding inclusion of learners with autism spectrum disorders (ASD), participants mentioned the establishment of Educational Resource

and Assessment Centres (ESRAC). ESRAC serves as a focal point in matters related with disability inclusion in Tanzania. In these centres, parents with children who have special educational needs (SEN) such as ASD go for screening and assessments before their children can be recommended for proper placement in schools. According to the interview responses, at ESRAC, learners are assessed to determine the type and severity of their disability, and recommendations as to whether the child should attend special school, integrated school or inclusive school are made. At the ESRAC, all the information about all schools, education centres and rehabilitation centres offering services for learners with ASD are made available to parents. On this, one of the interviewees commented:

> *"Also, before we register a child, we do take them to the Education Support Resource and Assessment Centre (ESRAC) which is nearby to our school. They assess the child and determine whether they should be taken to a special school, mainstream school or the rehabilitation centre for physiotherapy"* (Interview with Teacher 01).

Affirming the above statement, and portraying a different arrangement; another teacher noted:

> *"As I told you earlier, when a child is brought to us, we do direct the parent to take the child to the ESRAC first. At the ESRAC, the student is assessed his/her level of autism. Also, they give us details of whether the child has autism only, or they tell us if it is another kind of disability or it is intellectual impairment. When the child and parent come from ESRAC, they do come with a form that has assessment details; that form helps us to know where to place the child"* (Teacher 03).

Explaining what is supposed to happen at the ESRAC, and the actions that are supposed to follow, during focus group discussion teacher 07 (from Rhino School) added "Normally, for children with autism, we first start by doing assessment… Luckily, our school is the regional ESRAC centre. So, we do assessments and afterwards prepare the Individualized Educational Plan for them *"*, other participants

agreed mentioning that, ESRAC ensure "early diagnosis", "proper placement" and "appropriate support to teachers" as the implement inclusive education to learners with autism.

With the above data, one would argue that ESRAC are the starting point for the successful inclusion of learners with ASD. This argument is based on the fact that in these centres, the type and severity levels of these learners is established and also recommendations for proper placement in schools that have the capabilities to support these learners is recommended. However, the findings further revealed that the ESRAC centres which were supposed to be functional in all regions as well as districts of Tanzania were not there. A statement found within the national strategy for inclusive education (NSIE 2022-2026) indicated that, it is only one national ESRAC which is functional and fully resourced. This functional National ESRAC is located at Uhuru Inclusive School in Dar es Salaam. According to NSIE, no other ESRAC in the rest of the 26 regions in Tanzania is functional and fully resourced:

> *"Through the National Education Support and Resource Assessment Centre (ESRAC), Tanzania has made significant strides in the identification and assessment of especially children with learning disabilities. Some of the persistent challenges include that verified national data aggregated to types of learning difficulties are still difficult to come by"* (URT, 2021, p. 16).

Affirming the voices of participants, documentary review of NSIE (2022-2026) stressed "Currently, only the national ESRAC exists, headquartered in Dar es Salaam. There is therefore a challenge of cascading services to regional and district levels to reach communities across the country" (URT, 2021, p. 17). In order to address this evident gap, the Ministry of Education has indicated its commitment, stipulated as one of the strategic areas in the action plan within the NSIE (2022-

2026) stating "…Construct and equip new national and regional education support and Resource Assessment Centre (ESRAC)" (URT, 2021, p. 51). Explaining the essence and importance of ESRAC in all regions, the document expounded that " Through the efforts of ESRAC among others, identification, assessment, and enrolment of learners with special educational needs in inclusive educational settings has commenced in earnest. This is an uphill task and set to be up scaled in the subsequent NSIE" (URT, 2021, p. 26).

The impact of the lack of ESRAC services in other regions of Tanzania was echoed during the interview. Parents of children with autism spectrum disorders explained how hard it was for them to get the early diagnosis, and assessments. They were struggling to get proper schools for their children due to lack of the ESRAC services in the regions. On this, one of the parents commented:

> *"It is really difficult to get school for learners with ASD because many teachers are not aware of the condition. So, you find yourself enrolling your child in a certain school and teachers are failing to support him/her. After sometime, they call you and say they cannot continue keeping your child in that school. So, you have to take him/her away because they cannot help him. Getting a school is a major challenge as there are very few schools that cater for the needs of these students"* (Parent GS).

This parent's concern, together with the statements made within the NSIE (2022-2026) suggest the pain and hardship experienced by parents of children with ASD due to a lack of ESRAC centres in the regions outside of Dar es Salaam.

4.2.2.2 Learning by doing

NSIE 2022-2026 has indicated several principles that should guide the provision of inclusive education (URT, 2021b). Within it, there is a clear stipulation mentioning

the standards guiding the educational provision within the inclusive setting. That, there should be appropriate curricula which cater for diverse styles and rates of learning in order to ensure quality education for all. Among the learning styles known in the education system, is the tactile learner, who prefers to learn through active participation. This is also known as learning by doing. Others are visual learners who prefer to learn through visual inputs. NSIE (2022-2026) also stressed the importance of provision of extra support for learners who may require it due to their special educational needs in order to ensure their effective learning within the inclusive setting.

The findings of this study revealed that, learning by doing teaching approach, which is more learner-centred and skilled-based curriculum, has made it possible for the implementation of inclusion of learners with ASD in the mainstream schools. This finding was supported by the participants' affirmations on the fact that learners with ASD preferred practical and hands-on teaching methods more than lecture methods or paper and pen methods. Majority of the parents and teachers substantiated the fact that learners with ASD preferred learner-centred teaching methods, through which students become active participants in the learning process.

During interview teacher 05 (from Hyena School) mentioned "We normally say that we do focus on the strength and the ability of the child as the capital for learning", similar statement came during the interview from other schools, where participants mentioned "use of play in teaching", "playing football while counting", "teach counting through skipping the rope" as well as employing extra time to provide support for learners who are struggling.

As the findings reveal, the participants mentioned the effectiveness of the learning by doing, commenting that it was helping the learners to be active participants and thus bringing to life the meaning of learner-centred approach. Other methodologies that were mentioned to work well in teaching these learners were learning through play as well as teaching by using songs and games. Others included role play, teaching in the natural environment as well as using recorded videos. While explaining this, teacher 13 mentioned "Other times we do use the learning videos to teach them some concepts, videos like "akili, akili" (ubongo kids) so that they can see the activities behind the concept. They do learn, but very slowly". Stressing on the point of learning by doing and linking it with learn through play methodology, other participants mentioned the use of "learn-through-play methodology", "teach through songs" and "use of real objects in teaching".

One of the hindrances in the implementation of learning by doing in some of the schools, is associated with lack of creativity among teachers on the delivery of the content as well as the lack of understanding of the ASD condition and how to manage it in the classroom. On this, some of the participants commented:

> *"Because there is no physical feature to distinguish a child with autism from other children; physically, they look normal and one cannot notice if they have any challenges and this makes it hard even for teachers to support them because they do not have this knowledge"* (Parent QR).

While explaining the essence of clear knowledge about autism for teachers and the community in order to offer appropriate differentiations in instructions within the classrooms, particularly in area of communication, Parent CJ (parent of a child with autism) mentioned "Every person should be able to know the child with autism and

their symptoms. They should understand that children with autism have deficits in social interactions and communications and that some of them are non-verbal"

Basing on the concern about the distinguishing features of autism and lack of knowledge on how to identify them in classrooms, one may deduct that majority of the teachers may not be consistent in the implementation of the learning by doing methodology because they do not understand that they have learners within their classrooms whose only way for them to gain mastery of the subject is through active participation and learner-centred approach. It is to be considered that majority of teachers would otherwise incline to lecture methods and the paper and pencil methodologies of instruction which at the end of the day, would leave out learners with autism spectrum disorders.

4.2.2.3 Differentiated Curriculum, Instruction and Assessment

One of the key provisions for learners with special education needs as stated in the NSIE 2022-2026 is the adaptive curriculum also known as differentiated curriculum, instruction and assessment methods (URT, 2021b). Within this document, it is categorically stated that, differentiated curriculum for inclusive education should be an ongoing and dynamic process that modifies and adapts the prescribed methods and programmes of studies to meet the learning requirements of learners with special educational needs. It further substantiates that the teaching team should welcome learners of all abilities and ensures that every learner is challenged to learn. The NSIE 2020-2026 advocates for changes in the way instructions and assessments are carried out to give every learner an equal opportunity to demonstrate mastery of concepts and achieve the desired learning outcomes.

Based on the findings, majority of the participants mentioned the availability of differentiated curriculum, instruction and assessment for learners with ASD in inclusive elementary schools. This fact was made clear by the participants who expounded the presence of different levels of mastery for learners with ASD and intellectual impairments in the elementary inclusive schools. With a focus on this, one teacher reported:

> *"For learners with autism, they do learn in three levels. In each level, there is a certain level of mastery that a child is supposed to acquire before they move to the next level. For example, in numbers, at level one, a child is supposed to learn number zero up to number ten, and then move to level two. In level two, they are supposed to learn number ten up to fifty; in level three, they learn from fifty up to one hundred. If the child has shown mastery in all these levels, then we can take them from special classes and put them in the inclusive classes"* (Teacher 10).

In the effort to explain the situation at hand with regard to curriculum differentiation and the road-block to effective implementation, teacher 02 added:

> *"Yes, we have some few modifications even though they are not documented officially. That is, learners with autism and other related disabilities are supposed to learn a few things in the curriculum content so that they can be able to grasp and master them. Normally, they are supposed to just learn in the three levels and graduate; but recently, they say we should put them in grade four after they have mastered the three levels. But actually, upon joining the grade four, they do meet with heavy contents that are not fit for them thus they cannot cope with others"* (Teacher 02).

The findings revealed the implementation of a differentiated curriculum and instruction, even though it is clearly indicated that some of the differentiations are not formally documented. Room for improvements in the current implementation was also highlighted as teachers, the main actors, were observing some discrepancies in the current practice. During the interview, other gaps in the effective

implementation were mentioned as "no different evaluation", "absence of test modification", and "differentiation not officially documented" reappeared again. The main issues with regard to lack of smooth transition from the level of curriculum differentiation to full inclusion.

> *"There are no different evaluation and testing modifications for the needs of these learners, as I said earlier; these things are not formally documented; hence not clear on the implementation. This is because; from level one to level three, they are in special classes and later on, join inclusive classes from grade four. So, they struggle to cope with the grade four studies in general"* (Teacher 10).

Explaining how the continuation in levels of curriculum differentiation for smooth implementation teacher 03 commented during focus group discussion:

> *"I think there should be coherence and a continuation in the lessons content that they are learning from level one to level three and after joining grade four in the inclusion classes. There should be some continuity in the content. Thus, there is no need to change completely to some new and difficult contents"* (Teacher 03).

Despite the fact that evidence of differentiated unofficial and undocumented curriculum was substantiated, there was consistent voice speaking on the lack of differentiation in the assessment methods, a responsibility that falls under NECTA. Another key finding was the discrepancy noted in the acknowledgement of the differentiated curriculum and hence implementation thereof, as some of the respondents from other schools aired their concern indicating the absence of the modification in the curriculum.

Contrary to the findings above, teacher 08 (from Giraffe school) mentioned during the interview, "There are no changes in the curriculum content; but the only modification for them is the use of Individualised Education Plan, which enables

them to learn according to their level and ability" (Teacher 08), other participants echoed to this by mentioning some of the differentiated curriculum implemented to be: *"Individualised Education Plans", "flexibility in enrolment age", and "adjustment in content difficulty"*. Different sentiments observed in these findings might be pointing to the level of knowledge among the teachers concerned due to the lack of in-service training and adequate knowledge about inclusive education among school teachers. It also explains the different approaches to curriculum modifications and inclusive education practices among different schools due to lack of a formal document guiding these matters.

4.2.2.4 Introduction of the 21st Century Skills in the Curriculum

While highlighting the principles of Inclusive Education, NSIE 2022-2026 established that inclusive learning settings should be an effective means for building solidarity, collaboration, and equipping learners with special educational needs to make them acquire skills and competence that will enable them to participate and contribute fully as equal citizens in the 21st century (URT, 2021b). The ultimate goal of education provision, according to the Education and Training Policy of 2014, is to develop all learners to become independent and contribute to the national economic development and reduce dependency (The United Republic of Tanzania, 2014).

This goal points towards the development of all learners, the problem-solving skills as well as solidarity between learners with special education needs and their peers. This point has also been recommended in the Persons with Disability Act of 2010 (URT, 2010). It stresses the need to liberate people with disabilities by focusing on what they can do, instead of what they cannot do. Hence, it allows them to become

independent and productive citizens in the society.

The findings of this study pointed out that today's learners need to be equipped with the skills to communicate, collaborate, and solve problems. These skills can be taught through socio-emotional learning. The emphasis of this new paradigm of thinking in education has been a timely response to address the key three characteristic features of learners with ASD, which are deficit in communication, social interaction and repetitive behaviours. While it goes without saying that all learners need to be taught and master the 21st century skills, this emphasis on elementary schools serves as a key intervention to address the developmental gaps and challenges faced by learners with ASD. The inclusion of learners with special educational needs in elementary schools, on the other hand, serves as a strategic platform for all learners in the school community to embrace and practise 21st century skills throughout their schooling. Analysing the responses given by the participants under this theme, three sub-themes emerged, which were: the emphasis of the school in building social-cultural awareness, ICT literacy and collaboration among learners, as it is expounded in detail below:

Social and Cultural Awareness: The emphasis of the current curriculum in Tanzania's elementary schools is to groom learners who respect diversity, embrace differences, and celebrate individuality in terms of cultural, religious, gender, as well as diverse abilities. Schools have taken advantage of the inclusion of learners with special education needs such as ASD to instil the skills of social and cultural awareness to all learners. This was evident during non-participant observations in schools involved in this study as well as during the focus group discussions where

student A (who does not have autism from Elephant school) noted *"We feel good learning with pupils with autism because they are human beings just like us. We do not stigmatise them. We give them good cooperation"*. Several other participants agreed with this statement, mentioning that *"they collaborate"*, *"play together"*, *"support them"*, and *"love them"*. Cementing what was mentioned above, other students who had autism reported *"feeling good"*, *"no discrimination"*, *"play together"*, *"study together"*, and *"no bad thing"* when responding to the question on their experiences of learning in an inclusive school.

The fact that the Tanzania curriculum embraces and insists on the inculcation of social and cultural awareness to all students in elementary school has enabled the smooth implementation of inclusive education for learners with ASD.

ICT Literacy: The majority of the participants in this study mentioned that learners with ASD preferred to learn through pictures and videos. This was found to help them grasp the concept and understand it better than if the same instruction were presented in texts and verbal instructions only. This was explained to make most of the schools under the study employ technology and digital devices in the teaching and learning process for these learners. While explaining the strategies used to enhance learning outcomes for learners with autism in inclusive classrooms, during interviews, teacher 14 (from Lion school) narrated that *"Another strategy is by sometimes using technology such as computer, projector, and phone so that the child can see and hear what is being taught"* the same point also reappeared in the same intensity of feelings while teacher 09 from Rhino school mentioned *"Also, there are some programmes on the internet that are educational and they can help the child to*

learn". Verifying the information provided by teachers, Student D (from Hippo School, who has autism) mentioned, *"Because we can play sports such as football, basketball and we can work on the computer, we can read and write, and we can play video games"*, when he was responding to the question on what things he like the most about schooling in an inclusive setting.

The current education and training policy directs schools to incorporate the use of digital learning and technological devices in the process of teaching and learning. The use of ICT in teaching and learning has proved to be a relevant method for learners with ASD as they have been observed to prefer it to the traditional lecture method and paper and pencil methods.

Collaboration: Majority of the participants in this study affirmed the benefits of group works in teaching social interactions and communication skills for learners with ASD. On the other hand, this strategy was beneficial in instilling a sense of respect and tolerance for other learners without Special Educational Needs in inclusive elementary schools. This was given the name of "Child to Child Approach" in the inclusive schools under this study and was testified to be an effective strategy in the intervention of ASD in schools. When asked about the methods they were using in schools to teach social skills for learners with ASD, Teacher 6 from Elephant school narrated:

> *"We also use the "child to child approach" whereby we introduce the child with autism to other children so that they can identify what challenges he has and encourage them to involve him/her in all the learning activities in the class to keep him/her engaged".*

Other participants affirmed this approach, mentioning how effective it has been in teaching social interaction to learners with autism by adding that they use peers to

make learners with autism "participate in every activity" such as singing, reading aloud, learning a new game as well as participating in sports of their interest together with other children. They affirmed that learners with autism respond well to kind gestures extended by their peers, sometimes even more than they do to teachers. Collaboration is an important social and emotional skill for all learners. In this study, it was indicated to be a tool and a strategy used by inclusive elementary schools to teach social interaction skills to learners with ASD, who are medically known to have significant deficits in social interaction.

4.2.2.5 Teachers' Training on Autism Inclusion

The National Strategy for Inclusive Education (NSIE 2022-2026) espouses the commitment to make inclusive education a norm rather than an accompaniment in the Tanzania education system (URT, 2021b). Within it, there is a recommendation to refine the curriculum for initial teachers' training colleges and universities, as well as the professional training so that they can all encompass the component of inclusive education. This is to ensure that all teachers can teach all learners, including those with special education needs such as autism. This commitment reflects the one established in the Salamanca Statement, which recommends that nations create "Schools for All" (UNESCO, 1994).

Teacher training on autism inclusion came strongly and with sentiments among many participants. The majority of the participants mentioned teachers' training, particularly on inclusive education for learners with autism, as a key factor in the implementation of inclusion for learners with ASD in elementary schools. This was reported by participants when suggesting improvements in the implementation of

inclusive education for learners with autism in elementary schools in Tanzania. On this issue, teacher 10 (from Hyena School) commented, *"I think the only mechanism is to have teachers who are trained in special education so that they can give support to this kind of learners when they are in the inclusive schools"* (Teacher 10). Other participants affirmed the need for intensive and intentional pre-service and continuous in-service training for teachers on inclusive education, mentioning that *"Government has been providing training"*, and others explained their wishes: *"Government should make deliberate efforts to train"*. These statements indicate that, to some extent, training has been provided to some areas, and other areas are yet to receive the training. On the same note, the findings indicate that there is a significant need for training the pre-service teachers on inclusive education for learners with autism, especially during the initial teachers' training.

Based on the findings in the quotations above, it is indicated that to some extent, the government has been trying to provide in-service training to teachers. However, they indicated a need for regular provision of in-service training for teachers teaching learners with ASD in schools. The collected and analysed data suggested that teachers had shortly been trained by the government on how to teach learners with autism.

It is worth noting that this study was carried out in 5 different regions; some were major cities, and others were small towns. There might be disparities in the implementation of the provision of teachers' training on autism due to the different geographical locations. A statement found within the NSIE 2022-2026 may justify this discrepancy as it addresses the status of training that has been so far conducted

in Tanzania, under the category of what worked well in the implementation of the NSIE 2018-2021, on teaching learners with special educational needs in inclusive schools, NSIE states that, *"Pre-service teacher education curriculum (college based) was revised to accommodate aspects of inclusive education"* (URT, 2021, p. 25).

The statement above indicates that the pre-service teacher education curriculum has already been revised to accommodate the aspect of inclusive education. However, another statement justifies the discrepancy observed in the teachers' comments above, as it indicates that the training was provided to teaching assistants from only two regions which participated in the pilot study. As it was indicated in the documentary review of NSIE, *"Training of Teaching Assistants in the piloted areas and Inclusive Education teachers was done in Dar es Salaam and Kilimanjaro"* (URT, 2021, p. 26).

This statement supports the argument that, some of the teachers received the training. This includes those under this study who are located in Dar es Salaam and Kilimanjaro, or they were working in this region during the period of 2018 to 2021. Also, NSIE 2022- 2026 has categorically indicated the commitment to continue to train pre-service and in-service teachers on inclusive education, as a way to strengthen the implementation of inclusive education throughout Tanzania. This can be testified through the statements such as *"train all teachers and staff on inclusive education"*, (URT, 2021, p 41). *"Instruct all higher learning institutions to provide training on inclusive education"* (URT, 2021, p 52).

Participants' responses and the government's commitments both substantiate the essence of investing in teachers' training as the key aspect for the successful

implementation of inclusive education for learners with ASD in elementary schools in Tanzania.

4.2.2.6 Community Awareness of Autism

The National Strategy for Inclusive Education in Tanzania (NSIE 2022-2026) has recommended increased priority on autism awareness among the community as a strategy to combat the stigma and negative stereotypes for individuals with the condition in the education system (URT, 2021b). In this study, the majority of the participants mentioned the need for continuous community awareness of autism spectrum disorder as one of the key factors in the successful implementation of inclusive education for learners with ASD in the elementary schools of Tanzania. Parents who participated in this study associated the difficulty in getting access to enrolment in schools for their children with ASD with the lack of awareness of ASD for teachers and school administrators. On this teacher 09 (from Giraffe school) commented:

> *"In our school, they are not stigmatised because we have provided awareness training to all children so that they can show love and support to their fellows who have special educational needs and support them when they want to go to the toilet. We have also provided training to other teachers who have not specialised in special education so that they can be in a position to support these students"* (Teacher 09).

While stressing the importance of community awareness of autism and the impact it has on the provision of educational support in schools. On the same issue, parent QR (who has a child with autism) narrated during the interview:

> *"First of all, the community is not aware of the autism condition. This makes it very difficult because there is no physical feature to distinguish a child with autism from other children. Physically, they*

look normal, and one cannot notice if they have any challenges. This makes it hard for teachers to support them because they do not have this knowledge" (Parent QR).

The findings indicate that autism awareness to the community, school administrators, teachers and all students is a solution against stigma, mislabelling, and sometimes bullying for these learners in inclusive elementary schools.

4.2.3 Systems and Structures Needed to Enhance Learning Outcomes for Children with Autism in Inclusive Pre-Primary and Primary Schools

When giving their opinions regarding the systems and structures needed in elementary schools to enhance the learning outcomes for children with ASD in inclusive schools, participants mentioned environmental, administration, pedagogical and other multidisciplinary services that need to be in place and, in some cases, strengthened. In this theme, the following five sub-themes emerged.

4.2.3.1 Quality assurance

The majority of the responses mentioned the need to have quality assurers who were trained in Inclusive and Special Education to ensure that the needs of learners with autism spectrum disorders and other Neurodevelopmental disabilities are addressed appropriately. This is in connection with parents' sentiment indicating that some privately owned schools still screen out learners with special educational needs such as autism spectrum disorders. They either put obstacles during enrolment or decline their admission after establishing that these learners have special educational needs (SEN). The findings of this study indicated that quality assurers visits to schools would help to ensure that learners with autism and other special needs are met in

schools. Also, they would help to establish if all schools that enrol learners with ASD have teachers who have relevant knowledge and training to cater for the needs of such learners. This was echoed during the interviews. On this, teacher 08 (from Rhino School) mentioned:

> *"Some of the educational quality assurers do not have knowledge and training on special education, and when they come to visit schools, they are not mindful of the needs of such learners. That is why we are not getting the proper support and adjustments that we require in the curriculum and assessments as we would like"* (Teacher 08).

Expounding on the essence of training educational quality assurers on inclusive education, particularly for learners with autism spectrum disorders, another respondent commented:

> *"Educational quality assurers are the key people to help establish the gaps in the implementation of inclusive education and suggest to schools and educational administrators measures to mitigate the gaps. However, it seems that many of them are not aware of the special education needs, especially autism spectrum disorders"* (Teacher 02).

Based on the findings, one can argue that there is a gap in the training in the area of special educational needs for educational quality assurers. It is expected that significant investment in their training and capacity building will pave a way towards successful inclusion of learners with autism spectrum disorders in elementary schools of Tanzania.

4.2.3.2 Individualised Education Plans (IEP)

Individualised Educational Plans (IEPs) have been mentioned as the key reasonable accommodation and modification currently used by schools to ensure that learners with ASD attain their learning outcomes. The IEP document is prepared in an

official meeting which comprises of parents, teachers, educational officers and other key specialists in SEN. With this document, schools indicate the diagnosis of the child, the established gaps, needed interventions, as well as the desired goals to be attained within a specified period. This document serves as a reference tool for the implementation, monitoring, and evaluation of the educational progress of learners with ASD in schools. On this aspect, teacher 05 (from Hippo School) explained during the interview:

> *"The main tool that helps us in teaching learners with autism is their IEPs, because in our classrooms we do have children who have diverse learning abilities and thus their learning speed. Some are far ahead and others are far behind. Each one of them will learn according to their individualised plan (IEP). There are children who take more than three months to learn just one thing, like a cup. They will spend three months learning only to recognise and mention a word "cup." This is because; these learners take longer to master the subject"* (Teacher 05).

Supporting the above statement and further explaining the role of the IEP in the inclusion classrooms, Teacher 01 (from Zebra School) echoed:

> *"So, we do assessments and afterwards prepare the Individualized Educational Plan for them. This means the child will now start attending the inclusion classroom, but will be provided with individualised attention and support in order to address the learning needs and developmental gaps of that particular child"* (Teacher 01).

In the same line, while respond to the question on the types of differentiations in the current curriculum, teacher 03 (From Elephant School in Mbeya) seconded that *"There are no changes in the curriculum content, but the only modification for them is the use of Individualized Education Plan, which enables them to learn according to their level and ability"* (Teacher 03). This statement explains the absence of differentiation in the curriculum content while at the same time affirms the use of Individualised education plan as a tool to differentiate learning and instructions for

learners with diverse abilities in inclusive schools.

Individualised educational plans (IEP) have been testified to be instrumental in enhancing the learning outcomes for learners with ASD in inclusive elementary schools. However, a gap between what teachers teach at school and the type of final examinations is mentioned. It is to be understood that the National Examinations administered by NECTA do not give room to differentiate assessments and thus make learners with ASD without formal recognition at different levels of education system in Tanzania. This is due to lack of differentiations and flexibility (individualised assessments) in the modality of the final examinations.

4.2.3.3 Sensory integration facilities

The findings of this study revealed that, learners with autism spectrum disorders do have sensory perception disorders which may lead them to behave in ways that can be interpreted as not normal in the school community. Some of the sensory needs of these learners may lead them to behave in a certain way repetitively as they seek the pleasure that they obtain from doing that particular activity. Sometimes, their behaviour may seem to be harmful or cause pain to them and others around the school. In order to address this issue, there is a need to ensure that learners with ASD are getting the sensory-diet that their brain needs to settle, focus and learn well in classrooms. Schools have established sensory breaks and sensory activities that are performed regularly within the school compound. With a particular focus on this, some participants commented:

> *"To help them develop attention, we have an exercise called rolling, whereby we roll a child in a certain heavy material and then we roll them to feed their sensory needs. We can do this for like 15 to 45*

minutes to help them calm down" (Teacher 11).

 In line with the foregoing, and stressing on the importance of sensory breaks for leaners with autism spectrum disorders in inclusive classrooms teacher 04 (from Zebra School in Iringa), explained the role of replacement behaviours as a tool and a strategy used to manage sensory seeking behaviours in inclusive classrooms.

> *"If the child is hitting their heads, then we must have a space in our timetable where we feed the sensory needs of the children, where we enable each child to feed their sensory needs by doing a relevant/alternative and safe sensory stimulation activity in a special room designed with instruments and materials for sensory stimulations"* (Teacher 04).

Throughout the interview the conversation on behaviour management came with strong feelings among teachers, as they explain the sensory needs of these learners and how they are working to make sure they are being managed appropriately. In the same note, teacher 05 from (Giraffe school in Tanga) flagged that:

> *"We find something else to stimulate them and keep their brain busy and engaged so that they won't engage the aggressive behaviour. We do what we call a behaviour replacement, because that is something that happens in their brain. For example, there are those who like to hit their heads on the wall. We do find an alternative activity to feed their brain with the same kind of stimulus they get by hitting their heads on the walls so that they won't do it. We do it regularly so that they won't get time to do the unwanted behaviour"* (Teacher 05).

According to the participants' responses, sensory integration activities were mentioned to help learners with ASD improve in their concentration and attention during other class activities. They were said to help them calm down when they felt irritated or upset as well as serve as brain stimulation exercises for learners with ASD and other children in the school. The benefits thereof were said contribute to the enhancement of the learning outcomes as they were enabling them to settle,

focus and learn together with others.

4.2.3.4 Multidisciplinary Supports in Schools

The findings indicated that, learners with ASD had other behaviour issues and other developmental challenges which required the additional interventions from experts who were coming from the medical and psychology fields. According to the participants' reports, some of these learners had significant delays in speech, language, and communication. They might require longer and extensive therapies from speech and language pathologists who were medical practitioners. Others would need the occupational therapy services for them to be able to learn activities of the daily living such as toileting, eating, dressing as well as walking and writing for those with multiple disabilities. Another key area mentioned to need intervention from experts in child or clinical psychology was the area of behaviour management. It was found that majority of teachers and parents reported to have been struggling to handle and manage behaviours at home and during school hours. The following were the participants' reactions concerning the need of multidisciplinary support to help learners with ASD in the school environment:

> *"Behaviour modification is like additional content from the curriculum. As teachers, we should focus on helping them to learn subject contents. Behaviour management and modification should get support from the skilled experts in behaviour such as behaviour psychologists or school psychologists"* (Teacher 13).

From the sentiments and feelings exhibited by the participants during the interview and backed up with the non-participant observation notes, the issue of behaviour management appeared to be something that needed immediate action and attention. This was revealed by teacher 02 (from Elephant School in Mbeya):

> *"There are some who beat others, bite others, throw stones and other items to people; even the teacher. If you are near them, they may end up beating you. All these need to be handled by the school psychologists and not, us, teachers"* (Teacher 02).

Agreeing to the voices above and stressing on the need of multidisciplinary support to address behaviour issues, during focus group discussion student H (who has autism) reported that "To help the teachers, there is a need to have more teachers, to have more nurses and an occupational therapist" (Student H).

Involvement of multidisciplinary team was mentioned to be important for the successful inclusion of learners with ASD. This was found to help teachers understand the basics of the interventions carried out to these learners and continue implementing them with ease and integrate some of the techniques during the classroom to help them in behaviour and classroom management.

4.2.3.5 Anti-Bullying Campaigns in Schools

One of the issues that the findings warned against regarding inclusion of learners with ASD was the presence of incidences of bullying these learners. This was due to their communication challenges, difficulties in social interactions and presence of stereotype behaviours which was making them easy target to bullies. In some incidences, they were reported to be subjected to name calling, mistreatments and severe corporal punishments from teachers, due to lack of understanding and mislabelling of their behaviours and learning difficulties shown by these learners. In relation to this student E (from Hippo School in Dar es Salaam) highlighted that *"Some people have bad behaviour, like bullying and fighting. I think fighting and bullying happens more in the inclusive schools"* (Student E).

The need for anti-bullying campaigns was also indicated as a provisional support needed for successful inclusion of learners with SEN, as it was categorically stated in the NSIE 2022-2026:

> *"In order to ensure respect for and value of diversity, all members of the learning community are welcomed equally. All learners must feel valued, respected, included, and listened to. Effective measures to prevent abuse and bullying should be put in place"* (URT, 2021, p. 41)

Measures to prevent abuse and bullying are a necessary environment needed to enhance learning outcomes for learners with ASD as well as to retain them in schools and reduce the drop-out rates of such learners.

4.2.4 Challenges Experienced by Educational Stakeholders in the Implementation of Inclusive Education for Learners with ASD

In this study, participants responded to questions about the challenges they were encountering in the implementation of inclusive education for learners with ASD in elementary schools. In their responses, participants mentioned rigid curriculum, lack of autism awareness among the community, prolonged denial of the condition among parents, as well as the high cost of quality education and therapies.

4.2.4.1 Rigid Curriculum

A significant challenge of Autism Inclusion was mentioned to be rigid curriculum and assessment methods. While responding to the question on the challenges facing educational stakeholders in autism inclusion, many participants mentioned the gap between policy and implementation. Although the government had made a significant move in the launch of the National Strategy for Inclusive Education (URT, 2017, 2021b), the information gap in the area of actual implementation of

inclusive education for learners with autism spectrum disorders in elementary schools was still existing . In voicing his concern in this regard, a special education teacher had these to say:

> *"Now, in essence, all schools are supposed to practise inclusion, but what is actually happening right now in schools is nothing like inclusion; it is just a mere integration. They are telling learners "Welcome, but you must change". The circular says that all children must be enrolled, but in actual sense, they say all children are allowed to come to school but they must change in order to fit into the system and not to change the system according to the needs of the child"* (Teacher 12).

In the same note, a concern was raised on how to handle the transitions of these learners from one level/grade to another, especially after they had successfully completed the three basic levels for special education. Through non-participant observations, the researcher found the presence of diversity of practices in relation to this. It was noted that there was no uniformity among schools when it came to transition and the existing strategies for learners with autism spectrum disorders. This was echoed during interviews where one teacher commented:

> *"In my opinion, I insist on the continuation in content from the three levels of special school up to standard seven, when they are expected to complete primary education. They should not jump from level three to standard four where they teach very difficult subjects which are not related with what they have been learning in the special education classes"* (Teacher 11).

It was found that lack of conformity in implementation was associated with lack of clear guidelines and stipulations in relation to inclusion of learners with autism spectrum disorders within the curriculum. This was opposed to other kinds of disabilities such as hearing impairments and visual impairments. With regard to this, one teacher commented:

"Lack of the clear guidelines, especially for learners with autism, makes teachers just use their own creativity to teach as there is no a guideline in the curriculum on how to teach them properly. Yes, we do get trainings but there is no specified curriculum for the learners with autism" (Teacher 10).

All these voices cumulatively point to the need to have a clearly documented way on how to teach learners with diverse abilities such as autism spectrum disorders using the curriculum that we have. The findings are pointing out the gap in the content modification and no documentation in the flexibility allowable within the curriculum in content, instruction and assessment across all levels in the elementary schools.

4.2.4.2 Lack of Autism Awareness among the Community

Majority of the participants mentioned the lack of autism awareness to be among the leading barriers for effective inclusion of learners with ASD in the elementary schools. This challenge has been associated with the fact that many people in Tanzania, just like in many African Countries, are not aware of Autism. It has been a common practice to associate the condition with superstitious beliefs and demonic spirits. Majority of the population, even among the elites, do not know the symptoms of autism; individuals with ASD cannot be identified by using physical characteristics. Lack of knowledge about autism spectrum disorders among teachers and school owners was mentioned by many participants as a challenge facing autism inclusion in Tanzanian schools. With connection to this, one special education teacher noted:

"Many teachers don't understand this condition and they do not know how to support a child with autism. They don't know which language to use in giving instructions and they end up using force which makes the child develop aggressive behaviours, such as hitting themselves and blocking their ears. They normally do not like noises, so when you rebuke them in a loud voice, you escalate their problem, and the

challenge becomes even worse. Thus, there are many challenges" (Teacher 06).

While responding to the question related to the challenges they were facing in enrolling their children in schools, the parent of a child with autism spectrum disorder explained how the issue of lack of knowledge about autism among school teachers and school owners made her suffer in her struggle to look for a school for her child with autism spectrum disorders who was then 17 years old of age. Recounting her experience, she commented:

> *"I have many challenges; the first one is that it is very difficult to get a school. Not every school teacher understands this condition (autism). I have tried to take my son to more than three schools but they did not take him. Some took him for a few days, and then they called to tell me they could no longer keep him. Thus, I had to take him away"* (Parent A).

Affirming the association between the lack of knowledge about autism spectrum disorders and the struggle it brings for parents to find schools for their children with autism spectrum disorders, parent G (who has a child with autism) highlighted during the interview:

> *"I have really struggled to find the right school for my child. He has been to many schools before we could get the right school. When he was young, many schools claimed that they could not handle his condition"* (Parent G).

This finding points to the fact that many people especially key stakeholders such as teachers and educational officials are still unaware of this condition.

4.2.4.3 Prolonged Denial of the Condition among Parents

Although the benefits of early diagnosis and early intervention to the positive milestone attainments for learners with autism spectrum disorders has been stressed,

the major obstacle to this realisation has been reported to be the prolonged denial of the condition by parents. Many of the participants mentioned that majority of the parents of children with autism spectrum disorder took long to accept that their children had medical conditions that could be diagnosed and be intervened. Since there are no physical features to distinguish a child with autism spectrum disorders from other "typically developing children", majority of the parents would assume that it was just a minor developmental delay and the child would outgrow it without intervention.

Consequently, they kept them at home. It was found that some parents kept their children at home to avoid public shame, while others kept them at home in the hope that with time, they would outgrow the symptoms. With a focus on this, during interviews, teacher 14 from Giraffe school in Tanga narrated:

> *"Another challenge is that, most of these learners, when they are brought to school; they do come from situations where they were just locked inside the houses. So, they come while they have not developed any speech. When they have developed some speech, they tend to communicate in a way that is different from us. They also come while they are not able to do the basic self-care such as going to toilet or eating by themselves. So, this type of pupils make teachers take a lot of time grooming them in the basic etiquettes because you will have to teach them the basic self-care skills before you start teaching them academics"* (Teacher 14).

4.2.4.4 High Cost of Education

When responding on the question about the challenges facing inclusive education in Tanzanian schools, majority of the participants mentioned the high cost of education as the main challenge. The high cost for education appeared to be more than just monetary one like paying school fees to get quality education in the well-resourced private schools. It was also mentioned in terms of the distance the parent and child

had to travel from home to where the school was where children with autism and their parents or guardians had to walk to school to and from every day (twice a day) due to unavailability of inclusive schools in the nearby areas. Teachers mentioned the high cost in terms of getting all the necessary materials that were needed for sensory integration as well as teaching and learning for these learners.

School administrators mentioned the high cost for education in terms of the required standards for teacher to child ratio for learners with autism spectrum disorders, and the required support staff in schools. This was observed to be a major challenge; thus, it resulted to large class sizes in public schools and high school fees in private schools. On this aspect, teacher 12 commented *"The teaching and learning materials are very expensive and they are not available in many places. Even if you advise them to use the locally available ones, it is still very costly"* (Teacher 12). The findings indicated that teachers are experiencing the burden of cost in preparing teaching and learning materials. However, looking deep into this matter of teaching and learning materials and backed up with the evidence from the non-participant observation notes, the issue appears to be more due to lack of exposure and skills to improvise and make teaching and learning materials from the available local materials, or recyclable items, rather than the issue of cost as it was mentioned by the participants.

On this aspect, parents of children with autism spectrum disorders who were attending public schools had these to say:

> *"The main challenge is the transport means. This school is very far from where we live. I do walk a long distance every day to bring him to school and then come back to take him home. It is not an easy task. That*

is why some parents just decide to keep their children with special needs at home. I do that just because I see the value in education for his future, but the distance to and from school is too long" (Parent M).

Another parent whose child had autism spectrum disorder and was attending a private school testified:

"Due to his learning difficulties, the school owner advised me to take him to a special school and by then I wasn't aware of any special school that would take my son. I was advised to take him to a certain school in Nairobi Kenya, but that wasn't an option for me. So, he stayed at home for some time without going to any school. I hired a part time teacher to teach him at home" (Parent P).

Listening to the voices of these parents, the message that comes across indicates that there was a significant challenge facing parents while making the decision to enrol their children with autism in school. Depending on the level of support that an individual child may require to be able to commute from home to school and back, it may serve as a barrier to access school. Some parents who were choosing to take their children to school were doing it at the cost of abandoning other duties such as economic activities so that they could be available to escort their children from home to school and back every day.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter discuss the findings of the study in relation to the research study's objectives. The discussion focuses on the educational support systems for learners with autism spectrum disorders (ASD) in elementary schools and it addresses five (5) key objective areas, which are: the provisional support stated in the key policy and legislative documents. The current implementation of inclusive education for learners with ASD in elementary schools based on the provisional statements derived from the key policy and legislative documents.

Systems and structures needed to enhance the learning outcomes for learners with ASD in elementary schools. This part also discusses the challenges experienced by the educational stakeholders in the implementation of inclusive education for learners with ASD in elementary schools of Tanzania. Lastly, the chapter exposes the framework for educational support systems for learners with autism spectrum disorders in elementary schools, which has been designed by the author based on the findings of this study.

5.2 Provisional Support for Learners with ASD in Inclusive Elementary Schools as Stated in the Key Policy and Legislative Documents

The study sought to assess the provisional support stated within the policy and legislative documents guiding inclusive education in Tanzania. The documentary review search was done thematically, involving the Education and Training Policy (ETP) of 2014, The Persons with Disabilities Act of 2010, The National

Examinations Council (NECTA) Examination guideline of 2016 and the National Strategy for Inclusive Education (NSIE) 2022-2026 (URT, 2021). In general, the findings indicated that, The Education and Training Policy (ETP) of 2014 had not categorically mentioned or address anything related to inclusive education, something which could be translated as a roadblock towards successful implementation of inclusive education.

The key documents that describe clearly and in detail about inclusive education is the Persons with Disability Act of 2010 and the National Strategy for Inclusive Education. Some gaps in the examinations regulations provisions have been discussed in this study. The findings established that; the examinations regulations of 2016 released by the National Examinations Council of Tanzania (NECTA), does not clearly stipulate the differentiations and accommodation provisions for learners with learning disabilities, Intellectual Impairments and Autism Spectrum Disorders. Detailed discussions of the findings under each policy and guideline are provided in the subsections below:

5.2.1 Education and Training Policy 2014

Findings of this study revealed that, the Education and Training Policy of 2014(The United Republic of Tanzania, 2014) which is the key document governing the implementation, directives, guidelines and resources allocation for education in Tanzania; does not specifically mention or acknowledge inclusive education. This same finding was established in the National Strategy of Inclusive Education of Tanzania (URT, 2021), where it was mentioned categorically that there was no mention of the word inclusive education in the entire Education and Training Policy

(ETP) document. This obvious act of omission done by the government of Tanzania, with regard to matters of social justice and the right to quality education for all, could be taken to mean different things by different people.

One could translate the absence of the word inclusive education in this policy document to mean that; the Ministry of Education does not give due weight and attention to the important ideology of inclusive education, and embracing the commitment to the provision of quality education for all (Action Aid, 2020). The commitment to ensure no one is left behind in education, could best be portrayed by having clear and concrete statements regarding inclusive education for learners with special educational needs and disabilities in the education and training policy (Kyambo, et al., 2023).

Despite the fact that the government of Tanzania has signed all the international documents regarding inclusive education for learners with special educational needs such as CDPR and Salamanca Statement, the government commitment is not reflected within the Education and Training Policy, which was drafted and launched in 2014 after all the conventions, had been ratified. Although the ETP, 2014 indicates the words "access" and "equity", which means it has slightly addressed issues of accessibility and removing barriers to education for all; yet; in order to address issues of marginalisation, discrimination and exclusion in education for learners with disabilities and special educational needs in the education and community, there is a need to have clear statements within the policy documents which direct resource allocations and actual implementation in Tanzania (Action Aid, 2020; Majoko, 2017; Mwakalinga, 2012; Possi & Milinga, 2017). It is essential

to have a clear statement within the policy stipulating the provision of education for learners with disabilities and special educational needs such as autism within the policy document.

While the situation is like this in Tanzania, a study conducted in the six small European Union (EU) states indicated best practices in clear stipulations in the policy documents from the countries such as Malta (Van Kessel et al., 2020), one of the small EU states where by provisions for learners with special educational needs such as autism spectrum disorders have been stated clearly, hence indicating the commitment of the government in providing early screening, assessments and educational intervention for such learners. A clear statement of provision in the policy document does not only show the commitment of the government in the provision of quality education for all learners, but it also serves as a road-map and a reminder for proper allocation of resources, clear implementation and monitoring and evaluation.

A clear policy statement, such as the one which appears in Portugal Education Policy has many positive benefits. One of it being the clear allocation of resources to address the key areas mentioned within the policy document. For example, it has been reported that 100% of learners with special education needs in Portugal are attending mainstream schools, with reportedly high success in educational outputs for all learners due to clear inclusive education statements that have been put in place by the Ministry of Education in Portugal (Alves et al., 2020). This success can be attributed to the effective implementation of inclusive education policies which have been well communicated within the policy by the Portuguese government. One

of the statements which appears in the Inclusive Education Policy Document in Portugal is the demand to close all special schools and transition some special schools to become resource centres for mainstream schools, something that has been implemented by 100%.

The finding of this current study contradicts with the framework for inclusive education put forth by the United Nations Education Social and Cultural Organisation (UNESCO), which indicates that, Inclusive Education Practice should be preceded with the clear policy and legislative directives (Hayes & Bulat, 2017). This suggests that, clear policy statements serve as the road-map for effective implementation. It was expected that; the policy would inform and guide on the content of teachers training courses, the number of teachers to student ratios in inclusive schools and the type of teachers' collaborations within inclusive classrooms. In that context, it is very important for the policy to highlight on the government strategies to screen, diagnose and place learners with autism spectrum disorders in the right schools as well as the kind of support and coordination for multidisciplinary team that are needed to support them in schools. It is within the policy document that the statements regarding the availability of Education Support Resources and Assessment Centres (ESRAC) across the country could have been indicated.

5.2.2 Persons with Disabilities Act, 2010

The results suggested that learners with special educational needs are entitled to the mandatory access to inclusive education and availability of related support services. The data indicated that learners with special educational needs have equal rights to admission to the public or private schools. It stresses on the mandatory access to

inclusive education. Speaking of the term "mandatory" one would assume that all learners with disabilities are entitled to the same educational opportunities and support regardless of their level and severity of disability. That, they are afforded with the right kinds of differentiations and reasonable accommodations in instructions and assessments that are appropriate to their diverse learning needs as indicated in the study conducted by Antoninis and others in a global monitoring report which highlighted on inclusive education in 2020.

However, the findings of the current study indicated the situation to be contrary to this provision. The common practice in the Tanzania education system has reflected a practice that favours certain types of disabilities over others. It has even indicated that some of the disabilities such as autism spectrum disorders and other related neurodevelopmental disorders are complex and difficult to manage within the education system. This finding is similar to the study conducted in Sweden by Bölte et al. in 2021 and Göransson, et al., (2011).

On the other hand, the persons with disabilities act of 2010 stresses the need for these learners to attend ordinary schools and insist that there should be reasonable accommodations indicated as the appropriate disability related support services are availed for such kind of learners. This finding affirms with the study done by the United Nations global monitoring for inclusive education (Antoninis, et al., 2020) which emphasises the fact that all learners, meaning literally "all" should be given equal access and relevant educational support to allow them to get the maximum benefit for their presence in schools.

The findings of the current study further established that teachers who teach learners with special learning needs such as autism spectrum disorders should be provided with appropriate, relevant and adequate knowledge on how to manage and support these learners within the normal or "mainstream" classrooms. This finding resonates with a study conducted in Greece (Kofidou, et al., 2023) where the essence of investing in teachers' training and continuous in-service training was indicated as critical for the success of inclusive education for learners with special educational needs in the mainstream schools. It was established within the findings of this study that investing in teachers' training enhances the provision of appropriate educational support for learners with autism spectrum disorders in elementary schools.

When teachers are well equipped on how to teach learners with diverse abilities and needs within the classrooms, it is associated with increased confidence and efficacy for teachers. Several scholars have affirmed this finding and explained further on how well trained teachers can serve as a catalyst for the successful inclusion of learners with autism spectrum disorders in elementary schools (Lindsay et al., 2014; Symes & Humphrey, 2011). As it has been substantiated in the Persons with disabilities Act 2010, Teachers' trainings equip them with skills and strategies they need to offer differentiated support, instructions and reasonable accommodation relevant to the diverse needs of learners with autism spectrum disorders.

5.2.3 NECTA Examination Guidelines, 2016

The results of this study indicated that, currently, in Tanzania, there are neither specified differentiated assessments nor any special provision during national examinations for learners with special educational needs such as autism, learning

disabilities and intellectual impairments. The data collected and analysed indicated no mention of any of these special needs in the categories of learners who require special examinations arrangements or differentiations, within the National Examination Guidelines for primary schools released by NECTA in 2016. While the situation is like this for learners with neurodevelopmental disabilities, a clear provision and differentiation with regard to learners with visual impairments and those whose disability slows down their writing speed has been stipulated for secondary school learners, within the National Examination guidelines for secondary schools, released by NECTA in 2021 (NECTA, 2021).

This finding resonates with studies (Egelund & Dyssegaard, 2019; Strogilos et al., 2017, 2020, 2021), whereby the need to have clearly stipulated provisions for differentiation in curriculum, instructions and assessments from early childhood education to primary and later secondary schools were substantiated. The current National Examination Guideline for primary schools has only indicated the category of an additional ten (10) minutes in all other subjects and twenty (20) minutes for mathematics for learners whose disabilities slow their writing speed. This limited provision reflects the level of awareness among key educational stakeholders of the presence and magnitude of diverse abilities in reading, writing, sensory and cognitive levels among primary school learners which is due to their naturally endowed conditions such as autism spectrum disorders, learning disabilities and other related neurodevelopmental disorders.

Reflecting on the diversity of the learning needs of learners in elementary schools, it was expected that the National Examination Guidelines document would indicate the

type of differentiations relevant to the needs of learners with autism spectrum disorders. This would include issues such as the introduction of oral examinations for learners whose disability limits their ability to write, provision for practical examinations and picture and video questions instead of written texts for learners with autism spectrum disorders. Also, it was expected to include provision for sensory breaks within the examination room for learners whose conditions would need them to have regular sensory and movements breaks (Bailey & Baker, 2020; Schmidt & Brown, 2015; Strogilos, et al., 2021).

The results of this study suggest the need to have clear stipulations within the authority documents to address the complex and varying needs of learners with autism spectrum disorders and other learning disabilities during summative assessments. It is argued here that there is a need to incorporate provisions for sensory processing disorders and other relevant differentiation in the content, level of difficulty as well as the individualised assessments necessary for these learners. The arguments presented here are consistent with Bölte et al. (2021) who conducted a study in Sweden. In their study, they highlighted the conditions around inclusive education for learners with neurodevelopmental disabilities. They mentioned the need to incorporate inclusive practices in teaching and assessments to address the diverse needs of learners with neurodevelopmental disabilities such as autism spectrum disorders.

5.2.4 National Strategy for Inclusive Education (NSIE 2022-2026)

The findings indicated that there was a level of commitment to the provision of inclusive education for learners with special educational needs stipulated in this

document. Among the key issues highlighted in the mission to strengthen the education system include awareness raising, advocacy, capacity building, policy review, infrastructure improvement and resource mobilisation. This is expected to enable learners with special education needs to participate effectively in inclusive education settings so as to reach their full potential. This is similar to the ten (10) items mentioned in the global monitoring report (Antoninis, et al., 2020) and another study on the initiative to keep children from dropping out of school by the Ministry of Education Science and Technology (MOEST) (2018).

In the two documents, the need to improve the school environments and support for learners with special educational needs has been stressed. Awareness raising and advocacy have appeared consistently throughout the findings of this study and many other studies on Autism Inclusion, particularly in African countries such as Tanzania. This can be backed up by the fact that autism spectrum disorder appears to be a new terminology to many people in Tanzania. This is mainly because; previously, the condition was being associated with witchcraft and demonic spirits, hence leading to stigma and discrimination for individuals with that condition (Manji, 2018b). It should be argued that majority of Tanzanians are yet to know the medical explanation behind the condition including the name of the condition. Hence, the need to invest in awareness raising , advocacy and capacity building has been affirmed by several scholars (Manji & Hogan, 2013; Manji, 2018a; Staker, 2016).

Resource mobilisation as indicated in NSIE can be translated to mean both monetary and human resources are needed to offer quality and appropriate educational support for learners with autism. This includes the presence of occupational therapists,

speech therapists and behavioural psychologists in schools as well as revival of the educational support, resource and assessment centres (ESRAC) in all regions and districts of Tanzania. This is clearly indicated within the NSIE so as to ensure timely assessment, diagnosis and proper placement of these learners in schools.

Based on the findings of this study, it is argued here that there is a need to address issues of inequality, social justice and human rights. This need is justified by the Social model of disability which speaks of the contribution of the social and educational environments in rendering people disabled. There is a need to develop an education system which continually adapts to the needs of individual learners, rather than the learners adapting to the education system. It is noteworthy that learners need to be included not only in the classroom but also in the "quality learning". This is in consistent with (Alves, et al., (2020), who propose three pillars of inclusive education.

These are access to, participation in, and achievement in education for all young children. The argument is also a reflection of the statement highlighted in the study conducted in Portugal by Cruz, et al., (2023), who encouraged the change in the focus of the law to be more of a pedagogical model. This is based on the idea that all students have learning potential as long as they have adequate support. This model suggests a shift in focus from 'what is wrong with the child?' to 'what does the child need to support their learning?'Cruz, et al., (2023). The current study calls for more individualised approaches to learning, assessments and the education system that is more learner-centred to ensure each learner's learning needs are met, and instructional methods are adjusted accordingly.

Based on the current findings, it is suggested here that there is a need for the education system to adapt according to the needs of the learners. This can be achieved through the use of the universal design of learning and incorporating reasonable accommodations and adaptations in the curriculum, instructions and the environment. These kinds of modification are what have been advocated for in the Social model of disability, as they serve to remove barriers and increase access and participation. This should be associated with the increase in access and participation of all learners in diverse needs.

This argument is in connection with the study conducted in Bulgaria by Scanlon, et al., (2022) which pointed out that; at a practical level, inclusive education means that the individual is no longer required to adapt to the environment. It is the environment that needs to adapt to and facilitate the specific needs of individuals with Special Educational Needs and Disabilities through structural, attitudinal and instructional adaptations and modifications. For learners with autism spectrum disorders, the modified structural and environment can be translated into availability of sensory stimulation materials and integration of sensory activities within the school calendar. This means the use of picture exchange communication system in communication and learning within the school compounds; it also means presence of a calm down corner and/or calm down room in case of sensory meltdowns during school hours.

When the curriculum and instructional methods are inclusive, they facilitate the environment to ensure that all learners succeed within the educational system based on their naturally endowed talents and abilities. It also ensures that the necessary educational support services are in place for all learners to get the most out of their

schooling experience.

5.3 Implementation of the Current Policy Provisions Regarding Learners with Autism in Elementary Schools

The results of this study indicated that, there is a gap in the implementation of inclusive education in Tanzania. This is due to the lack of Educational Support Resource and Assessment Centres (ESRAC) in most of the regions in Tanzania, with the exception of Dar-es- salaam and other major cities such as Mbeya. Paucity in the use of learning by doing teaching techniques, lack of differentiation in curriculum, instruction and assessments and paucity of knowledge on autism inclusion; have been hindering the implementation of inclusive education for learners with autism spectrum disorders in elementary schools.

A presence of emphasis of teaching the 21st century skills within the curriculum, a provision that gives room for the use of ICT in teaching and learning, incline into social emotional learning and collaboration skills; have all been mentioned. These are very helpful for learners with autism. Also, investing in community awareness with regard to autism spectrum condition was mentioned to contribute significantly towards the efforts to successfully include learners with autism spectrum disorders and offer appropriate educational support to them within the mainstream elementary schools. The detailed discussion of each element mentioned under this objective has been provided here below:

5.3.1 Educational Support Resource and Assessment Centres (ESRAC)

The findings of the current study indicated that Educational Support Resource and Assessment Centres (ESRAC) are important facilities needed in the provision of

educational support systems and effective inclusion of learners with autism in elementary schools. Within these centres, parents and children receive appropriate diagnosis and placement in schools within their areas of residences. This finding points towards the essence of early screening and proper placement as the key educational support system for successful inclusion of learners with special educational needs. The finding similar to this, was mentioned in the study conducted by Van Kessel et al. (2020) in the Baltic states. In this study, the need for early diagnosis and proper placement was mentioned; it was associated with timely enrolment in schools as well as positive outcomes in the attainment of pre-primary and primary school competencies for these learners.

The lack of facilities for early diagnosis, assessments and placements which are well resourced and full functioning in the remote regions of Tanzania has been mentioned to hinder the smooth process of including learners with special educational needs in schools. This situation has been linked to the lack of appropriate educational support systems for these learners in schools. Similar findings that highlighted the importance of early diagnosis and assessments and early placements were mentioned in a study conducted in Bulgaria (Kusters, et al., 2021). In this study, several initiatives done by the Ministry of Education in Bulgaria in 2013 to promote and support the inclusion of children with SEND at the pre-primary level were piloted. One of them was through creation of systems for the early identification of SEND and provision of early intervention.

The process of early identification involved specialist supports from psychologists, speech therapists, and resource teachers to develop an individual plan of inclusive

support for children identified as having additional educational needs. This initiative was realised through the Pre-School and School Education Act (2016), in Bulgaria. This initiative was mentioned to be pivotal in advancing inclusive education in Bulgaria. The participants' justification of the essence of early screening and identification of SEND has contributed to the similarities between this study and the one conducted in Bulgaria.

A similar finding t was observed in a study which was conducted in Malta, where the government made intentional efforts clearly stipulated in the education policy whereby a national early screening programme for autism was established. This is a simple means to help identify possible developmental delays, learning difficulties and/or education needs related to autism so that children can be supported before starting kindergarten. This early assessment national campaign involves a process that starts at the age of 18 months through the use of a professional form for screening developmental delays known as M-CHAT. This is a short questionnaire, responded to by parents or guardians to provide an indication of any risks relating to autism (Van Kessel, et al., 2020).

Strategies such as this, which offer children with early services for screening and identification, have been reported to contribute positively towards investment in early intervention and education placement thus ensuring positive output in attainment of independent skills and smooth community integration for learners with autism. ESRAC centres have been referred to as resource centres in other countries, whereby the experts in inclusive education for learners with autism and other learning disabilities are found.

It is also a place where the supports of the multidisciplinary team of experts such as occupational therapists, speech therapists and behavioural psychologists can be coordinated and accessed by teachers, parents and learners who need extra support. The similarity between this study and the one conducted in Malta is the fact that both have highlighted the central position that early screening and identifications plays in the early intervention of autism. Both studies also agree on the significance of ESRAC centres in the provision of support, trainings and learning materials for effective inclusion of learners with autism in elementary schools.

5.3.2 Learning by Doing

Findings of this study indicated the effectiveness of learning by doing teaching strategies for learners with autism spectrum disorders in the inclusive schools. This approach was mentioned to work very well with these learners, based on the fact that it is more participatory, learner-centred and requires an active involvement of the student. This finding is similar to studies conducted by Egelund and Dyssegaard (2019), Majoko (2017), Mosha (2012) and Yehualawork Malle (2016) which all highlighted the practices that favour the inclusion of learners with special educational needs such as autism spectrum disorders. They indicate that learners with special educational needs learn best in lessons that are delivered through activities-based learning and practical skills orientation.

This approach has been mentioned in the findings alongside other teaching strategies, such as learning through play, teaching by using songs and games as well as the role playing and learning in the natural environment. Similar findings were also mentioned by Hedges (2000), Strogilos, et al., (2020) and Zosh, et al., (2017),

who affirmed the effectiveness of learning by doing, and other practical and participatory teaching strategies for children with special educational needs. They claim that the methods are relevant, effective – as they keep the learners engaged throughout, help them to get the most out of the lesson, and prepare them for the world of work and employment in the future. This teaching strategy has also been mentioned to help learners stay focused in an activity and help them improve their concentration skills (Nkoma, 2019). This is in line with the stipulations within the Social Model of Disability which has informed this study.

This study has also pointed out the fact that, some teachers failed to employ learning by doing strategy in the inclusive classrooms. This was due to lack of creativity and excessive use of pen and pencil as well as lecture methods in teaching and learning. This finding is in line with the study conducted by Anglim et al. (2018) and Kennedy and Stewart (2012), which both affirmed the central position that teachers play in the preparation, choice of teaching strategy and teaching learners with autism, as critical for the successful learning of these learners in inclusive schools. Differentiated instructions which are tailored to the learning needs of an individual with autism are mentioned as one of the key educational support systems for effective inclusion of these learners within the mainstream schools in both studies.

5.3.3 Differentiated Curriculum, Instruction and Assessment

The findings of this study indicated that, the success of inclusive education for learners with autism spectrum disorders and other related disabilities is centred on the presence and application of differentiated curriculum, instruction and assessments. Although the presence of unofficial and undocumented curriculum and

instructions for learners with neurodevelopmental disabilities have been substantiated, there has been a consistent voice indicating the need for an up to date and officially documented curriculum (Msoroka, 2024). This should go together with differentiated continuous and summative assessments for these learners in the elementary schools.

This finding is similar to another study conducted in the secondary schools in Tanzania, where a lack of differentiation in curriculum, instructions and assessments was also mentioned (Philip, 2022). While a situation is like this in Tanzania, several studies conducted in Greece, indicated the availability of differentiated instructions, curriculum and assessments in the inclusive schools for learners with autism spectrum disorders and other related disabilities (Strogilos et al., 2017; 2020; 2021). The differentiation was mentioned to be in terms of number of teachers per class, taking the example of Greece's parallel support model whereby each inclusive class has two teachers, a special education teacher and a general education teacher.

The special education teacher focuses on the pedagogy of the entire class while the general education teacher focuses on the content of subjects for the entire class. Thus, both teachers are responsible for all kinds of learners within the classroom and they use their expertise to give appropriate educational support to all learners depending on their unique and diverse abilities. Introduction of team teaching or collaboration teaching among special education teachers and general education teachers is said to contribute to appropriate levels of support for learners with autism spectrum disorders, and substantiate the facts stipulated within the Social Model if Disability. This is due to the fact that both teachers can plan the lesson together and

agree on the level and type of differentiated instructions, content and assessments that each learner within the classroom may require in order to succeed in the education system.

Even though there are cross-country differences with regard to implementation and availability of the differentiated education, Tanzania can benefit from the lessons obtained from the study conducted in Slovenia. This study revealed a significant effort in this regard where from the year 2005, a policy which insisted on the non-discriminatory environment in education was developed. This ensured that all children had a place. Children with Special Educational Needs use a modified version of the mainstream curriculum that adapt to their needs. These adaptations are in the form of additional professional assistance, as well as adaptation of class size ranging between 4 and 12 pupils per class, depending on the severity of their conditions. Modified education programmes are made available for children with Special Educational Needs to use (Van Kessel et al., 2020). As we can deduct from the findings, the level and type of differentiations required for these learners encompass the quality of professional support available in inclusive schools. For this to happen, it is important to ensure we have small class sizes in the inclusive schools and manageable students to teachers' ration.

5.3.4 Introduction of the 21st Century Skills in the Curriculum

The findings of this study further mentioned the introduction and emphasis put on the skills such as ICT literacy, social and cultural awareness, and collaboration as important in the provision of educational support for learners with autism spectrum disorders. While it goes without saying that all learners need to learn these very

important skills, their introduction and emphasis on the curriculum serve as a critical intervention for learners with ASD who have significant gaps in communication, interactions and executive functioning. Based on the themes developed from the findings of this current study, three sub themes appeared under this category. These were social cultural awareness, ICT literacy and collaboration among learners.

Regarding social and cultural awareness, this study indicated that the curriculum of the Tanzanian elementary school has been geared towards grooming learners who respect diversity, embrace differences and celebrate individuality, in terms of cultural, religious, gender as well as diverse abilities. Due to this, schools have taken advantage of inclusion of learners with special education needs such as autism to instil the skills of social cultural awareness to all learners. This finding is similar to a study carried out by King-Sears and Strogilos (2020) which indicated the improvement in self-efficacy, school belongingness and social interactions for all learners as a result of the positive experience of inclusive education in elementary schools.

Another associated positive inclusive education experience was noted in the increased tolerance in diversity as well as improvement in social interactions and communications for learners with autism spectrum disorders (Kefallinou et al., 2020). Positive social interaction, as it appeared in the findings of this study, is linked to the development of the sense of belonging among learners with autism spectrum disorders. This ultimately leads to their improved social interactions as it removes tension and makes them feel like they are part of the community. This aspect has been correlated to the improvement in other learning domains for learners with autism, hence being mentioning among the key elements of educational support

system for learners with autism spectrum disorders in elementary schools.

Concerning the introduction and application of ICT literacy skills, the findings of this study indicated that learners with ASD preferred to learn through pictures and video. This was claimed to help them understand the concept better than if it were presented in texts only or through verbal instructions. This was found to motivate most of the schools involving learners with ASD to employ technology and digital devices in the teaching and learning process. This finding is similar to the findings reported in studies conducted by Hayes and Bulat (2017) and Reagan (2012) where by the use of digital technologies in teaching and learning for learners with autism spectrum disorders was mentioned to be an effective tool for their successful inclusion in the mainstream curriculum.

The use of technology as a support system for learners with autism spectrum disorders can also be reflected in the use of alternative communication. As an alternative communication, learners with autism spectrum disorders who have significant impairment in speech and language can use the assistive communication devices such as the Augmentative and Alternative Communication (AAC). AAC devices are designed to help individuals who have limited abilities to communicate like those with autism spectrum disorders thus making them be able to express themselves when they have difficulty with speech or language. These devices range from simple picture communication cards (such as those used in the picture exchange communication (PECS) to sophisticated electronic devices that produce speech.

Results of this study affirmed the benefits of group works, peer teaching and ability groups in teaching social interactions and communication skills for learners with ASD. This fact has been associated with the findings of other two studies which affirmed that learners with autism learn best from imitating their competent peers and happen best in an organised group activity (Mwakalinga, 2012; Thwala, 2019). Collaboration is an important social emotional skill for all learners, and in this study, it is indicated to be an effective tool used by inclusive schools to instil the skills of social interaction and communication to learners with autism spectrum disorders.

Collaboration in teaching and learning can happen through organised group activities such as when the teacher assigns activities among group members with the same ability to allow them to work in their own pace and level of understanding, or when they are mixed in groups of learners with different abilities so that those who are good in one area can support others who are struggling in that same area. This can also be carried out during teaching so that the teacher attends each group and give instructions and modify lesson content according to learners' abilities, learning styles, learning pace, needs and levels for each group. Collaboration, as a coordinated education support system for learners with autism, can also happen when teachers and other professionals offer one on one support and therapies for learners with autism spectrum disorders in inclusive elementary schools, whereby the student directs the learning activity while guided by the teacher or therapist.

5.3.5 Teachers Training on Autism Inclusion

The demand for training to all teachers on inclusive education, and specifically for learners with neurodevelopmental disorders such as autism, appeared strongly in the

findings of this study. Participants mentioned that adequate preparations for teachers to handle inclusive classrooms through pre-service and in-service trainings is a key factor for successful implementation of inclusive education for learners with autism spectrum disorders in the mainstream elementary schools. The reasons behind this fact include adequate knowledge and skills on inclusive education.

Also, having right skills on managing learners with autism helps to build confidence and self-efficacy of teachers to teach inclusive classrooms, it gives them enough skills required to manage behaviour issues as well as to offer appropriate educational support according to the diverse needs of these learners. This finding agrees with studies by Pappas et al.(2018), Symes and Humphrey (2011) and Zigler et al. (2017). All these studies mentioned teachers training on autism inclusion as a number one factor which facilitates effective implementation of inclusive education for learners with autism spectrum disorders in the mainstream elementary schools.

Adequate training on autism inclusion for teachers is associated with improved capacity to differentiate instruction, provide reasonable accommodations as well as enhance their ability to understand, interpret, manage and modify the behaviours of learners with autism within the classroom. All these are essential educational support expected from teachers to learners with autism to facilitate and enhance their positive learning experiences in schools.

Another finding in the current study highlighted the gap in the current curriculum for special education teachers' training colleges, where the lack of content regarding neurodevelopmental disorders such as autism was observed. A similar finding was

observed in studies conducted by King-Sears et al. (2021), Laiser (2023), Litton et al. (2017), Philip (2022), and Schmidt and Brown (2015) whereby the content of knowledge on autism and neurodevelopmental disorders was mentioned to be absent and in other cases missing completely in the colleges and universities preparing special education teachers.

Lack of in-service training for teachers was also observed in this study. This is associated with poor implementation of inclusive education for learners with autism in elementary schools in Tanzania. Similar finding was also reported by Edward (2015) through which lack of in-service training for teachers was mentioned to be among the challenges that hinder effective implementation of inclusive education for learners with autism in Tanzania. It is worth noting that, adequate knowledge and regular training to teachers on autism inclusion and support in schools is paramount in order to enhance their learning outcomes and ensure their positive experiences in schools.

5.3.6 Community Awareness on Autism

The findings of this study suggest that community awareness on autism is among the key factors necessary for effective implementation of inclusive education for learners with autism spectrum disorders. Community awareness on autism spectrum disorders has been associated with reduced negative attitudes around the condition to all of the key stakeholders and key players in the education provision. Such key stakeholders include the general public, school administrators, school owners and other staff working within the school environment.

The findings of the current study further indicated that community awareness on autism would reduce stigma around the condition and hence facilitate smooth and effective implementation of inclusive education for learners with autism spectrum disorders in elementary schools of Tanzania. This finding agrees with the finding of the studies conducted by Kusters, et al., (2021), Lindsay, et al., (2014), Symes & Humphrey (2011) whereby the factor of community awareness on autism was found to be associated with the increased acceptance of these learners in schools. It was also found to be correlated with improved level of support and understanding and accommodation extended to these learners within the inclusive schools.

5.4 Systems and Structures Needed to Enhance the Learning Outcomes for Learners with ASD in Elementary Schools

While looking at the systems and structures needed to enhance the learning outcomes for learners with autism spectrum disorders, the findings of this study highlighted several issues. These included: the need to have educational-quality assurers trained on inclusive education and the application of the individualised education plans. Other structures included presence of sensory integration facilities in schools, availability of multidisciplinary support such as speech therapists, occupational therapists and school-psychologists within the school. Also, leveraging on anti-bullying campaigns in schools as well as strong parental involvements in teaching and learning process.

5.4.1 Quality Assurance

Regarding quality assurance, the findings of this study indicated that the presence of educational-quality assurers trained on inclusive education for learners with autism

and other neurodevelopmental disorders, may help to ensure that the education of these learners is given priority and delivered according to the required standard. Regular visits of well-trained educational-quality assurers in schools which offer inclusive education for learners with autism is associated with the increased enrolment and school-retention for these learners. It is expected that such quality assurers will ensure that the presence of learners with autism within schools will be well monitored and their effective participation in the learning process will be well evaluated.

The findings further stipulated that, quality assurers may help to verify that teachers who teach these learners have received adequate training to enable them perform their job well. They are also expected to give appropriate advice with regard to effective teaching and learning processes for these learners in the inclusive elementary schools. These findings agree with another study conducted in Tanzania, whereby the lack of educational-quality assurers trained on inclusive education was associated with the poor implementation of inclusive education for learners with disabilities and special educational needs (Action Aid, et al., 2020).

5.4.2 Individualised Education Plans

The findings of this study mentioned the individualised education plan (IEP) as an important system which, once used effectively, can help to enhance the learning outcomes for learners with autism spectrum disorder in inclusive elementary school. By using the IEP, schools can have records of the actual diagnosis of the individual child, the established developmental and learning gaps of the learner, the required interventions, as well as the desired goals to be attained within a specified period of

time (Laiser, 2023). The findings further revealed that the IEP preparations meetings is the appropriate system to establish, maintain and evaluate collaboration between teachers, parents and other multidisciplinary specialists such as speech therapists, occupational therapists and school-psychologists who were all working together to offers support to the learner.

These finding echoes with several other studies conducted within and outside Tanzania. For instance, a study conducted by Scanlon, et al., (2022) mentioned the system which was created in Bulgaria to enhance learning outcomes for learners with special educational needs. In this system, a multidisciplinary team works to develop an individualised education plan, and its implementation enabled Bulgaria to achieve inclusive education by 78% in the 2020/2021 school year for pre-primary education, with learners starting school at the age of three years. Another study conducted by Kurth and Mastergorge (2015) also discussed the effectiveness of individualised educational plans in the enhancement and realisation of educational goals for learners with mild-learning capabilities.

5.4.3 Sensory Integration Facilities

The findings of this study indicated that the presence of sensory integration facilities within the inclusive elementary schools is one of the key structures needed in order to enhance the learning outcomes for learners with autism spectrum disorders. This was explained due to its usefulness in addressing and responding to the sensory perceptions disorders common to these learners as well as feeding the sensory diets of some of them. It was ascertained that, there were some who required a certain level of sensory stimulation in a regular basis so that they could be able to settle,

focus, concentrate and learn well in classrooms. The findings further suggest that the presence of sensory integration facilities will enhance the learning outcomes of learners with autism by retaining them in schools and help them focus and learn during lessons. This finding was also highlighted in other studies, whereby the importance of sensory integration facilities and adherence to sensory breaks within the school timetable were emphasised as a critical structure for successful inclusion of these learners in the mainstream schools (Bailey & Baker, 2020; Cermak, et al., 2010).

5.4.4 Multidisciplinary Supports in Schools

The findings of this study indicated that, learners with ASD had other developmental gaps/challenges and behavioural issues which would require additional interventions from experts coming from medical and psychology fields. According to the findings, some learners with ASD were reported to have significant delays in speech, language and communication which would require longer and extensive therapy services from speech and language pathologists to be able to gain mastery in those areas (Waddington & Reed, 2017). The findings further substantiated that, other learners with ASD would need continuous occupational therapy services to be able to learn and master the basic functional literacy skills and activities of daily living (Missiuna et al., n.d.).

Another key area which, according to the findings, was shown to require multidisciplinary intervention in school was the area of behaviour management. Behaviour modification and behaviour management support from behavioural psychologists was mentioned to be an important structure needed in order to ensure

learners with autism get the most out of their schooling experiences (Pulse & Sims, 2023). The need for a coordinated multidisciplinary support system in schools has appeared in other studies as well. For instance, Pulse and Sims (2023) and Tragoulia and Strogilos, (2013) also indicated the need for a multidisciplinary support system in schools in order to enhance the learning outcomes for learners with autism spectrum disorders.

5.4.5 Anti-bullying Campaigns in Schools

The findings of this study highlighted the risk of learners with autism being bullied by others due to their lack of communication, social interactions and stereotype behaviours. This necessitates the need to have regular anti-bullying campaigns within the school to ensure that inclusive schools become safe and friendly enough for all learners regardless of their diverse abilities and differences. This will ultimately lead to enhanced learning outcomes for learners with autism as it will help ease the social anxiety, help them to relax and therefore make them concentrate on their studies while at school.

Findings similar to these were reported in studies conducted by Humphrey and Symes (2010), Maïano, et al. (2016), and Humphrey (2008) whereby various measures were indicated for combating bullying among learners with autism in inclusive elementary schools. These measures included regular autism awareness among students and the entire school community. Another anti-bullying strategy is the intentional peer contact times between individuals with autism and other learners within the classroom so as to establish friendships and enhance understanding of the condition among peers.

5.4.6 Strong Parental Involvement in Teaching and Learning Process

With reference to the need for strong parental involvement in teaching and learning process, the findings substantiated that strong parental involvement in the teaching and learning of their children is critical in order in enhancing learning outcomes for these learners. The findings further established that, other learners with autism would require a close level of support and monitoring. Also, some of the ASD interventions and support needed for independent living are continuous and lifelong. Evidence from the findings indicated that, parents who showed a high level of engagement and commitment in supporting their children in the teaching and learning process at school and home reaped benefits of positive progress and enhanced learning outcomes for their children (D'Elia, et al., 2014).

This finding is similar to several other studies which stressed the need for close parent-teacher relationship and strong parental support for the positive outcome of schooling experience for learners with autism spectrum disorders (D'Elia et al., 2014; Drabble, 2020; Mwakalinga, 2012; Wong et al., 2014; Yirmiya et al., 1992). Paseka and Schwab (2020) indicated that, the majority of parents of children with special educational needs such as autism were found to experience high levels of stress and depression due to the demanding responsibility of raising a child with special needs, coupled with other family and work-related duties.

It is argued here that stress can sometimes hinder parents' effective participation in the educational programme, including giving appropriate support to their children. It is due to this reason that another study by Msangi (2017) highlighted the need to have organised support systems and psychosocial support services for parents of

children with autism spectrum disorders, so as to ensure their mental well-being. This is due to the reason that parents work tirelessly to ensure that they provide appropriate educational support to their children with autism spectrum disorders.

5.5 Challenges Experienced by Educational Stakeholders in the Implementation of Inclusive Education for Learners with ASD in Elementary Schools

While looking for the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism spectrum disorders in elementary schools, the findings of this study revealed four themes. These themes were rigid curriculum and assessment methods, lack of autism awareness among the community, prolonged denial of the condition among parents and the high cost of education in private schools, coupled with transportation costs to public schools.

5.5.1 Rigid Curriculum and Assessment Methods

The findings of this study pointed out that most of the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism spectrum disorders are due to curriculum rigidity and lack of differentiations in assessment methods. According to the findings, the curriculum of Tanzania is said to be more of knowledge-based. There is little room for accommodations and adaptations to address the complex needs of learners with neurodevelopmental disorders such as autism spectrum disorders, learning disabilities and intellectual impairments.

The findings further suggest that, the issue of rigid curriculum is coupled with the lack of differentiated assessments for these kinds of learners, specifically during

final exit examinations which are administered by the National Examinations Council of Tanzania (NECTA), This situation limits the potentials of learners with autism to be exposed hence limit their participation and success as explained by the Social Model of Disability. According to the findings, lack of differentiation and accommodations in curriculum and assessments in Tanzania makes teachers sceptical of including learners with autism and other neurodevelopmental disorders in the mainstream classrooms. This is a result of the fear that they cannot cope with the curriculum and assessment methods. In this study, most of the teachers indicated that they were normally teaching learners so that they could pass the final examination.

Consequently, the majority of learners with neurodevelopmental disorders were not getting the right support to enable them to qualify to sit for the final national examinations as no teacher was found to bother making any efforts to include them because they were sure that at the end, most of these learners would normally not sit or pass the final/national examinations. The findings of this study are similar to another study carried out by Kofidou, et al., (2023), who assessed teachers' perceptions and attitudes on teaching learners with special educational needs in inclusive classrooms. In Kofidou's study, the issue of rigid curriculum and knowledge-based curriculum and assessments, coupled with lack of differentiation in curriculum and assessments, was also mentioned.

The issue of rigid curriculum and lack of differentiations in curriculum and assessment methods can be translated to mean a lack of accessibility in curriculum and assessments, a fact which is exposed by the social model of disability guiding

this study. As it was highlighted earlier in the findings of this study, the three pillars of inclusive education are access to, participation in, and achievement (Alves et al., 2020). Based on the findings of this study, one can argue that still the Tanzanian curriculum and assessment methods are not accessible to learners with special learning needs (Msoroka, 2024). This hinders learners with autism spectrum disorder to participate fully in the learning and assessments and ultimately hamper them of the opportunity to achieve to the maximum out of the schooling experience.

5.5.2 Lack of Autism Awareness among the Community

As observed in the findings chapter, this study found a lack of autism awareness among the community as the leading challenge hindering effective implementation of inclusive education for learners with autism spectrum disorders in the mainstream inclusive schools. There was a consistent voice throughout the findings of this study, thus highlighting this situation and associating it with other barriers to the successful inclusion of learners with ASD. Lack of autism awareness among the community was reflected in the level of awareness of the condition among key policy makers, key decision makers in education, as well as school teachers. Since there is no distinguishing physical feature to tell if an individual has autism, majority of these learners have been mislabelled in schools and communities.

Mislabelling of the condition is associated with mistreatments in schools and homes (Manji & Hogan, 2013). As observed in this study, traditionally, majority of people do associate the ASD condition with witchcrafts and demonic spirits. Arguably, this usually leads to stigma and lack of appropriate support for these learners in schools and homes (Manji, 2018b). According to the findings of the current study, lack of

autism awareness among school administrators in the public schools and school owners of private schools causes a lot of trouble to parents while looking for schools to enrol their children with ASD.

Similar findings have been reported in studies conducted by Edward (2015), Emam and Farrell (2009), Majoko (2018), Mantzikos, et al., (2017) and Sally, et al., (2013). The consistent voices about the challenge of lack of autism awareness in the community were also mentioned in the National Strategy for Inclusive Education(URT, 2021b) where it was mentioned among several factors thwarting the efforts towards effective implementation of inclusive education for learners with special educational needs in Tanzania. These findings speak of the central position that autism awareness plays in the provision of appropriate educational support for these learners in schools.

5.5.3 Prolonged Denial of the Condition among Parents

The findings of this study established that, while literatures have affirmed the effectiveness of early diagnosis and early intervention in the improvement of the autism symptoms and realisation of positive outcomes later in life; the major obstacle in this was highlighted in the findings to be prolonged denial of the condition among parents. The findings further expounded that, majority of the parents of children with autism spectrum disorders were taking too k long to accept that their children had such a condition, but which has medical explanation and therefore their children can receive timely intervention thus making them lead an independent life.

As it was explained earlier in this study, the fact that there is no physical characteristic to tell if a child has autism, has led majority of parents to assume that it is just a minor developmental delay and the child will outgrow it without any intervention and hence they keep the child at home. It was indicated in the findings that, some parents were keeping their child at home in order to avoid public shame, while others were keeping them at home in hoping that with time, they would outgrow the symptoms. Whatever the reason a parent may have to keep their child locked at home, the findings indicated that, this situation has made many learners with autism spectrum disorders not to get access to school and some to drop out of school.

This challenge is standing as the roadblock to the realisation of the Sustainable Development Goal number four (4) which intends to ensure that "no one is left behind in education". Findings similar to these were also reported in other studies conducted by Antoninis et al.(2020), Bissaker (2023), Msangi (2017) and Paseka and Schwab (2020), through which a need to have early psychosocial support extended to parents who have children with special educational needs was proposed as a way to help them accept the condition and proactively look for proper solutions early enough in order to help their children get appropriate support and schooling to enable them to live an independent and productive life.

5.5.4 High Cost of Education

Regarding the above sub-theme, the findings indicated that, provision of quality education for learners with autism spectrum disorders is a costly endeavour. The findings further explained that, the high cost for education is more than that

involving the direct costs of school fees and educational supplies; it extends to time and distance that some parents have to take in order to support the child to attend school. It was further illustrated by the findings that, some learners with autism required a significant level of support in order to be able to commute from home to school and back, and this required the parents to escort them. This demand was translated into time that the parent would have to spend taking the child to and from school, even if the child was attending to a public school which offers free-education.

It was revealed by the findings that, some inclusive schools were located very far from where the children were living, and this was requiring parent to use some means of transport to commute from home to school and back. As it was narrated by the findings, this was a very costly undertaking for some of parents with children who had ASD. The findings further indicated that, some of the private schools offering quality education for learners with autism had very high school fees, and this was found to be a barrier for parents who would wish to give their children best education but they could not afford to.

School administrators also explained the fact that getting appropriate materials required for the successful inclusion of these learners was not easy and some of them were very expensive. This could be explained by the fact that some of these learners required a one on one support in education, which would be translated into extra costs in hiring assistant teachers and maintaining small class sizes to facilitate their smooth inclusion in the mainstream classes. This finding contradicts the study by Antoninis, et al., (2020) which indicated that, inclusive education is more affordable

because it helps to concentrate all the resources in one place for all learners, than to divide them by establishing special schools for some few learners.

The reason behind this contradiction can be explained by the fact that, it is indeed more cost-effective to include learners with autism in the existing mainstream schools, than allocating resources to build special schools exclusively for these learners. Hence, it is economically wise to use the same mainstream schools that have been existing and use little resources to improve some structures and human resources to accommodate learners with autism, rather than starting building special schools for these learners from scratch.

5.6 The Framework for Educational Support System for Learners with Autism in Inclusive Elementary Schools

One of the objectives of this study was to develop a framework for educational support systems for learners with autism in inclusive elementary schools. Data obtained from participants' interviews, field observations and documentary search and literature review pointed out several elements that could be used to develop educational support system for learners with autism spectrum disorder (ASD). The findings obtained from objective number three (3) of the current study which looked at the systems and structures needed to enhance the learning outcomes for learners with autism in elementary school, informed the design of this framework. After thorough analysis of the findings and literature review, the researcher proposes a framework that she calls "Autism Inclusion Model (AIM)." This framework is expected to generate solution pathways for autism inclusion in the elementary schools.

The framework integrates and takes into consideration of all the solution pathways and best-practices that have been suggested in the literatures. The framework stipulates the philosophical assumptions guiding the effective inclusion of learners with autism spectrum disorders; it exposes all the important components needed to be in place as well as the key elements guiding autism inclusion in elementary schools. It serves as a guide to educational stakeholders on how to go about providing quality educational support and inclusion for learners with autism in elementary schools. Development of this framework took into consideration all the contextual factors, hence reflecting the realities of the Tanzanian Education System.

The proposed Autism Inclusion Model (AIM) is influenced by the social mode of disability which was coined by the disabled academic Mike Oliver in 1983 and the Social Cultural Theory (SCT) which was authored by the renowned Russian Psychologists Levy Vygotsky in the early 20th Century. The social model of disability exposes the fact that an individuals' state of impairment is contributed to partly by the environment they are in, and does not entirely depend on their mental, sensory or physical makeup. This points us to the fact that, once we adjust our environment and put in place appropriate accommodations and adaptations needed to address the sensory and cognitive needs of learners with autism, we will be able to enhance their learning outcomes in inclusive schools.

The Social Cultural Theory on the other hand, speaks about the role of scaffolding and social interaction in helping learners attain learning and reach the zone of proximal development. The SCT substantiates the need to leverage all the necessary support systems as well as social integration in order to help learners achieve the

milestones that would have been impossible for them to attain without the support. Building up from the lessons obtained from the Social Model of Disability and the Social Cultural theories, and the inputs from the findings, the researcher derived five philosophical assumptions guiding the Autism Inclusion Model (AIM). The philosophical assumptions point out to curriculum and environmental adjustments that are prerequisite for effective inclusion of learners with autism; the detailed explanations of each philosophical assumption are indicated here below:

1. Early Diagnosis and Intervention: Scientific Evidence has established that, the brain development occurs at the maximum capacity during the period between 0 to 5 years of development. This is according to the theory of Neuroplasticity (Doidge, n.d.). Scholars have suggested that, early identification of autism which can happen during infancy enables the intervention programmes to start early, tapping to the potential of the brain development during early years of development(Atun-Einy et al., 2013). This has been associated with attainment of the desired milestones in communication, social interaction and behaviour modification early in life.

2. Sensory Accommodation: As it was flagged in the findings of this study, his addresses the needs for schools to have sensory materials and allocate time for sensory integration activities, and sensory breaks during normal school hours, and also during examinations. It also includes the need for calm down rooms or calm down corners in schools so that learners with autism can go to in the incidences of sensory meltdowns.

3. Learners' centred approaches: This came clearly from the finding of this study and it includes one to one support and teaching, Individualised

Education Plans, peer learning, collaboration learning, group activities, and hands-on activities including learning by doing approaches.

4. Differentiated Curriculum: As it was highlighted in the findings of this study, this involves all the modifications which are necessary for effective learning and academic success of learners with autism. It includes team teaching, co-teaching practices, reduced content and differentiated instructions, oral assessments, visual aids in communication and instructions, inclusive teaching methods, hands-on teaching and assessments instead of pen and paper practices. It also includes use of real objects, pictures and videos in teaching and examinations, instead of written texts.

   Differentiated curriculum also suggests for flexibility in the primary school enrolment age for learners with autism as well as number of years it takes for a learner to graduate from one level to another. It also includes introduction of intervention classes or resource rooms where learners with autism can go to receive additional instructions, one on one support and extra teaching. Ability grouping also can be carried out, whereby learners are divided according to their ability levels and receive instructions in the separate small groups. In this aspect, a teacher can adjust and modify the lesson content, the teaching methodology and the speed of teaching to reflect the needs and learning styles and levels of learners in each group.

5. Parents support and involvement: Parents involvement in education is one of the key factors in the success of any educational programme. As it was highlighted in the findings of this study, for learners with autism, parents' involvement is critical for the success of any intervention planned for them.

This is due to the fact that, whatever is conducted by the therapists and teachers at school is supposed to continue at home in the same manner. Also, scholars have indicated that many parents with children with special needs experience high level of stress due to inability to handle their children condition and the interplay with their other roles and responsibilities at home and in their work places. This calls for psychosocial support and intervention programmes targeting parents, in order to address their mental well-being and help them take care of their children with special needs.

The key factor of the Autism Inclusion Model (AIM) is Differentiation. Differentiation refers to the varied approaches proactively planned to address the diverse learners' learning needs. It includes what learners need to learn, how they will learn it, and how they will show what they have learned in order to increase the likelihood of every student to learn and succeed in the education system. Differentiation is associated with responsive teaching and assessments with the goal to ensure curriculum access for all learners. The Framework of Autism Inclusion Model is built up with several components, which highlight the administrational provisions which act as lever necessary for effective inclusion of learners with autism. These components as they were identified in the findings are:

1. Teachers' Capacity Building

2. Multidisciplinary collaborations

3. Quality Assurance

The design process of the Autism Inclusion Model (AIM) came about through rigorous development process which took place throughout the data collection and

data analysis period of this study. This period covered 14 months, from October 2022 to December 2023, when the researcher conducted in-depth literature review, conducted field observation, consulted experts in autism inclusion as well as piloting different aspects of the framework in one of the schools involved in this study.

In the process of designing the Autism Inclusion Model (AIM), the author was informed by the existing challenges in the inclusion of learners with autism in elementary school. The evidence-based practices highlighted in the Kasprzak (2020) framework guided the author to develop a framework that suits the contextual realities of the education system in Tanzania. All the key components and philosophical assumptions were derived from the informed practices from literatures, Kasprzak (2020) framework and research findings of this study and experts' opinions due to their significance in autism inclusion as explained below:

Educational support

In the context of this framework, support is regarded as any and all activities that enhance the ability of a school system to respond to diverse learning needs of the children with autism. Such support assumes the availability of multidisciplinary professionals including well trained teachers, speech therapists, occupational therapists and behavioural psychologists. It also goes further to include sensory accommodation, differentiation in curriculum and instructions, and learners' centred approaches. Justified by the principles of neuroplasticity, which explains that there is maximum brain development happening to children between the ages of 0 to 5, this framework included the philosophical assumption of early diagnosis and early intervention.

This is to stress the need for stakeholders to invest in programmes and activities that will enable children to be screened for autism and neurodevelopmental disorders as early as during infancy, and the interventions to begin immediately after that. This approach is expected to produce desired outcomes early and help children with autism attain the developmental milestones early and achieve the independence level desired in areas of communication, social interaction and behaviour modification while they are still young. Figure 2 below summarises the Autism Inclusion Model (AIM) and the interplay between each component as it has been designed by the researcher.

Clear and Enabling Policies

As it has been referred to in this framework, policy indicates all authority documents such as acts, policies, guidelines, circulars and all governmental directives issued in writings to guide the provision and the implementation of education within the country. While the Education and Training policy remains the main authority, this framework assumes that the Education and Training Policy will clearly indicate within the main policy documents the governments' commitments and strategies to ensure early screening and diagnosis of autism all over the country.

To indicate the measures to ensure the provision of quality and equitable inclusive education for learners with autism and access at all levels of education, from kindergarten to tertiary levels of education; clear stipulations also entail the directives within the policy document on the teachers' collaborations model within the inclusive classrooms as well as the required number of teachers to student ratio for schools which accommodate learners with autism. It is the expectation of this

framework that, clear policy stipulations will directly be reflected in the government allocations of resources and funds to ensure smooth implementation. It also guarantees that there will be measures put in place for monitoring and evaluation to ensure that there is no gap between policy and practice at all levels of the education system.
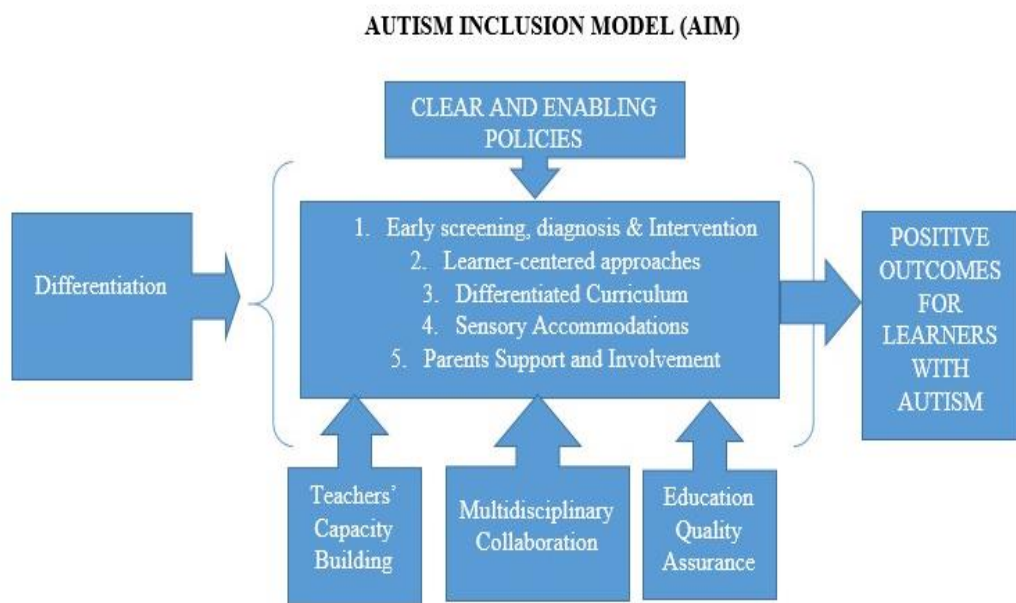

Figure 5.1: Framework for Educational Support Systems for Learners with Autism (Autism Inclusion Model)

The implementation of this framework, Autism Inclusion Model (AIM), may face several challenges. Some of these challenges include a paucity of experts in the field of autism in Tanzania. The shortage of occupational therapist who can work in schools, the shortage of speech and language pathologists, as well as a lack of trained school psychologists in many schools in Tanzania, might hinder the effective implementation of this framework. However, the literatures and experts consulted were of the opinion that, there can be several mechanisms in place to train para-professionals in all those fields that do not have enough personnel. These para-professionals can work under the supervision and continuous coaching from the

trained professionals. Another limitation is that the large number of learners with neurodevelopmental disabilities and autism in public schools may not favour the practice of one-on-one educational support, which is essential for the attainment of academic skills for learners with autism.

5.7 Chapter Summary

This chapter started with the introduction to the chapter and then straight highlighted the discussion of the findings of this study. The discussion was based on the findings presented in chapter four (4) of this study, whereby the findings obtained under all the objectives of this study were discussed. Also, the chapter proposes the framework for educational support systems for learners with autism spectrum disorders in elementary schools as designed by the researcher. The discussion of the findings started with the first objective through which the discussed the provisional support stipulated in the key authority/policy documents such as the education and training policy of 2014, Persons with Disabilities Act of 2010, Examination Guidelines provided by NECTA for primary schools in 2016, and the National Strategy for Inclusive Education (NSIE) of 2021.

The discussions for objective number two of this study focused on the implementation of the policy provisions stated in the first objective in the provision of inclusive education for learners with autism in Tanzania. The discussion focused on the areas that have been well implemented as well as established the gaps that still exist in the implementation process. Discussion for the third objective highlighted on the systems and structures needed to enhance the learning outcomes for learners with autism in the elementary schools.

Based on the findings, this part expounds on the key adjustments and modifications needed in the curriculum, personnel, and environment to ensure effective inclusion of learners with autism in elementary schools. Furthermore, the chapter discussed the challenges experienced by educational stakeholders in the inclusion of learners with autism which was based on the findings from the objective number four of this study.

Finally, the chapter concluded by exposing the framework for educational support system, which is called Autism Inclusion Model (AIM) that has been designed by the author of this study. The building blocks of this framework and the details therein were generated from the literatures and the findings of this study as well as the opinion of experts on autism inclusion and were piloted for the period of 14 months in one of the schools that participated in this study. The figure which shows the components of the framework was included in this chapter.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter gives the summary of the entire study and conclusions drawn from the study findings. Recommendations are also put forward and stipulated areas where further research should focus. The current study's main goal was to assess the educational support systems for learners with autism spectrum disorder within the inclusive elementary schools in Tanzania. Specifically, the study highlighted the legislative provisions stipulated within the key educational documents in Tanzania, and followed up on the implementation of inclusive education for these learners in elementary schools.

Systems and structures needed to enhance learning outcomes for learners with autism spectrum disorders in schools were expounded and the challenges hindering the effective implementation of inclusive education were exposed. The study put forth a framework for the educational support systems for learners with autism in Tanzania that is the Autism Inclusion Model (AIM). Finally, the study concluded by highlighting the key issue pertaining to the successful inclusion of learners with autism in inclusive elementary schools as well as putting forth recommendations for action and further research area.

6.2 Summary of the Study

Scholars and educational stakeholders have been working for many decades to address issues and challenges that are pertinent to the education system. One of those issue was mentioned to be persistent exclusion and seclusion from the education

system for learners with autism spectrum disorders. Recent studies have pointed out that children with autism benefit much by being included in the mainstream schools, in an arrangement that is now commonly known as "Inclusive Education". The enactment of several United Nations Policies paved a way for the institutionalisation of the key findings and recommendations brought forth by the scholars and educational stakeholders. One among those idea is the access to quality, equitable and inclusive education for learners with special education needs (SEND) and disabilities.

The Salamanca Statement, article 24 of the Convention on the rights of persons with disabilities (CRPD) and the sustainable development goal number 4 (SDG 4), are among the United Nations Policies which have addressed the issue of inclusive education and brought about the paradigm shift in education. Tanzania is among the countries which have ratified these conventions, and demonstrated her commitment through the enactment of the Persons with Disability Act of 2010, which stipulates clearly that; persons with disabilities in all ages and gender shall have the same rights to education, training in inclusive setting and the benefits of research like other citizens. This was later followed by the amendments of the education and training policy in 2014 and the launch of the current Inclusive Education Policy (NSIE) in 2021, to guide and direct matters of access to quality, equitable and inclusive education for all in Tanzania.

In light of the above background, this study sought to assess the current educational support systems and establish a model for appropriate educational support for learners with autism spectrum disorders in elementary schools in Tanzania. The

study was guided by five objectives which were as follows:

i. To assess the provisional support for children with autism in inclusive schools as stated in the current educational policy.

ii. To examine the implementation of the current educational policy regarding children with autism in elementary schools.

iii. To identify the systems and structures needed to enhance learning outcomes for children with autism in inclusive elementary schools.

iv. To highlight the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism in elementary schools.

v. To formulate the appropriate model for educational support systems for learners with autism in inclusive elementary schools.

The main research question which guided this research was; what is the relevant model/framework for effective inclusion of children with autism spectrum disorders within the mainstream elementary schools in Tanzania? The study was guided by five subsidiary questions which were:

i. What is the current education and training policy provision with regard to the needs of children with autism in inclusive elementary schools?

ii. How does the implementation practice in inclusive schools reflect the intention and substance of the policy on children with autism?

iii. What are the appropriate support systems and structures needed in order to enhance learning outcomes for children with autism spectrum disorders in the Tanzanian inclusive schools?

iv.   What are the challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism in Tanzania?

v.   What is the best educational model to support children with autism spectrum disorders in Tanzania's inclusive elementary schools?

The study employed the interpretivist research paradigm to conduct qualitative research. Multiple case study design was used in this study, and data were collected by using semi-structured interviews, non-participant observation, Focus Group Discussions and Documentary Review. Data were analysed thematically aided by Nvivo 12 computer software. Based on the above objectives and subsidiary research questions, the findings of this study indicated that, there is no mention of the word "inclusive education" in the entire Education and Training Policy of 2014 in Tanzania. There is a mention of the word access and equity a few times within the document. This situation may have implication in the type of measures, or provisions in place to safe guard its effective implementation in schools. On the other hand, the Persons with Disabilities Act of 2010 indicates that provision of inclusive education for learners with special education needs is mandatory and the availability of related support services entitled to them.

The National Strategy for Inclusive Education (NSIE) appeared to be an authority document with regard to education provision for learners with special education needs and disabilities. Within it, there are provisions with regard to reasonable accommodations for learners with autism, differentiated instructions and assessments. There are also advocacy statements so that learners with diverse learning abilities such as those with autism spectrum disorders can get the

appropriate educational support. Among the policy documents reviewed, the National Examinations Council of Tanzania (NECTA), Examination regulations guideline for primary schools released in 2016 was also scrutinised in this study. The findings indicated a lack of provision for differentiations and reasonable accommodations in terms of content modification, examination administrations and sensory accommodation for learners with autism spectrum disorders in the national examinations.

While analysing the implementation of the current education policy regarding children with autism in elementary schools in Tanzania, the findings indicated that there was a provisional statement regarding the establishment of Educational Resource and Assessment Centres (ESRAC) in the NSIE. However, currently, there is one national ESRAC centre which is functional, and a few others in the major cities of Mbeya and Dodoma. The findings suggest for establishment of these centres in all districts and regions in Tanzania to enable the implementation of early screening, identification and intervention for learners with autism.

Other provisions that are being implemented is learning by doing teaching approaches, differentiated curriculum, instruction and assessments and the introduction of the 21st century skills of collaboration, communication, problem solving and ICT literacy. In all these, a significant gap in implementation was observed in most of the public schools. Other provisional statements indicated in the policy documents but not being fully implemented includes teachers training on autism inclusion and community awareness on autism.

The findings under the objective highlighted the systems and structures needed to enhance learning outcomes for children with autism in inclusive elementary schools. These are educational quality assurance, individualised education plans (IEP), sensory integration facilities including scheduled sensory breaks and sensory accommodation in schools. The need for multidisciplinary support teams in schools was also mentioned here, whereby the need for occupational therapists, speech therapists and behavioural psychologists who work together with teachers in schools was stressed. The need to invest on anti-bullying campaigns was identified as a key system and structure to enhance the positive learning environment for learners with autism, whereby leveraging on the autism awareness to other students and entire school community was suggested.

Challenges experienced by educational stakeholders in the implementation of inclusive education for learners with autism were the fourth objective of this study. The findings indicated that rigid curriculum and assessment methods, lack of autism awareness among the community, prolonged denial of the condition among parents and high cost of education, were the main challenges facing educational stakeholders in the implementation of inclusive education to learners with autism.

In the effort to address these challenges as well as to provide a road map of solution pathways for offering educational support systems to learners with autism spectrum disorders in elementary schools in Tanzania, the researcher came up with the framework for appropriate support for autism inclusion in elementary schools. This framework is named Autism Inclusion Model (AIM). The framework has been informed by the theoretical as well as empirical literatures, findings of this study and

was also piloted for 14 months in one school that participated in this study. The framework is informed by the social model of disability and the social cultural theory. It is built upon the five philosophical assumptions which are: early diagnosis and intervention, sensory accommodation, learner centred approaches, differentiated curriculum and parents support and involvement.

The key factor of the autism inclusion model (AIM) is differentiation. It is also backed up by three main components which are: teachers' capacity building, multidisciplinary collaboration and education quality assurance. The framework for appropriate educational support systems for learners with autism in elementary schools is preceded by the assumption that there are clear and enabling policies guiding the implementation of inclusive education for learners with autism in elementary schools.

6.3 Conclusions

Guided by the specified objectives' findings, it is concluded that provision of inclusive education for learners with autism spectrum disorders and other neurodevelopmental disabilities in elementary schools of Tanzania still has a long way to go. This has been reflected by the fact that up to this moment, there are no clear policy statements regarding inclusive education provision for learners with special educational needs within the Education and Training Policy (ETP) of 2014. The current National Strategy for Inclusive Education (NSIE) of 2021 is taken as the authority documents with regard to matters of inclusive education for learners with autism in Tanzania. It goes without saying that, effective implementation of inclusive education for learners with autism spectrum disorders was supposed to be

preceded by clear policy provision. It is expected that the Education and Training Policy of 2014 and the Education Act are the key authority documents which show the roadmap of implementation, resource allocation as well as monitoring and evaluation of the critical provisions such as inclusive education in the education system.

Regarding the implementation of inclusive education for learners with autism spectrum disorders in elementary schools, this study concludes that there is a gap in the availability of early diagnosis, assessments and proper placement services in regions other than Dar es Salaam, Mbeya and Dodoma. Currently, the only available and functional Educational Support Resource and Assessment Centre (ESRAC) is the national one, located at Uhuru Inclusive Primary School in Dar es Salaam. Another functional ESRAC is located at Mwenge Inclusive Primary School in Mbeya Region. However, Tanzania has more than 26 regions, and all these have children and parents who would have benefited from the early diagnosis, assessments and proper placement for successful inclusion in pre-primary and primary school.

With regard to systems and structures needed to enhance learning outcomes for learners with autism spectrum disorders in inclusive pre-primary and primary schools in Tanzania, several conclusions have been made. First, there is a need to have educational-quality assurers who are trained on inclusive education. Also, there is a need to deploy individualised educational plans in the teaching and learning of these learners. These learners need sensory integration facilities in schools, multidisciplinary support teams in schools and anti-bullying campaigns.

Investing in the training and deployment of education-quality assurers will ensure a smooth and quality implementation of inclusive education in elementary schools. To realise this, quality assurers are responsible to visit schools and assess the quality of education offered to the learners. Having them trained in matters of inclusive education will help to safeguard the interests of learners with special educational needs in elementary schools. They will ensure that quality education inputs are well evaluated and monitored throughout the schooling periods. This will ensure that inclusive education is delivered according to standards, adhere to the evidence-based practices and suggest for improvements whenever necessary.

Regarding the challenges experienced by educational stakeholders in the implementation of inclusive education, this study concludes that rigid curriculum, and undifferentiated assessment methods are among the challenges that limit access and equity for some learners with special educational needs in education. If we are to include everyone in the education system, there is a need to move from a knowledge-based and academic-only curriculum and incorporate a skills-focused and strengths-based approach curriculum.

Assessments methods also need to be differentiated enough to give room for diversity of learners to access the final national examinations. This can be done through individualised assessments, strengths-based assessments, and incorporation of creative skills and gifts such as music, football and other talent-based skills in the final national examinations assessments. This will ensure proper and formal exits and transitions into the job market as well as further studies. National examination questions should also be inclusive, by addressing the communication preferences and

abilities of all learners. This can be done by having oral examinations for learners with severe reading and writing disabilities, assessments by doing or hands-on-practical examinations instead of pen and paper assessments methods. Also, the use of picture and videos instead of written texts would be very helpful particularly for visual and auditory learners. The need for sensory breaks and sensory movements between the examination sessions would also be an appropriate educational support system for learners with autism spectrum disorders.

The framework for appropriate educational support systems for learners with autism spectrum disorders in elementary schools has put forth the solution pathways for appropriate educational support systems for learners with autism in elementary schools in Tanzania. It embeds within itself   the findings obtained from this study, literatures, the Kasprzak (2020) framework and the practical observations during the 14 months that it was piloted. Within it, there are lessons to help improve the provision of educational support systems for learners with autism spectrum disorders in Tanzania. These include the need to have clear and enabling policies on autism inclusion in Tanzania.

The essence of incorporating differentiation at all levels of education systems as well as the need for continuous training and capacity building to teachers, and educational quality assurance, find realisation within these aspects. Within this framework, the focus to invest in early diagnosis and intervention, the need for sensory accommodation in schools, employing learner centred approaches, differentiated curriculum as well as designing programmes for psychosocial support for parents of learners with special education needs, will enable them to be well and actively

involved in the learning programme of their children.

Conclusively, the journey towards inclusive education for learners with special education needs such as autism spectrum disorders has been complex to many countries. This is because; inclusive education is a new philosophy and many educational stakeholders are still in the process of comprehending what it really means. Also, autism spectrum disorder has gotten the attention of people in recent years, but many have not taken time to consider its implication in the education of learners who have that condition. Having these in mind, it is prudent to conclude that, Tanzania is also in the learning stage when it comes to inclusive education for learners with autism spectrum disorders in the mainstream education system. Therefore, provision of educational support systems for learners with autism spectrum disorders in elementary schools need to be preceded by clear policy and legislative statements, before they can be actualised in the effective implementation of inclusive education for learners with autism spectrum disorders in elementary schools.

6.4 Recommendations

Based on the study's findings and conclusions, various recommendations can be made for the provision of educational support systems for learners with autism spectrum disorders in inclusive elementary schools. Some recommendations have been made for policy makers and other stakeholders' engagement; also some have been put forth for further research. The details thereof are included in the subsequent sections.

6.4.1 Recommendations for Action

This study found high demand for early identification, diagnosis and proper placement of learners with special educational needs (SEN) in schools. Due to the shortage of ESRAC centres, people travel far (from remote areas and far regions to Dar es Salaam) for the service. Thus, this study recommends that ESRAC centres in all regions should be revived, resourced with relevant assessment and diagnostic materials as well as be equipped with enough qualified multidisciplinary professionals to ensure that all learners who need the service can get it in time and within their areas of localities.

Due to shortage of trained teachers with knowledge of inclusive education, this study recommends for the teachers' training colleges and universities to include a content on inclusive education and make it a mandatory course for all teachers who undertake initial teachers' training. This is to ensure that all teachers are prepared to teach all learners. Also, plans should be put in place to train all in-service teachers on inclusive education especially for learners with autism and neurodevelopmental disorders. Programmes for regular professional development trainings in this regard should also be put in place.

In this study, most education quality assurers were found to lack knowledge of inclusive education, especially for learners with ASD. Thus, this study recommends training for inclusive education for learners with neurodevelopmental disabilities such as autism spectrum disorders to education quality assurers. This is expected to ensure quality implementation, monitoring and suggestions for continuous improvements in the provision of inclusive education for learners with special

educational needs, such as autism spectrum disorders.

6.4.2 Recommendations for Policy

Since the Education and Training Policy (ETP) as a key document in the guidance and resource allocations for education matters in Tanzania does not openly focus on ASD, it is recommended that a policy review be made to incorporate matters pertaining to ASD students.

It is also prudent to consider having a stand-alone inclusive education Act and inclusive education policy to streamline all issues regarding the provision and implementation of inclusive education in these key documents. The policy should clearly indicate the measure to be taken to ensure quality, access and equity in inclusive education for all learners, by categorically mentioning the names of the disabilities and special education needs it intends to address and their statutory provisions under each category.

There is a need to have clear policy stipulations on the means of early identification and placements for learners with special learning needs (SEN) such as autism spectrum disorders and other neurodevelopmental disabilities. This can be done through national campaigns for early identifications, early interventions and school placements. This would be made possible through the revival and establishment of the ESRAC centres in every local region authority and districts of Tanzania. This will facilitate smooth implementation of inclusive education for learners with autism spectrum disorders and support the provision of appropriate educational support systems for learners with autism in inclusive pre-primary and primary schools of Tanzania.

Due to the curriculum rigidity observed; it is recommended that implementation of a flexible curriculum which can be differentiated according to the diverse needs of learners who have special educational needs, be put in place. This should be coupled with provision for differentiated methods of assessments particularly in the final summative and exit examinations which are normally provided by NECTA. This will ensure accessibility and equity in examination and assessments for learners with special educational needs such as autism and other neurodevelopmental disorders.

6.4.3 Recommendations for Further Studies

Based on the findings of this study, the following are the areas recommended for further studies:

i. This study focused on educational support systems for learners with autism spectrum disorders (ASD) within inclusive settings. Thus, future studies can assess further the type of teachers' collaboration models effective for inclusive classrooms for learners with autism spectrum disorders.

ii. The Autism Inclusion Model (AIM), which has been put forth in this study, needs to be further implemented in the form of action research or intervention research. The research should cover a large sample and a broader area to substantiate its practicability and its effectiveness in the provision of education support systems for learners with autism spectrum disorders in elementary schools in Tanzania.

iii. The current qualitative study was limited to only five regions with only seven schools. A future quantitative study is recommended to include a broader sample to get broader understanding of the subject matter.

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APPENDICES

Appendix 1: Interview Guide for Teachers

1. Are you aware of any MoEVT policy related with inclusive education for learners with autism? If yes, what is it?

2. In your opinion, in what ways has the current education and training policy made it possible for learners with autism to be included in elementary schools?

3. Are you aware of any mechanisms that have been proposed by the policy to ensure maximum participation of learners with diverse needs such as autism in elementary schools?

4. How does the school ensure the participation of learners with diverse needs such as autism?

5. What kinds of reasonable accommodations are there in the curriculum and pedagogy to address the needs of learners with diverse needs such as autism?

6. What mechanisms are in place to ensure that learners with diverse needs such as autism are successfully completing the basic education?

7. How many children with autism are there in your school?

8. What criteria do you use to enrol a child with autism in the mainstream (inclusion) classes?

9. What do you do to those children whose severity doesn't allow them to be included in the mainstream classes?

10. What are the strategies you use in your school to ensure that learners with autism attain their educational goals?

11. In your opinion, what do you think needs to be done in order to effectively

include learners with autism in elementary schools?

12. What structures (school entry competences and completion levels, exit assessments and transition plan), are there for learners with autism in inclusive schools?

13. What structures (school entry competences and completion levels, exit assessments and transition plan), do you think need to be considered for learners with autism in inclusive schools?

14. What system (formal, informal and non-formal) do you think is relevant for learners with autism and why do you think so?

Appendix 2: Narrative Prompts for Students with and without ASD

1. Do you think the current environment in your school is sufficient enough to accommodate the needs of learners with autism?

2. What areas do you think need to be worked on in order to effectively include learners with autism in the elementary schools?

3. Can you mention one area that you think schools need to improve in order for learners with autism to attain their educational goals?

4. What else do you think schools and government should do in order to provide better education for learners with autism in inclusive schools?

5. What other services do you think a student with autism should be provided with in order to attain his/her educational goals?

6. What is your feeling concerning having learners with autism in your mainstream classes?

7. What is your feeling concerning attending a class with other typically developing peers?

Appendix 3: Interview Questions for Parents

1. In your opinion, what conditions need to be in place in order to make schools friendlier and more inclusive to learners with autism?

2. How easy/hard was it for you to find the right school for your child who has autism compared to other typically developing children?

3. What areas do you think the school and community should put more emphasis on to ensure effective inclusion of learners with autism in elementary schools?

4. Which kind of support do you think learners with autism do require in order to be well included in elementary schools?

5. Who else do you think needs to be done in order to ensure that learners with autism are getting the support that they need in schools?

Appendix 4: Observation Checklist

1. Learning environments for learners with autism as reflected in the;

    g) School environment

    h) Curriculum

    i) Pedagogy

    j) Individualised Education Plans (IEP)

    k) Assessments

    l) Transitions from one level to another

    m) Extracurricular activities

2. Interaction between learners with autism and the teachers, other support staff/ therapists, parents and other children around the school.

3. Special support for learners with autism within school, at home and around the community (on the way from home to school and back)

Appendix 5: Research Clearance Letters (Five Regions)

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/ PG201902764   19th October, 2022

Regional Administrative Secretary,
Mbeya Region,
P.O Box 754,
MBEYA

Dear Regional Administrative Secretary,

RE: <u>RESEARCH CLEARANCE FOR MS MIRIAM LOIVOTOKI LAISER, REG NO:</u>
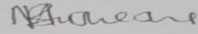<u>PG201902764</u>

2.   The Open University of Tanzania was established by an Act of Parliament No. 17
of 1992, which became operational on the 1st March 1993 by public notice No.55 in the
official Gazette. The Act was however replaced by the Open University of Tanzania
Charter of 2005, which became operational on 1st January 2007. In line with the Charter,
the Open University of Tanzania mission is to generate and apply knowledge through
research.

3.   To facilitate and to simplify research process therefore, the act empowers the Vice
Chancellor of the Open University of Tanzania to issue research clearance, on behalf of
the Government of Tanzania and Tanzania Commission for Science and Technology, to
both its staff and students who are doing research in Tanzania. With this brief
background, the purpose of this letter is to introduce to you **Ms. Miriam Loivotoki
Laiser, Reg. No: PG201902764)** pursuing **(PhD)**. We here by grant this clearance to
conduct a research titled **"Assessing Educational Support Systems for Children with
Autism Spectrum Disorders (ASD) within Inclusive Settings in Selected Regions in
Tanzania"**. She will collect her data at Child Support Tanzania in Mbeya Region from
October 2022 to April, 2023.

4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

For: VICE CHANCELLOR

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/ PG201902764

19ᵗʰ October, 2022

Regional Administrative Secretary,
Iringa Region,
P.O Box 858,
IRINGA.

Dear Regional Administrative Secretary,

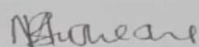RE: **RESEARCH CLEARANCE FOR MS MIRIAM LOIVOTOKI LAISER, REG NO:**
PG201902764

2.   The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1ˢᵗMarch 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1ˢᵗJanuary 2007.In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

3.   To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Ms. Miriam Loivotoki Laiser, Reg. No: PG201902764)** pursuing **(PhD)**. We here by grant this clearance to conduct a research titled **"Assessing Educational Support Systems for Children with Autism Spectrum Disorders (ASD) within Inclusive Settings in Selected Regions in Tanzania"**. She will collect her data at Kipera Primary School in Iringa Region from October 2022 to April, 2023.

4.   In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

For: VICE CHANCELLOR

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/ PG201902764   19ᵗʰ October, 2022

Regional Administrative Secretary,

Dar es salaam Region,

P.O Box 5429,

DAR ES SALAAM.

Dear Regional Administrative Secretary,

RE: RESEARCH CLEARANCE FOR MS MIRIAM LOIVOTOKI LAISER, REG NO: PG201902764

2.   The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1ˢᵗMarch 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1ˢᵗJanuary 2007.In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.
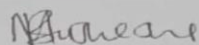
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4.   In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

For: VICE CHANCELLOR

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/ PG201902764

19th October, 2022

Regional Administrative Secretary,

Dodoma Region,

P.O Box 914,

DODOMA.

Dear Regional Administrative Secretary,

RE: <u>RESEARCH CLEARANCE FOR MS MIRIAM LOIVOTOKI LAISER, REG NO:</u>
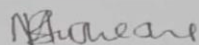<u>PG201902764</u>

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nepkelewn
10/11/22 Maspala ya RAS

4.   In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

For: VICE CHANCELLOR

THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

THE OPEN UNIVERSITY OF TANZANIA

Ref. No OUT/ PG201902764   19th October, 2022

Regional Administrative Secretary,

Tanga Region,

P.O Box 5095,

TANGA.

Dear Regional Administrative Secretary,

RE: RESEARCH CLEARANCE FOR MS MIRIAM LOIVOTOKI LAISER, REG NO: PG201902764

2.   The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

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4. In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam. Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours sincerely,

THE OPEN UNIVERSITY OF TANZANIA

Prof. Magreth S.Bushesha

For: VICE CHANCELLOR

Appendix 6: Research Permits (5 Regions)

MBEYA

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI MBEYA

Unapojibu tafadhari taja
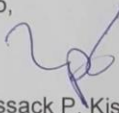
Kumb.Na. MCC/R.50/1/VOL.XXV/170   Tarehe: 22/11/2022

Afisa Elimu Msingi Jiji,,
Halmashauri ya Jiji la Mbeya,
S.L.P 149,
MBEYA.

YAH: KIBALI CHA KUFANYA UTAFITI

Tafadhali husika na somo hilo hapo juu.

2.   Mtajwa hapo juu ni Mwanachuo kutoka katika Chuo Kikuu huria cha Tanzania ameruhusiwa kufanya utafiti katika mada inayohusu *"Assessing Educational Support Systems for Children with Autism Spectrum Disorders (ADS) within Inclusive Setting in setting in Selected Regions in Tanzania"* utafiti huo utafanyika ndani ya Halmashauri ya Jiji la Mbeya kuanzia tarehe 28/11/2022 na kumalizika tarehe 30/4/2023.

3.   Halmashauri ya Jiji la Mbeya haitahusika na gharama zozote kwa kipindi chote ambacho Mwanachuo huyo atakuwa anafanya utafiti wake. Aidha katika kipindi chote atakachokuwa anafanya utafiti Mwanachuo atapaswa kuzingatia Sheria, Kanuni na Taratibu zote zinazosimamia uadilifu katika tafiti.

4.   Naomba apatiwe ushirikiano,

Issack P. Kissaka
**KNY: MKURUGENZI WA JIJI
MBEYA**

Nakala: 1.   Mkuu wa Chuo,
                         Chuo Kikuu huria cha Tanzania
                         S.L.P 23409
                         DAR ES SALAAM

                  2.   Mwanachuo   : Ms. Miriam Loivotoki Laiser

Ofisi Kuu ya Halmashauri ya Jiji, Mtaa wa Soko Kuu, S.L.P 149, Mbeya, Simu: +255 25 2502372,
Nukushi:+255 25 2502488,Barua pepe:cd@mbeyacc.go.tz,Tovuti:www.mbeyacc.go.tz

IRINGA

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

IRINGA REGION:

Regional Commissioner's Office.
4 Road of Pawaga, Gangilonga,
P.O. Box 858,
51108 IRINGA.
Tele:2702021/2702715

FAX:2702082
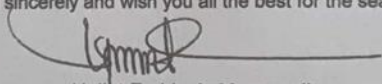For Reply please quote:

Ref.No.DA.255/265/01/12   07th November, 2022

District Executive Director,
Iringa District Council,
P.O.Box 108,
IRINGA.

_DEO (S)_
DEO (P)
Accord necessary assistance.
09/11/22

RE: A PERMIT FOR Ms.MIRIAM LOIVOTOKI LAISER, THE BONAFIDE STUDENT OF OPEN UNIVERSITY OF TANZANIA TO CONDUCT RESEARCH IN YOUR COUNCIL.

      Please refer the heading above

2.   I hereby inform you that the aforementioned parties have been granted a permit by the Regional Administrative Secretary to conduct research in your area of jurisdiction namely Council.

3.   The title of her research is "Assessing Educational Support Systems for Children with Autism Spectrum Disorders (ASD) within Inclusive Settings in Selected Regions in Tanzania ". She will collect her data at Kipera Primary School in Iringa Region.

4.   I therefore ask you to be forthcoming and kind enough by availing her with any needful support which is within your reach in order to make this noble task a reality and a great Success.

5.   I beg to remain yours sincerely and wish you all the best for the season.

Hajjat Farida A. Mwasumilwe
FOR:REGIONAL ADMINISTRATIVE SECRETARY

CC The Open University of Tanzania,
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY.
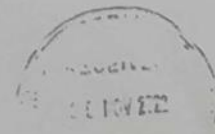
DAR ES SALAAM

JAMHURI YA MUANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

MKOA WA DAR ES SALAAM
Anwani ya Simu:
Simu:2203156/2203158/286371
Barua pepe ras@dsm.go.tz

Unapojibu Tafadhali taja:

Kumb. Na. EA.260/307/02B/74

OFISI YA MKUU WA MKOA,
3 Barabara ya Rashidi Kawawa
S.L.P 5429,
12880 DAR ES SALAAM.

16 Novemba, 2022.

Mkurugenzi wa Manispaa,
Halmashauri ya Manispaa Kinondoni,
S. L. P 31902,
Dar es Salaam.

Yah: **KUMTAMBULISHA BI. MIRIAM LOIVOTOKI LAISER KUFANYA UTAFITI**

Tafadhali husika na somo tajwa hapo juu.

2.   Ofisi ya Mkuu wa Mkoa wa Dar es Salaam imepokea barua **Kumb. Na. OUT/PG/201902764 ya tarehe 19 Oktoba, 2022** kutoka Chuo Kikuu Huria ikimtambulisha na kumuombea kibali cha utafiti Bi. Miriam Loivotoki Laiser katika Halmashauri yako.

3.   Mwanafunzi huyu anafanya utafiti kuhusu *''Assessing Educational Support Systems for Children with Autism Spectrum Disorders (ASD) with Inclusive settings in selected Regions in Tanzania.''*

4.   Kwa barua hii, kibali kimetolewa kuanzia Oktoba, 2022 hadi Aprili, 2023.
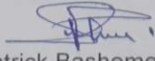
5.   Asante kwa ushirikiano wako.

Emmanuel Musona
Kny: **KATIBU TAWALA MKOA**
DAR ES SALAAM

Nakala: Makamu Mkuu wa Chuo,
Chuo Kikuu Huria,
S.L.P 5429
Dar es Salaam.

Bi. Miriam Loivotoki Laiser

DODOMA

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA JIJI LA DODOMA

Unapojibu tafadhali taja:

Kumb. Na. HJD/F.10/5/214   25 Novemba, 2022

Mkuu wa Divisheni ya Elimu ya Awali na Elimu ya Msingi,

Halmashauri ya Jiji,

S.L.P 1249,

<u>DODOMA.</u>

YAH: <u>KIBALI CHA UTAFITI/KUKUSANYA TAARIFA</u>

Husika na somo tajwa hapo juu.

2.   Namtambulisha kwako **Ndg. MIRIAM LOIVOTOKI LAISER** kuja kufanya utafiti katika Halmashauri ya Jiji la Dodoma.   Utafiti huo unahusu *"ASSESING EDUCATIONAL SUPPORT SYSTEM FOR CHILFREN WITH AUTISM SPECTRUM DISORDERS (ASD) WITHIN INCLUSIVE SETTINGS IN SELECTED REGIONS IN TANZANIA".* Utafiti huo utafanyika kwa muda wa **SIKU MBILI** kuanzia **28 Novemba, 2022** hadi **29 Novemba, 2022**. Utafiti huo utafanyika Shule ya Msingi Hombolo Bwawani.

3.   Utafiti huu ni kwa malengo ya masomo ili aweze kukamilisha kozi yake.

4.   Kwa barua hii, naomba apokelewe na kupatiwa ushirikiano ili aweze kufanikisha utafiti wake kama ilivyoelezwa hapo juu.

Ahsante.

Patrick Bashemera

Kny: **MKURUGENZI WA JIJI**

DODOMA

3 Mtaa wa CDA, S.L.P. 1249, 41183 Dodoma, Simu: +255262354817, Nukushi: +255262321550, Barua Pepe: cd@dodomacc.go.tz, Tovuti: www.dodomacc.go.tz

TANGA

THE UNITED RERUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

none: 027 2642421
ax: 027 2647752
-mail: ras.tanga@tamisemi.go.tz

Regional Commissioner's Office
P. O. Box 5095
TANGA

In reply please quote:
Ref. No.**DA.228/258/06/240**

18th   November , 2022

District Administrative Secretary,
S. L. P 111,
LUSHOTO.

RE: RESEARCH CLEARANCE   FOR MS MIRIAM LOIVOTOKI LAISER, REG NA. PG201902764

Reference is made to the heading above.

2. We have received a letter with **Ref. No.OUT/PG201902764**   19 October, 2022 From Vice Chancellor   the Open University of Tanzania   requesting our Office to grant permission for research in favour of **Ms. Miriam Loivotoki Laiser** .

3. I am pleased to introduce **Ms. Miriam Loivotoki Laiser** a Student of Open University of Tanzania who are is required to conduct research as part her studies . The title of the research is; *"Assessing Education Support Systems for Children with Autism Spectrum Disorders (ASD) within Inclusive Settings in Selected Regions in Tanzania "*. The period of the Research is from **October 2022 to April, 2023** at Irente Primary School.

4. Kindly, be informed that the permission to conduct this research has been granted. Please accord her any needed assistance so that this research study is a success.

5. Thanking you for your continued cooperation.

Z. A. Gaulawala
For: **REGIONAL ADMINISTRATIVE SECRETARY**

Copy: Rigional Administrative Secretary
            TANGA