Teaching Students with Visual Impairments in Inclusive Classrooms

A Case Study of One Secondary School in Tanzania

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Abstract

This study aimed at investigating the way general teachers teach students with visual impairments in inclusive classrooms and the challenges facing them. The intention was specifically to find out the ways general teachers adapt their teaching to make sure that inclusion of students with visual impairments is appreciated and realized. Furthermore, it intended to uncover the challenges these general teachers face when teaching students with visual impairments in inclusive classrooms. This study was conducted at one of the secondary school located in southern part of the country. It employed qualitative case study design using four (4) general teachers teaching in classes having students with visual impairments. Data collection was done using semi-structured interviews and participant- observation methods.

The findings revealed that general teachers have little knowledge about inclusive education and how it should be practiced not only for students with visual impairments but for all students with special needs. The knowledge about inclusion and teaching in inclusive classrooms is highly needed among general teachers to practice inclusive teaching for students with visual impairments in a professional manner. Preparation of teaching resources, like audio and tactile materials, reading braille writings, and instructing students with visual impairments the proper ways of using their visual devices, is said to be the role of a special needs teacher. However, it is also advisable for a general teacher to have some of this knowledge in order to counteract the challenges associated with teaching students with visual impairments in inclusive classrooms. Furthermore, findings showed that, general teachers were not using the little knowledge of teaching in inclusive classrooms they have, due to many challenges surrounding the whole inclusive teaching in secondary schools like scarcity of both general and special needs teachers and lack of commitment among them, scarcity of resource and rigid curriculum.

Building from the findings, it is recommended that, the Government should improve the situation of inclusive teaching, such as training teachers in the area of special education to help them conduct their teaching properly. The government should also allocate enough funds to inclusive schools to ensure availability of teaching and learning facilities that will help facilitate teaching students with visual impairments in inclusive classrooms. Finally, due to the fact that, there are few studies conducted on the area the current study has ventured on, it is recommended that, further studies should be carried out.

Acknowledgement

Many institutions and individuals have contributed very much to the successful completion of this study. Although it is not possible to mention all of them here, their direct and indirect contribution is highly appreciated. Foremost, I send my sincere gratitude to the Almighty God for the health and strength he has given me all the days till the completion of this study.

Baraka Michael Mwakyeja
University of Oslo
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Dedication

I dedicate this work firstly to my lovely and adorable wife **NEEMA MAKWANI**, secondly to my lovely son **AMANI BARAKA**. I love you very much!

Abbreviations

EFA   Education For All

ESR   Education for Self Reliance

ICC   International Conference Centre

ICEVI   International

IEP   Individualized Education Plan

MOEC   Ministry of Education and Culture

MoEVT   Ministry of Education and Vocational Training

NBACL   New Brunswick Association for Community Living

NBS   National Bureau of Statistics

NECTA   National Examinations Council of Tanzania

NGO's   Non-Governmental Organizations

NSGRP   National Strategy for Growth and Reduction of Poverty

PEDP   Primary Education Development Program

SEKUCo Sebastian Kolowa University College of Education

TFDPO   Tanzania Federation of Disabled People Organizations

UDHR   Universal Declaration of Human Rights

UNESCO United Nations Educational, Scientific and Cultural Organizations

URT   United Republic of Tanzania

ZPD   Zone of Proximal Development

Table of Content

X

1 Introduction

This chapter gives background information and why the study was worthy conducted. It also points out the main purpose, objectives and research questions. Furthermore, key terms are operationalized later in the chapter. Finally the outline of the thesis is given.

1.1 Background to the Study

This study investigates the way general teachers in inclusive classrooms teach students with visual impairments and the challenges facing them. Being part of an inclusive class, students with visual impairments need to enjoy the good intentions of Education For All (EFA). EFA is a UNESCO's strategy to ensure provision of equal and quality education to all children notwithstanding their socio-economic and cultural background, ethnicity or disability condition. If properly provided and implemented, inclusive education seems to be a good way of achieving EFA (Eklindh & Van den Brule-Balescut, 2006; Peters, 2003). Tanzania is among the forefront countries to ratify the Salamanca statement, and other various United Nations documents, fighting for the rights of education in inclusive settings for children with disabilities (TFDPO, 2010). Despite ratifying this document, however, inclusive education to children with disabilities, seem to be very complex when it comes to its implementation.

The reason for this can be due to lack of specific policies stating how inclusive education should be provided and implemented. For example, the National Disability Policy, introduced in 2004, failed to clearly state and provide guidelines on how inclusive education to children with disability should be implemented and monitored (Gronlund, Lim & Larsson, 2010). Lack of guidelines and efforts to facilitate preparation of conducive environment, lead to poor implementation of inclusive education in the country. One of the area affected by the lack of effectiveness in provision of inclusive education, is the recruitment of adequate number of general teachers to teach in the secondary schools (Gronlund, Lim & Larsson, 2010; Mmari, Mzee & Frankenberg, 2008; URT, 2008).

For instance, the recruitment of general teachers in Secondary schools increased from 15,911 teachers in 2007 to 39,934 teachers in 2011.Despite the increase in the number of teachers, the student-teacher ratio is still low (URT, 2011). Moreover, some of these few general teachers who are posted to teach in inclusive schools are said to have inadequate knowledge

of teaching in these schools. As a result their teaching methodologies and assessment procedures are not conducive to students with special needs in inclusive classrooms (Daily News, 2012b; Gronlund, Lim & Larsson, 2010). This in turn may affect the education and performance of students with special needs, and students with visual impairments in particular. In order to deal with the challenges of teaching in inclusive classrooms, general teachers need to possess enough knowledge on inclusion and special needs education (Mmbaga, 2002; URT, 2008).

There is a big discrepancy in the number of students with visual impairments between primary schools level and secondary school level (Appendix 1). This suggests that, there are few students in primary schools advancing to secondary schools. This brings a question as to why there is a small number of students progressing to secondary schools. Talking on participatory workshop on education, gender and inclusion, the first secretary of embassy of Finland in Tanzania, Satu Santala, said that, there are many challenges in the education sector which eliminates students with special needs from the school system (ICC, 2008). One of the challenges and reasons for elimination from the education system as said before, is the fact that, teaching methods used to teach students with visual impairments in inclusive classrooms are not conducive enough to help them learn better. As a result, these students with visual impairments do not perform better in their final examinations and therefore expelled from education system. Lack of reliable and conducive teaching methods to students with visual impairments in inclusive classrooms is one of the reasons why this study was considered (Daily News, 2012b; Gronlund, Lim & Larsson, 2010).

Another reason is that, very few studies related to inclusion, especially inclusion of students with visual impairments, in the Tanzanian context were found. Many of these studies focused at the level of primary education, leaving a gap at the level of secondary schools. There seems to be insufficient knowledge in the area of teaching students with visual impairments in inclusive classrooms in Tanzania. This study was, therefore, expected to make a valuable contribution in the research knowledge to fill out the existing knowledge gap and serve as a future reference to many similar studies. It was therefore worthy being conducted.

Furthermore, I was motivated to undertake this study due to my personal interests and experiences. I had a teaching practice in one of the inclusive schools in Moshi Municipality in Kilimanjaro region, in Tanzania, having students with visual impairments. It was too challenging for me to handle all students and ensure meeting educational needs of students

2

with visual impairments. This experience developed intrinsic motives and desire to understand how these students can be educated. Furthermore, being a tutor at the teacher's university college, this knowledge will help me to confidently deliver and impart knowledge to student teachers, who after completion of their studies are posted to secondary schools, some of them having students with visual impairments. This was another reason for carrying out this study.

This study was expected to inform teachers in the school and other teachers facing the same situation, on how they could handle their teaching, and make necessary adaptations to enable the students with visual impairments in inclusive classrooms access the curriculum and benefit from the education system like their fellow sighted peers. Furthermore, it was expected to provide opportunity for relevant educational authorities to be aware of these challenges, and take initiatives to provide required support to improve inclusive education provision. This is another reason why it was important to venture on this study.

1.2 Purpose, Objectives and Research Questions

The major purpose of this study was to investigate the way general teachers teach students with visual impairments in inclusive settings, and the challenges facing them. The empirical investigation was guided by the following objectives:

(i) To explore the knowledge of general teachers on inclusive education

(ii) To identify ways that general teachers use to assess learning needs of students with visual impairments in inclusive classrooms

(iii) To find out the way general teachers adapt teaching methods for students with visual impairments in inclusive classrooms.

(iv) To find out the extent to which general teachers collaborate with special needs educators and parents of students with visual impairments for quality teaching in inclusive classrooms.

The study was guided by the following major research question:

How do general teachers teach students with visual impairments in inclusive classrooms and what are the challenges they face?

Sub-questions

(i) How do general teachers understand inclusive education?

(ii) How do general teachers identify the learning needs of students with visual impairments in inclusive classrooms?

(iii) How do general teachers adapt their teaching methods for students with visual impairments in inclusive classrooms?

(iv) How do general teachers collaborate with special teachers and parents of students with visual impairments for quality teaching in inclusive classrooms?

1.3 Operationalization of Key Terms

1.3.1 Inclusion

Since the focus of this study is education, then inclusion was limited to the education system, and every time inclusion was mentioned, the education aspect was then referred to. In short, inclusion and inclusive education have been used to mean the same thing. However, inclusive education can be noticed to be used frequently that inclusion. Inclusion is therefore defined as the state or a process of addressing and responding positively to the diversities that exists among the students, through modifying and changing the education systems, to accommodate all children regardless of their physical, socio-emotional, and intellectual and other types of conditions. These modifications and changes involve content, teaching methods, teaching and learning materials, organization of the classrooms and infrastructural adjustments. Inclusion calls upon the educators, professionals and authorities to see learning diversities among the students not as a problem but as a catalyst towards enriching the educational support (UNESCO, 1994).

1.3.2 Visual Impairments

In this study, visual impairments referred to both blindness and low vision. Visual impairment can be defined legally and educationally. This study adopted educational definition of visual impairment which considers the ability or degree of a person to use visual ability educationally. Educationally, a student with low vision is the one who has some vision, and

4

therefore can read enlarged prints. On the other side, an educationally blind child is the one with very limited vision and thus relies on reading and writing by using the braille system or by using audio tapes (Mastropieri & Scruggs, 2010).

1.3.3 Adaptation

The principle of suitably adapted education in inclusive schools requires teachers to change their teaching and adopt strategies that will consider the needs of every student in the class individually, because these students have different abilities and different learning styles. This calls for all regular teachers in inclusive classrooms to adapt and modify their teaching to meet these individual needs of specific students (Johnsen, 2001).This modification and changing the teaching practices and learning environments to suit individual needs of all students in inclusive classrooms, is termed as adaptation. This is the context in which this terminology was used in this study.

1.3.4 Regular Teacher and Special Needs Teacher

In this study a general teacher is treated as the regular teacher handling classroom lesson while a special needs teacher is the one dealing with disability specific educational problems in inclusive classrooms. All teachers aim at implementing the Individualized Education Plan (IEP) of students in inclusive classrooms. (NCSET, 2003). In this study most of the time, a word teacher is used to mean a general teacher. Where a special teacher is referred, a word special needs teacher or just special teacher is used.

1.4 Organization of the Thesis

This work is organized in six chapters, Chapter one is an introductory chapter, where the background to the study is presented. Here the reasons for carrying out this study are discussed. Purposes, objectives of the study and research questions are also mentioned here. Finally, the chapter operationalizes the terms before outlining what constitute the thesis. Chapter two presents the Tanzanian experience and the overall situations surrounding inclusive education in the country. In this aspect, therefore, historical background, current situation, policies as well as general and special needs teacher education are analysed.

Furthermore, education of students with visual impairments in inclusive classrooms in Tanzania is discussed. This chapter ends with the summary of the chapter.

Chapter three is the literature review chapter. Here various aspects of inclusion are discussed, followed by a detailed account of the visual impairments and how visual impairments affect learning of students. Also, the chapter puts forward the process of assessing academic ability and educational needs of students with visual impairments in inclusive classrooms. Another aspect discussed in this chapter is the Individualized Education Plan (IEP) and how it should be prepared and implemented through collaboration between a regular teacher and special needs teachers on one side and parents on the other side. Furthermore, various methods and how regular teachers adapt them for better learning of students with visual impairments are discusses. Several studies addressing the challenges of teaching inclusive classrooms are discussed before the final part of the chapter, which is the summary.

Chapter four describes in detail the procedures and methods that were used in collecting and analysing data from the field. The aspects discussed in here include, research approach, a design of the study (case study design), methods of data collection i.e. Interview and observation and a pilot study. Other aspects involves issues of sampling the research site, population, techniques used in sampling, characteristics and the size of the sample as well as data analysis process. Additionally, issues of quality assurance and ethical considerations, and steps taken to achieve them are presented. Thereafter, limitations and delimitations of the study are presented. The chapter is winded up by the summary of the chapter.

Chapter five is purposely for presentation and discussion of the findings from the field, where the systematic presentation of data according to the research objectives is followed. Before, the actual presentation, a detailed introduction outlining important features and organization of the chapter is presented. Chapter six is the final chapter and is all about summary of the findings according to the research objectives, summary of the whole study, final conclusion and recommendations for improvement and for further actions.

2 Inclusive Education and Visual Impairments in Tanzania

This chapter gives a detailed account of three major areas which are; Tanzanian experience on inclusive education, including policies stressing on inclusive education. Also, general and special needs teacher education is discussed, followed by the discussion of how students with visual impairments are educated in inclusive classrooms. Finally, the chapter details challenges facing inclusive teaching of students with visual impairments. However, the challenges are not treated as separate entities but they are blended into the three major areas mentioned above. It was considered important to incorporate and blend them in their respective areas in order to help the reader to immediately understand why and how a specific challenge affects implementation of a particular aspect. The purpose of this chapter is not to describe the situation in the country systematically according to research objectives, rather to shed light and give a holistic picture of the situation around inclusive education of children with visual impairments in Tanzania.

2.1 Historical Background of Inclusive Education

Historically, inclusion has been part and parcel of African communities through their ways of living. That is, African cultures and life practices reflected some traces of inclusion. For example, formal, informal and non-formal education systems were incorporated in various socializing activities such as child rearing and agricultural activities. Deep inside these activities elements of inclusion seem to be embedded although inclusion is currently announced as a new approach to education provision (Mmbaga, 2002).

Immediately after independence, the Government of Tanzania began struggling to eliminate the form of education introduced by the British colonial government which based on segregation. Education was provided based on race, religion, ethnic groups and gender background. Majority of Africans were denied this right. Estimations indicate that only 25% of the Africans were enrolled in schools at the time of independence, in 1961. Since then the government of Tanzania, has been trying to promote inclusive education by ensuring that all citizens receive the right to education. The Policy of Education for Self Reliance (ESR) was introduced to eliminate this form of segregation in the education system. It emphasized on

living and working together, as well as helping each other, without any kind of discrimination. This policy laid down the foundations for inclusion (Mmbaga, 2002).

2.2 Current Situation of Inclusive Education

Official implementation of inclusive education by the Tanzanian Government started in 1998, after Salamanca Conference of 1994.The Government, in collaboration with the Salvation Army and UNESCO, carried out a pilot project in Temeke Municipality in Dar-es-salaam by introducing inclusive education in seven primary schools. The project expanded up into 208 primary schools in different regions throughout the country by 2008 (URT, 2008). The increase in number of schools resulted in an increase in the enrolment rate for students with disabilities, although a lot of them are still out of the school. For instance, the enrolment rate for children with visual impairments, in inclusive settings, is still low as compared to other students without disabilities due to few inclusive schools for students with visual impairments (see appendix 2). For those who manage to enter the school system, education provision does not favor them and their needs are not met (ICC, 2008).

Charema & Peresuh (1996) contend that; inadequate relevant resources and facilities is an obstacle to the implementation of inclusive education in developing countries. A study done by Kisanji (1995) in Tanzania revealed that; appropriate materials were insufficient for children with disabilities enrolled in regular schools. Also, the disability survey conducted in 2008 showed that only 2.5% of children with disabilities up to the age of 14 years (Appendix 3) were using assistive devices (NBS, 2009). In Africa and many other developing countries, meaningful inclusive education is not realized due to lack of necessary support and resources from the Governments caused by limited funds (Abosi, 2000; Zindi, 1997).

However, through Secondary Education Development Program (SEDP), the Government works in collaboration with other educational stakeholders to improve the quality of inclusive education in secondary schools. This is done through provision of general and disability specific learning materials, and assistive devices, to enhance learning of students with disabilities. It is also done through modification of school buildings and infrastructures, in order to eliminate barriers related to mobility of children with disabilities (URT, 2008).

Furthermore, inclusive education is not clearly understood by general teachers. Research done in Temeke Municipality showed schools were trying to implement inclusive education,

8

although the concept of inclusive education was not very much understood among the general teachers and other educational stakeholders (Miles, 2003). Another study conducted in Same district in Tanzania, on how inclusive education was provided at classroom level, showed that education system continues with segregating and labelling students into "bright students and dull students". The "bright students" were given more attention than the "dull students" (Mmbaga, 2002). Practices of inclusive education in the way these teachers were doing, shows that general teachers are far away from the realities of inclusive education provisions, because learning environments are not adapted and adjusted enough to accommodate and accept the differences among the students (Miles, 2003; Mmbaga, 2002). Furthermore, this form of inclusive practices suggests that, general teachers see education provision in inclusive schools in a medical model perspective, which demands students to change so that they fit into the existing education system. On the other hand, this means that, the education provision in inclusive schools is dominated by rigid curriculum. The principle of inclusion demands the curriculum to be flexible to meet the diverse needs of students in inclusive classrooms (social model). The consequences of providing education in inclusive setting in a medical model perspective, means that some students with special needs and who are not "bright" are left out (Mmbaga, 2002).

The knowledge among general teachers may be lacking due to the fact that inclusive education is a relatively new concept and approach that the country is struggling to implement. The fact that inclusive education is not mentioned in educational documents makes its implementation, monitoring, and evaluation difficult (Eleweke, 2002; Lewis & Little, 2007). Therefore there is a need to incorporate it in all educational policies to enable educational stakeholders to become aware of inclusive education and how to implement it (MoEVT, 2009).

However, the Government is making efforts to gradually change the vision of inclusive education among educational stakeholders to a new perspective of understanding it as a system to support all learners regardless of their differences (URT, 2008). To achieve this, there is a unit of Special Needs Education in the Ministry of Education and Vocational Training (MoEVT) that prepares teacher's guides on inclusive education and teacher's resource pack adapted from UNESCO. Through these documents, the ministry has the intention of educating and creating awareness among teachers on adaptive teaching, and creating environments, that responds to individual needs of students in order to meet the goal

of Education For All (EFA). Moreover, it aims at encouraging teachers to work in cooperation with families, parents and the community at large, to determine the learning needs of every student with special educational needs (URT, 2007).

Moreover, until now there are still negative attitudes among people towards people with disabilities. Many still have the belief that it is worthless to educate a child with disability. MoEVT therefore has been sensitizing parents to send their disabled children to inclusive schools (Maswanya, 2007; URT, 2008).Together in this effort; Information Centre on Disability (ICD) in collaboration with Light of the World (AUSTRIA) is conducting a four year Programme in Dar-es-salaam and Mwanga district in Kilimanjaro. The intention is to increase awareness among people about inclusive education for students with disabilities (Maswanya, 2007). Also, the Government of Tanzania is currently making efforts to ensure all children, with all kinds of differences like those with disabilities, orphans, children from poor families and marginalized communities, get the right to education (URT, 2008). The government is providing grants to students from low income families in secondary schools to make sure that they receive education. From 2004 to 2007 about 111261 students had received grants for their secondary education. According to URT (2008), the Government of Tanzania has committed to do away any form of discrimination, and ensuring equality in education system through the provision of inclusive education.

The aim of inclusive education in Tanzania, is to build the society promoting equality in participation and contribution in the development of the nation. Inclusive education is important to meet EFA goals which the Government of Tanzania has committed itself to (Polat & Kisanji, 2009). EFA does not mean just sending all children to school and putting them in the class ready for the lesson. The aim of EFA, in addition to sending these children to school, is to emphasize teachers, parents and other educational stakeholders, to ensure that, educational needs of these students are met through creation of school environments that are user friendly to all students (Mmbaga, 2002).

However, achieving EFA goals and quality inclusive education may seem difficult due to many challenges facing the education system in Tanzania. The challenges are for instance lack of supportive environment for learning and scarce resources needed for inclusive education (MoEVT, 2009). Further, Polat & Kisanji (2009) through their study on inclusive education in Tanzania mentioned the fact that, there are large numbers of students in these inclusive classrooms as the problem to proper provision of education to students with special

educational needs particularly those with visual impairments. It was found that; many classes have more than 80 students which is a very large number of students in an inclusive classroom. Therefore, Possi (1996) suggests an increase in access and improvement of inclusive education settings for learning of students with special educational needs.

2.3 Policies on Inclusive Education

Tanzania is a signatory to various international policies on education and is bound to adhere to and translate them into workable national policies for implementation. The following is the brief discussion of some of these international policies stressing on inclusive education.

The first policy is the **Universal Declaration of Human Rights (UDHR) of 1948**, adopted by United Nation General Assembly is at the center of Inclusive Education. The Declaration admits that human beings are different from one another and that these differences should be respected and used as catalysts for ensuring provision of services to cater the needs of all people without discrimination (UNESCO, 1996). The second policy is the **United Nations Convention on the Rights of the Child of 1989**. This policy advocates for the rights of all children to get education without any kind of segregation or mistreatment. It also points out that children with disabilities should be assured of education as much as their fellow children without disabilities (MoEVT, 2009). The third policy is the **Jomtien World Declaration on Education for All of 1990** which took place in Thailand. Among the six goals set under the Jomtien World Declaration, one of them (more related to this study) was to ensure access and provision of education to all marginalized groups including children with disabilities (Eklindh & Van den Brule-Balescut, 2006).

The fourth policy is the **Standard Rules on the Equalization of Opportunities for Persons with Disability of 1993**. Rule number six in this policy asserts that, all countries should provide equal access to primary, secondary and tertiary education for children with disabilities in integrated settings **(**Possi, 1996). Fifth is the **Salamanca Statement of 1994**. This is a remarkable and fundamental document giving out a firm standpoint on inclusive education, aiming at eliminating discrimination, creating welcoming communities, building an inclusive society and reaching education for all (Eklindh & Van den Brule-Balescut, 2006). Sixth is the **Dakar Framework for Action** which adopted a world Declaration on Education for All (EFA) in the year 2000, as a tool to establish Education for All children. It was seen

that, Inclusive Education is a good way of achieving EFA goals (Eklindh & Van den Brule-Balescut, 2006; Peters, 2003).

The Government of Tanzania introduced several National policies, some of which were a direct result of the international policies mentioned above (TFDPO, 2010). The following are policies introduced in the country stressing on inclusion.

The Policy of Education for Self-Reliance (ESR) (1967). This was introduced by the Late Mwalimu J.K. Nyerere, the first President of the United Republic of Tanzania, in 1967. ESR was introduced to abolish the existed form of colonial education which was segregating Africans. Therefore, ESR was introduced with the aim of opening doors to all school aged children without any form of discriminations. It was also to provide education that was appropriate and relevant to the Tanzanians, in order to give them knowledge and skills important for them to participate in the community production for their own benefits, and for the benefits of the nation. ESR was the philosophy that guided and continues to guide the education provision and development in the country till now (Mmbaga, 2002).

Universal Primary Education (UPE) (1977). This declaration aimed at emphasizing the provision of free education to all children up to university level regardless of their socio-economic and ethnic differences. UPE helped to increase the enrolment rate in primary schools. However, the issue of quality education was not taken into consideration. Under this policy, overcrowding classes were observed, resulting into some classes being conducted under trees (Karakoski & Strom, 2005; Mmbaga, 2002; Omary *et al*., 1983).

The Education Act of 1978. This act governs the compulsory Primary Education for all children and that every citizen has the right for it as long as he or she can pursue it. Parents and guardians were assigned the role of making sure that no children, who deserve to be at school, remain at home. This Act, however, did not state how its guidelines should be implemented. As a result, the Act did not make any significant impacts on the education for people with disabilities as many of them were still locked out of the education system (Karakoski & Strom, 2005; Mmbaga, 2002). Despite the amendments it has gone through, the policy still does not include the issues of inclusive education. Therefore inclusive education and special needs education provision are still unclear (Karakoski & Strom, 2005).

The Education and Training Policy (1995). The right to education for all school children was still emphasized by this policy. The policy was introduced to ensure the right to education

for every child regardless of sex, colour, ethnicity etc. (MOEC, 1995). In this policy some statements about the right to education for children with disabilities were obvious although there were little significant practical and enrolment changes in this regard. It also put emphasis on the training of general teachers as well as teachers for students with special educational needs (Karakoski & Strom, 2005; MoEVT, 2009).

National Disability Policy (2004). Tanzania clearly started to uphold the rights of people with disabilities after the introduction of this policy. Before the introduction of this policy, there was no clear specific policy to guide the life of people with disabilities. Among other things, National Disability Policy advocated for the provision of conducive environment for inclusive education by the Government itself and other educational stakeholders (URT, 2004). However, the policy does not state how inclusive education and the philosophy behind inclusion, as shown in the Salamanca guidelines, should be implemented to effect the proper provision of education to students' special needs in inclusive settings (Mmari, Mzee & Frankenberg, 2008).

Primary Education Development Program- (PEDP, 2002-2006). PEDP is said to have made significant impact on the improvement of access and quality of primary education in the country. However, PEDP had no effect to the education situation of children with disabilities, because the issues of education for children with disabilities were not put forward in the overall plan (Karakoski & Strom, 2005).

Secondary Education Development Program - (SEDP I, 2004-2005 & SEDP II, 2010-2015). The intention of SEDP was to increase enrolment rate and make sure that 75% of the students completing Standard VII, proceed with secondary education. To achieve this, community members were to participate in construction of at least one Secondary school in each Ward (TEN, n.d). As a result of this there was a dramatic increase in the enrolment rate at Secondary schools (Kapinga, 2012).

National Strategy for Growth and Reduction of Poverty (NSGRP I, 2005 -2010 & NSGRP II, 2010 - 2015) has several objectives, some of them having focus on education. It was intended to increase the enrolment rate of school aged children including percentage increase in the enrolment of girls and boys with disabilities, and other vulnerable groups by 2010. NSGRP was to make sure that the education provided is of high quality, coupled with

improved learning environment for all children in all schools, in order to promote acquisition of specific knowledge and skills (TEN, n.d).

Despite all these policies, Grol (2000) claims that, effective policies and legislations to support implementation, control and monitoring of inclusive education are lacking. This seems true considering the fact that, there are no official documents specifically prepared to guide the education provision for people with disabilities, especially in inclusive settings. All the guidelines for provision of education are based on the policies and documents for general education (Karakoski & Strom, 2005). As a result, many children with disabilities in Tanzania do not receive education in general schools (Eleweke, 2002). Even for the few who are included in general classes; their educational needs are not met because many schools do not have supportive environments for their learning (MoEVT, 2009). Karakoski & Strom (2005) suggest that, if the Government of Tanzania wants to make a move on education, and to fulfill the international educational goals, it has committed to, it should seek to review legislations and policies to establish inclusive settings and address issues of disabilities.

2.4 General and Special Teacher Education

As stated in the previous chapter, there is a shortage of teaching staff in general and inclusive secondary schools in Tanzania to counteract the large number of students in these general and inclusive schools (URT, 2011; Seya, 2008). It was observed that current general teachers do not have sufficient knowledge and skills of teaching inclusive classrooms and handling students with special educational needs (URT, 2008). Karakoski & Strom (2005) documented that only 0.9% of about 118,000 general teachers, teaching in general and inclusive schools in Tanzania, have had teacher training on special needs education. This is because there are few colleges and universities which offer courses for teaching students with visual impairments (Seya, 2008). On top of that, teacher training colleges do not have sufficient packages on inclusive education (Mboya *et al*., 2008; Mmari, Mzee & Frankenberg, 2008). For example, the University of Dar-es-salaam has few courses on inclusive education (Mboya *et al.,* 2008).

The Government has been making efforts to increase the number of universities to improve the expertise among general teachers on this area. Currently, there is a slight increase in the number of institutions offering special needs training for general teachers in secondary schools. Previously, Tanzania had only one college, Patandi teachers college that offered

training to teachers at certificate and diploma levels in special needs education. This was until 2005, when the university based training started by the Open University of Tanzania (OUT) in collaboration with the Abo Akademi University in Finland. The bachelor degree in special needs education was therefore offered by this university (Kapinga, 2012). Later in 2007, another private university by the name, Sebastian Kolowa University College (SEKUCo), in Lushoto district, started to offer a bachelor degree in various specializations within special needs education for both pre-service and in-service teachers (SEKUCo, 2009). In 2009, a third university started to offer a bachelor degree in the same area for both pre-service and in-service teachers, and this was the University of Dodoma (UDOM). Despite an increase in the number of universities, still there is lack of enough training programmes to provide knowledge and skills for specialists needed to support inclusive education (Kapinga, 2012).

The Government has also been making efforts to incorporate inclusive education components in teachers' training programmes, to help teachers acquire necessary skills to teach in inclusive classroom (URT, 2008). Additionally, The University of Dar-es-salaam, has been offering courses with packages of inclusive and special needs education though they are few and are elective (Mboya *et al*., 2008). Furthermore, in order to respond positively to the emergency of inclusive schools, teachers are encouraged by the Government to undertake professional development training to equip them with necessary current knowledge of teaching inclusive classrooms (Maswanya, 2007).

2.5 Education of Students with Visual Impairment

Rwajahura (2008) pointed out that, NGO's, UNESCO and Ministry of Labour estimated the number of children with disabilities in the country to be 3.5 million. The survey conducted in 2008 by National Bureau of Statistics (NBS) revealed that, people with visual impairments constitutes high percentage of persons among those with disabilities (NBS, 2009). It is currently estimated that, there are 1.5 million people with visual impairments in the country with an increase of 70,000 people who become visually impaired every year due to blood pressure and lack of vitamin A (Daily News, 2011). According to research done in Kibaha District in Tanzania, to determine the magnitude and causes of low vision among primary school children, the prevalence of low vision among the students is high and increases with age (Kingo & Ndawi, 2009).

Despite the large figures of people and students with visual impairments, both the enrolment rate and transition of students with visual impairments to secondary school, is still low. It is estimated that, less than 10% of students with visual impairments have access to education in developing countries (ICEVI, n.d). From the table (Appendix 1), the number of students with visual impairments in primary schools advancing to secondary school is only 870 out of 4031 students enrolled at primary schools (URT, 2010). Some of the reasons for this small number could be few inclusive schools in the country, and examination system, which is not good enough to enable students with visual impairments to proceed to secondary schools (Daily News, 2012b; Gronlund, Lim & Larsson, 2010).

Talking on the number of schools, for example, there were only seven schools by 2004 adapted to children with visual impairments, one of them being Patandi Practising School, which has braille machines and a room adapted for students with special needs. These classes were supposed to accommodate 2000 students with special needs (Mboya *et al*., 2008). The Government is now trying to establish new special and inclusive schools in order to increase the enrolment rate for students with disabilities including students with visual impairments. With the introduction of Poverty Reduction Strategy II, it was estimated that the enrolment rate for children with disabilities would increase from 0.1% in year 2000 to 20% by 2010 (URT, 2008). According to the MoEVT (2009), there is a slight increase in the number of secondary schools including students with visual impairments nowadays. There are about 15 schools including students with visual impairments in the country (Appendix 2).

On the other hand, the small number of students with visual impairments in secondary schools is the result of mass failure of these students in their final primary school examinations, hence, only few are selected to join secondary schools. According to the ICEVI (n.d), students with visual impairments in secondary schools are automatically placed out of the top grades because they are exempted from some subjects and topics. UNESCO (2006) say, these students for example, in addition to mathematics, are not performing questions involving calculations, drawing diagrams, reading and drawing maps etc. This is because the government has not adapted the curriculum enough to help these students access all the subjects like other students without visual impairments. To implement and ensure inclusive education provisions, The National Examination Council of Tanzania (NECTA) is planning to make some adjustments on the Examinations for students with special needs who are in transit from primary schools to secondary schools particularly those with visual impairment.

16

According to these amendments, Students with visual impairment are to be given 20 more minutes for every 1 hour in mathematics examination and 10 minutes for every 1 hour in other examinations. These exams will be in braille for the blind and enlarged prints for those with low vision (URT, 2007).

Failure in the examinations and therefore small number of students advancing to secondary schools is partly contributed by the teaching methods, which do not meet the needs of students with visual impairments. Cosmas Mnyanyi, a coordinator of the assistive technology at the Open University of Tanzania (OUT), talking on a graduation ceremony of assistive technology training for people with visual impairments narrated that, for a long time students with visual impairments have been left behind in the education system because there is no special consideration set to help them in terms of teaching methodologies, teaching materials and assessment procedures (Daily News, 2012b). Consider this example from one student in a primary school in Tanga region.

> *The young man mumbled and gestured desperately not sure that his name had been called. He finally responded when his teacher touched his shoulder to signal to him that it was his turn to read out a line in a manual. It was written in braille paper (Daily News, 2011, para 1).*

The above example details on how teachers are failing to apply adaptive teaching such as calling names of students with visual impairments. On the same graduation, a Member of Parliament, Alshaymaa Kwegyir, also suggested that; it is important that students with visual impairments are provided with proper education to make them independent and be able to contribute to the national development (Daily News, 2012b).

2.6 Summary

Tanzania is a signatory of many of these international policies discussed above many of which insist on the theme "Education for All". However, its implementation to achieve EFA goal as the way towards inclusive education is far from reality due to many challenges facing the education system in the country. Some of these challenges include lack of effective plans for implementing the policies, lack of enough qualified general teachers to teach in inclusive classrooms, insufficient funds, and negative attitude and lack of awareness among the community members. Therefore, if Tanzania as country really needs to achieve quality inclusive education for all students with special needs and visual impairments in particular,

there is no shortcut. The government has to either introduce effective specific policies on inclusion or lay down strategies and programmes based on the existing policies for implementation, monitoring and evaluation of inclusion practices in the country.

3 Literature Review

This chapter addresses the meaning of inclusion and other related aspects, visual impairment and its impacts on the learning process of a child. Moreover, the chapter provides ways teachers use to identify learning needs of students with visual impairments. Additionally, Individualized Education Plan (IEP) and two forms of collaboration are discussed. These collaborations are general teacher collaboration with special needs teachers on one side and parents of students with visual impairments on the other side. This section is followed by various adaptive methods used to teach students with visual impairments. Finally are the challenges. Literature review came up with empirical studies whose findings were mostly challenges. That is why challenges are discussed under these empirical studies. The chapter is winded up by the summary.

3.1 Inclusive Education

Inclusion is grounded in the principles of human rights. The Salamanca statement is said to be the first international statement that considered human rights in the education arena. Although inclusion has its roots in the Universal Declaration of Human Rights (UDHR) of 1945 and the 1990, Jomtien World Conference on Education for All, The Salamanca Statement (1994) puts inclusion on top of the agenda (Eklindh & Van den Brule-Balescut, 2006). Inclusion is geared in the provision of education that is anchored in improving the education systems that will benefit all children regardless of their differences or difficulties. Inclusion is concerned with provision of appropriate responses to the broad spectrum of learners in the education settings (*Ibid*, 2006).Inclusion seems to be important, because studies show improvement in academic performance for students with disability in inclusive settings as compared to special education settings. Also, all children need to build friendships and relationships, respect and understanding of each other, so that they are prepared to be responsible members of the community, inclusion provides this opportunity (Salisbury, 2008).

3.1.1 Belonging to and Participation

Belonging is a situation of a person feeling and understanding that he or she is the member of a society. Belonging is the sharing of some of the common things in the society like culture, traditions, values, experiences, attitudes etc. (Bromell & Hyland, 2007; Everett, 2009).

Belonging is facilitated by recognizing, valuing, appreciating and celebrating different contribution that every member of the community makes (Kunc, 1992). Likewise, student needs to feel that they belong to a particular school society. The key elements of inclusive schools involve students respecting each other, and being welcomed by the school society regardless of their differences. Also it involves learning to cooperate, feeling that they belong and are motivated to learn (NBACL, 2007). On the other side, participation means involvement of a person in all aspects of life such as socio-economic, political, religious activities etc. (Everett, 2009). That everybody in the society and especially students with special needs in inclusive schools, need to feel that they are given opportunity to participate in the various activities in the school (Bromell & Hyland, 2007; Everett, 2009). In addition, Mmbaga (2002), pointed out that the success of inclusion depends on the attitudinal change among teachers, and that the children's self-image and confidence, depend entirely on the way they are accepted, welcomed and given opportunity to participate by their teachers and peers.

3.1.2 Equality and Diversity

Inclusion is an educational approach based on equality, grounded in the UDHR. This entails that all students, regardless of any form of differences, should enjoy the provision of the national curriculum and be educated like others (Garner & Davies, 2001). The fact is that; students in inclusive classrooms have different learning needs because of different backgrounds and experiences (Johnsen, 2001). These differences and diversities should be acknowledged, and attempts should be made to make use of these differences in order to meet their needs through preparing conducive learning and teaching environments (Johnsen, 2001; UNESCO, 1994). This should be done because every student, regardless of how different he or she is, has the right to be educated like other students.

3.1.3 Learning diversities and Special Needs

Nowadays, there is a growing number of students with learning needs in inclusive schools, such as students with physical, sensory, emotional, behavioral and learning difficulties (Stakes & Hornby, 2000). A study conducted in New Brunswick, shows that there is an increased number of students with diverse learning needs and visual impairment enrolled in inclusive classes (NBACL, 2007). It is argued that, learning needs should be respected by teachers through modification and adaptation of the classroom environment, to help students

achieve their special educational needs (Johnsen, 2001). Special Educational Needs, are the needs a student with learning difficulties requires to benefit from the education system like other students in an inclusive classroom (Garner & Davies, 2001). A child is said to have special educational needs, if he or she has learning difficulties that prevent him or her to benefit from the lesson, and therefore requires special educational programmes. Special educational services provided by the teacher and other educational stakeholders to cater for the needs of students, is known as Special Needs Education (SNE) (Hegarty, 1993). SNE considers approaches that respect children the way they are as individuals, instead of focusing on shaping them in the way we want them to be, thereby creating categories (Mmbaga, 2002).

Meeting special educational needs is a core of Education For All agenda. EFA does not mean just sending all children to school and putting them in the class ready for a lesson. The aim of EFA, in addition to sending these children to school, is to emphasize meeting the educational needs of children, with learning difficulties and differences. Therefore, a teacher in the class should consider of these differences in learning needs and styles among students, and try as much as possible to meet them (Mmbaga, 2002).

3.2 Visual Impairment and its Impact on Learning

Visual impairment can be defined legally and educationally. Legal definition describes visual impairment by considering the visual acuity of a person. It describes a blind person as the one having visual acuity of 20/200 or less than that, even by using optical devices. This means that; a person with blindness can see an object at 20 feet whereas a sighted person can see at 200 feet. A legal definition considers a person with low vision as having visual acuity of 20/70 meaning that; a person with low vision can see an object at 20 feet whereas a person with normal vision can see at 70 feet (Spungin, 2002). In this study, educational definition (refer section 1.3.2 in chapter one), is relevant because it shows directly the impacts of visual impairments on the learning process of a student. Visual impairment can be congenital, occurring at or shortly after birth or acquired through other means later in life (Sacks & Silberman, 1998). Some of the congenital causes of visual impairments include conditions like retinopathy, glaucoma, cortical visual impairment, coloboma, optical nerve hypoplasia etc. Visual impairment can also be acquired later in life as a result of cancer, cataract, trauma, accidents, nutrition etc. (Kirk *et al*., 2011).

Before imposing any teaching to students with visual impairments, it is very important that a teacher knows how the loss in vision influence the learning process (Sacks & Silberman, 1998). Visual information is crucial in helping children observe and interpret what happens in the environment. It is also an important prerequisite for conceptual development in a student's learning. Malformation and destruction of this part of the body, brings about a reduced amount of sensory data to the learner, leading to deficit or delay in various skills learned through watching and imitation from others. This impacts language development, reasoning skills, problem solving abilities and abstract thinking. This finally causes great impact on the individual's learning and performance, because a student cannot observe and use visual information to interpret various learning situations happening in the environment (Bishop, 1996; Fraser & Maguvhe, 2008; Webster &Roe, 1998). If visual impairment occurs during early childhood, cognitive and language development is impaired (Bishop, 1996). But if the loss of vision is after five years, below which visual memories cannot be retained, then there will be some visual memories. This visual memory will be very helpful in the learning process through construction and formation of images, and concepts later by relating the new concept and experience acquired earlier in life (Webster &Roe, 1998).

There are basically three ways through which students with visual impairments can get information from the environments. Verbal description is the most important source of information to visually impaired students. However, verbal description provided by others is always incomplete and cannot satisfy the person's needs. Another way is the use tactile stimuli. However, a tactile method is also not effective, because a student needs to feel an object repeatedly in order to grasp the image of the object. Finally, students with visual impairments rely on self-exploration about the world. This way is limited in amount of information that can be accessible to students with visual impairments. All in all, these modalities together cannot effectively compensate visual stimuli, they are there just to reduce the impacts to learning caused by lack of vision (Spungin, 2002). Therefore a teacher teaching students with visual impairments in inclusive classrooms needs to plan teaching based on these assumptions.

3.2.1 Learning Environment

Generally adaptation of teaching and learning environment is at the core of successful inclusive education. If the environment in which learning occurs is not supportive to students

with visual impairments, their learning will automatically be interrupted (Johnsen, 2001). Research shows that the context in which the learning occurs; inflexible curriculum and inappropriate assessment procedures, are some of the factors leading to ineffective learning among students with visual impairments (Fraser & Maguvhe, 2008). Inclusive learning environment should be different from the ordinary learning environment, because an inclusive classroom contains students with different learning needs and abilities (Simon *et al*, 2010). For quality learning of students with visual impairments, some features and conditions should be adhered to. These include special services from specialized teachers, teaching and learning resources, as well as assistive devices like braille and magnifying glasses and the use of flexible teaching methods (Webster &Roe, 1998; Simon *et al*, 2010). Inclusive learning environment, therefore, is an environment that allows and supports the potential learning of all students, regardless of the learning differences and diversities these students possess in the class (Simon *et al*, 2010).

Therefore, there is a need for all educational stakeholders including teachers to consider restructuring of the education system and practices, in order to help these students learn better in inclusive settings (Fraser & Maguvhe, 2008).

3.2.2 Assessment of Learners' Needs

Assessment of learners refers to the systematic procedures of gathering and identifying relevant educational information about a student. The main aim is to understand the specific needs of the student (McLoughlin & Lewis, 2005).Quality teaching and learning can only be achieved when student's background and prior knowledge, is assessed and known. Assessment of the learning needs of a student, with visual impairment, prior to the beginning of the course of study is important for both the student and the teacher. This is because it allows for an understanding of the student's academic ability, learning styles and learning needs (Spungin, 2002). Parents and peers are therefore important partners in provision of information about the learning of students with visual impairments. This is because parents know the needs and interests of their children better than other people. On top of that they know much about their children's learning problems and therefore can suggest better educational intervention (Johnsen, 2001; Spungin, 2002). Assessment can also be through reading students' academic records (Spungin, 2002). Assessment is important for knowing whether a student will need low vision devices, large prints, magnifiers and lenses, braille etc.

It is also important to know the learning style, ability and learning pace of the student (Spungin, 2002). Assessment of learners with special educational needs, should aid teachers to plan teaching and meeting individual needs of the student. All these information about students learning should be stipulated and stated in the Individualized Education Plan (IEP) (McLoughlin & Lewis, 2005; Mitchell, 2008; Spungin, 2002). However, in many schools this information, which is important for student's learning, is not gathered in most cases (Johnsen, 2001; Smidt, 2009).

3.2.3 Individualized Education Plan

Individualized Education Plan (IEP) is a plan of study extracted from the general curriculum which is designed specifically to meet the needs of a student with additional needs. This plan of study comprises a list of specific goals to be met, and the strategies to be used to meet those goals (Salisbury, 2008). There is a team of specialists, including parents and teachers, which work together to determine these specific goals and academic needs of students to enable a teacher to plan and implement teaching (Spungin, 2002). Team planning and implementation of IEP is crucial if we want inclusive education for students with visual impairments to be meaningful. However, IEP does not call for individualized teaching, rather it intends to inform educators to be aware of and meet the individual needs of every student in inclusive classroom (Mitchell, 2008). General and special needs teachers as well as parents are important collaborators in the preparation and implementation of IEP.

3.2.4 Teaching Collaboration (Co-teaching)

Teacher collaboration (Co-teaching) is an important aspect of inclusive education, because inclusive classrooms contain students with diverse learning needs. No single teacher can have all the skills necessary to meet students' diverse needs in inclusive classroom (Lipsky & Gartner, 1997). Co-teaching involves two teachers teaching the same class at the same time, a regular teacher taking the responsibility of the main teaching, and a special needs teacher, dealing with disability specific needs of students (Dalen, 1982). A teacher, who has specialized in visual impairments, therefore, should be part of the teaching in an inclusive classroom having students with visual impairments. A special teacher will be helping a general teacher in preparation of teaching materials and learning environment that suits students with visual impairment. A co-teacher will also be responsible for teaching skills like

reading and writing by using braille, using glasses and lenses etc. (Spungin, 2002). According to Scruggs *et al.,* (2007), some reported benefits of co-teaching include improved instructions and communication between a teacher and a student and increased enthusiasm for teaching.

3.2.5 Collaboration with Parents

Parents offer a big contribution to the education of their children, and are potential sources of information about the academic ability of students with visual impairments. Parents know their children better; they know what their interests are and what things are good for them. They also know their educational needs, and can plan for the future on behalf of their children. They will also provide necessary information about social, physical and emotional development (Garner & Davies, 2001; Webster & Roe, 1998). Having this information, a teacher will strive to structure and modify his or her teaching to help student with visual impairments in the class (Spungin, 2002).

3.3 Adaptive Teaching Methods for Students with Visual Impairments

For a very long time, learning has been considered as a product of teaching. Teachers have been mostly using non-participatory strategies which are not effective in teaching. An effective teaching is more than merely transmission of information from teachers to students, but rather a complex interaction between the two parts (Webster & Roe, 1998). Therefore, a paradigm shift is required from non-participatory, traditional teaching to modern teaching that involves an interaction between a teacher and a student, where different needs of students are considered (Bowring- Carr & West-Burnham, 1997). However, teaching in inclusive classrooms is not easy, since teaching needs to be more individualized as compared to normal classrooms, where there are little diversities among students (Peters, 2003).

Furthermore, it has been pointed out that, the degree of visual abilities varies among the students leading to variation in learning needs and learning strategies for students (Salisbury, 2008). It is this degree of severity that will determine the extent of understanding how the world is organized, and how it can be acted upon (Webster &Roe, 1998). As a result, students with visual impairments require unique ways of addressing their academic problems. Therefore, it is important that teachers understand this desire to be able to predetermine

teaching approaches to be used for effective teaching (Salisbury, 2008). The support these teachers should provide to students with visual impairments should base on the use of different sensory stimulations, such as sounds, smells, textures and shapes, to help them build a picture of the world (Webster &Roe, 1998). Research shows that, quality teachers are the ones, who are the best at including students with diverse learning needs (Mastropieri & Scruggs, 2010). Since inclusive education insists on adaptive teaching, a quality teacher should be the one who considers these adaptations for students' learning. Although we talk of these modifications and adaptations of teaching and learning environment, in some instances adaptation is not necessary, meaning that, teaching strategies and other practices applied to sighted students can also be applied to students with visual impairment (Raymond, 1995; Spungin, 2002). The following are several methods teachers use to teach students with visual impairments in inclusive classroom. Some of these methods are used as they are but other methods require adaptations to work better for students with visual impairments.

3.3.1 Encouraging Collaborative Learning

It is believed that in a learning process students differ in capabilities. Students with low ability will learn from their fellow capable peers. Cooperative learning among students of different learning capabilities and learning needs, in an inclusive classroom, has proved to be effective in promoting academic achievement, positive attitude towards the subject, and improving social interaction among students (Johnson & Johnson, 1986; Lypsky & Gartner, 1997; Mastropieri & Scruggs, 2010; Vygotsky, 1978; Wade, 2000).

Cooperative group learning involves learners working together in small learning groups. This helps students to help each other to carry out different tasks. It is a good strategy of teaching students with visual impairment, particularly in the mixed ability groups. It is especially important in third world countries where classes are very large (Mitchell, 2008). In these groups, students with visual impairments should be paired with their fellow sighted students who will help them to organize their works, find correct pages and repeat teacher's instructions (UNESCO, 2001).

3.3.2 Using Questions and Answers

Oral method of giving instructions and receiving responses from the students, can also be a good option. A teacher of students with visual impairment can write down the answers given

out orally by a student with visual impairment. Moreover, a tape recorder can be used to record the answers the student is giving. However, through this way, a student cannot review the answers he or she has given for possible correction. Therefore, students with visual impairment and teachers of students with visual impairment should be consulted before the test is taken, in order to find a better way of assessing a student with visual impairment (Spungin, 2002).

3.3.3 Sound Projection and Calling Students Names

Since students with visual impairments do not see, they rely on the voice of the teacher as one of the main source of information for learning. It is therefore important for the teacher to do some or all of the following: - Firstly, the voice of the teacher has to be pleasant. By pleasant it means that it should produce relaxed tone and pitch. Secondly, the voice of the teacher needs to be interesting to listen to. Speed of talking, volume and pitch are very important to make the voice interesting for students (Best, 1992). Thirdly, a teacher should avoid vague statements. Phrases like "over here" or "this and that" should be avoided as much as possible, because they do not help students with visual impairments to understand what a teacher is talking about (Mastropieri & Scruggs, 2010). Fourthly, during the teaching process a teacher should read the notes aloud while writing them on the board or presenting them on the projector (Spungin, 2002).

Fifthly, teachers should call the names of students first when they wants to address a specific student, ask questions or give specific instructions so that students know specifically whom the teacher is talking to. This seems important, because it helps students with visual impairments feel that they are part of the class and they are effectively included in the lesson (Mastropieri & Scruggs, 2010; Salisbury, 2008). It is equally important to use students' names during class discussions so that students with visual impairments are in the position to understand who is talking (UNESCO, 2001). Finally, the language that has been used for content delivery in the class has been a major hindrance for the level of engagement and academic achievement of some students, especially those with visual impairment (Grace & Gravestock, 2009; Hannell, 2007). The best teacher is the one who uses simple presentation and communication. The best teacher also makes follow up on individual student's tasks in order to make sure that they understand the lesson (Westwood, 1995).

3.3.4 Adapting Written Texts

To help students with visual impairment, teaching materials need to be adapted. For example printed text can be adapted through increasing the font size, bolding the text, increasing contrast, adding colour, and adjusting spaces between characters. However, the extent of these adaptations depends solely on the severity of visual defects and the needs of the student concerned (Bishop, 1996; Mastropieri & Scruggs, 2010). Therefore, it is important to consult a specialist teacher on preparation of materials prior to the lesson; because different students use different materials depending on the degree of their visual impairment (Spungin, 2002).

Meanwhile, students with low vision should be provided with a copy of notes which are written on the board or presented on a projector. A specialized teacher for students with visual impairment, should help to clarify the lesson to them, and if possible, should teach them before the main teaching session starts (Spungin, 2002). If a teacher is writing on the blackboard or uses visual aids, it is important that he or she uses large writing text on the blackboard or visual aids. In addition a teacher may use coloured chalks (UNESCO, 2001).

3.3.5 The use Audio, Optical and Non-Optical Devices

Since students with visual impairments rely mainly on verbal information for their learning, audio devices should be incorporated to aid the teaching process. These include things like audio cassettes and compact discs. However, lesson contents with diagrams and tables cannot be well explained in an audio format (Salisbury, 2008). Moreover, a lesson can be tape recorded and given to students with visual impairments for later playback at their convenient time (UNESCO, 2001).Moreover, if a videotape for example has to be shown, it is wise to show it to students with visual impairment so that through a specialized teacher's or a classmate's explanation, they understand all the visual concepts in it before the class watch it. For a film with sub titles, a classmate or teacher can read aloud to the class to help those with visual impairment (Spungin, 2002).

Optical devices such as eye glasses, magnifiers and telescopes use lenses to increase a person's residual vision. They are normally prescribed by a medical specialist while non-optical devices do not incorporate a lens and do not need to be prescribed by a specialist. Things like large prints, braille and braille writer, tape recorders, book stands, recorded and talking, books and calculators etc., are examples of non-optical devices (Simon *et al.*, 2010).

The role of both optical and non-optical devices is to improve vision and increase functionality of students with visual impairments through the use of other senses. It is the role of a teacher to encourage students with visual impairment to use visual devices and assistive technologies to help them with vision (Spungin, 2002).

3.3.6 The use of Tactile Materials

Teachers must be aware, that students with blindness have deficit in conceptual experiences and understanding due to absence of visual ability, therefore adaptations of teaching materials becomes paramount, if they have to learn all the things other students without visual impairments learn in the class. To help this, therefore, these students should be taught physically using concrete experiences (Bishop, 1996; Pauline, 2008).

Following this proposition, these students should be given an opportunity to explore tactile diagrams. Tactile diagrams are very important to understand images and concepts which are difficult to explain and describe in words. Therefore, they should apparently be used when shapes and patterns are very important to understand the concept but also, when the real objects are not available to help teaching (Salisbury, 2008). Tactile images or diagrams can be drawn on braille papers using a special mat and stylus. This produces a relief image or diagram that can be easily felt (UNESCO, 2001).

3.3.7 Extra Time Allowance

Students with visual impairment complete their work very slowly due to the nature of their impairment (Mastropieri & Scruggs, 2010), Therefore, extra time allowance is extremely important for them to process visual information, and complete their written assignments (Salisbury, 2008). For example, students with low vision take longer time to read a text than students with normal vision. Also reading and writing in braille as well as getting information from tactile sources for students with blindness consumes a lot of time. At the same time, students with blindness need much time to integrate information coming through hearing (Best, 1992; Mastropieri & Scruggs, 2010).Generally, it is acceptable to add half of the time for students with low vision, and twice as much for students with blindness (Spungin, 2002). Many external examinations recognize this requirement and, therefore, give them allowance of up to 100% additional time for students with visual impairments (Salisbury, 2008).

3.4 Challenges to Inclusion of Students with Visual Impairments

Several challenges interfere with the provision of education to students with visual impairments in inclusive classrooms. The challenges are reflected in the following studies conducted, inside and outside Tanzanian context.

3.4.1 Lack of Clear Policies on Inclusive Education

The study by Gronlund, Lim & Larsson (2010), conducted in two developing countries, namely Tanzania and Bangladesh. The study's aim was to answer the question of, how can assistive technology effectively be used for inclusive education in developing countries? The study came up with findings showing that Tanzania does not have specific policy on inclusive education. Inclusive education is mentioned in some of the policy documents such as disability policy and education and training policy but these policies do not state how inclusive education should be implemented, monitored and evaluated. The study revealed that teaching and learning materials for students with special needs are lacking.

3.4.2 Lack of Knowledge

The study by Kesiktas & Akcamete (2011), sought to determine the degree to which the professional standards for Turkish teachers of students with visual impairments were addressed during pre-service training and the degree to which the in-service teachers of visual impairments implemented these professional standards. Findings of the study showed that, there is insufficient knowledge and skills among teachers regarding implementation of inclusive teaching for students with visual impairments. Another study by Miles (2003) conducted in Temeke district to explore appropriate and sustainable ways of building capacity of key stakeholders in education to reflect, analyse and document their experiences of promoting inclusive education, revealed that inclusive education is a difficult concept to understand among teachers.

3.4.3 Lack of Resources and Poor Participation of Parents

Simon et al., (2010) conducted a study in Spain with the aim of analyzing the process of inclusion to students with visual impairments. The study found out that schools do not have

appropriate teaching and learning resources to help students with visual impairments learn better in inclusive classrooms. Additionally, the study found that, there is a lack of collaboration and participation of parents in the educational affairs of their children. Moreover, the findings revealed that; teachers do not have enough knowledge of inclusion and how to teach students with visual impairments in inclusive classrooms.

3.4.4 Teaching Methods

Lewis & Little (2007) conducted a study with an intention of providing insight on the current situation of inclusive education in four countries, namely Nepal, Tanzania, Vietnam and Zambia. The findings of the study in Tanzania revealed that, teachers are not educated enough in sign language, use of braille materials, preparation of hearing and aids, tactile diagrams and maps etc. to be able to face the challenges of inclusive teaching. It was also found out that teacher education is insufficient in the components of inclusive education. Finally, the study revealed that rigid curriculum is also a problem for implementation of inclusive education. Teaching methods and examination systems are centrally controlled contradicting with the efforts to make inclusive environments for all children regardless of their learning differences.

3.4.5 Labeling and Negative Attitudes

Mmbaga (2002) conducted a study in Same district in Kilimanjaro region in Tanzania with the objective of determining the existence of educational arrangements and processes that ensure effective learning for all pupils in primary schools in Tanzania. The study came up with the findings that, teachers were categorizing and labeling students into "bright and dull". The "bright students" were given more priority to answer questions unlike the "dull students". Therefore, teaching methods did not consider the needs of students with special needs. Students with visual impairments were present in the classes but teachers were teaching as if all students were sighted using "talk and chalk" strategy.

3.4.6 Lack of Teacher Collaboration and Rigid Curriculum

New Brunswick Association for Community Living (2007) conducted a study to provide insights on the systemic barriers to the implementation of inclusive education in New Brunswick. The study found lack of collaboration among teachers to teach in inclusive

classrooms. It was also observed that, rigid curriculum does not allow collaboration (co-teaching) among teachers.

3.4.7 Other Challenges

Tools used to assess students in inclusive classrooms are rigid and not adapted. Students are not evaluated on the basis of their individual ability and specific educational needs. A normative kind of assessment seems to dominate in these classes. Crowded classes cannot be left out. This has been a big challenge towards inclusive education in many countries, but mostly third world countries as pointed out by Mitchell (2008).

3.5 Summary

As said before, the study did find few researches on inclusive education at the primary school level in Tanzania. Furthermore, the study could not find any of the research focusing on the education of children with visual impairments in inclusive classrooms. Lack of research on the education of students with visual impairments at the secondary school level suggests that little is known on this area. Considering insufficient knowledge existing on this area, it was important to conduct a study on how teachers teach students with visual impairments in inclusive classrooms at the secondary school level. This study was also important considering what Mmbaga (2002) proposed. She suggested the importance of conducting studies to investigate teaching and learning in inclusive classrooms because inclusive education is the top agenda in education as an endeavor to attain Education for All (EFA) goal.

So far, we have seen that, provision of quality inclusive education depends very much on adaptations of several aspects of school settings. However, adaptations and practices of inclusive education are faced with a lot of challenges. Students with visual impairments are the most affected by these challenges due to the nature of their disability and the great contribution of vision in the learning process of the child. Therefore, schools should try to maximize the extent to which students with visual impairments are provided with better education in inclusive settings.

4   Research Methodology

This chapter describes in detail the procedures and methods that were used in collecting and analysing data from the field. Several aspects are discussed here. These include, research approach, a design of the study (case study design), methods of data collection i.e. Interview and observation and a pilot study. Other aspects are research site, population sampling, characteristics and the size of the sample as well as data analysis process. Furthermore, issues of quality assurance and ethical considerations, and steps taken to achieve them are presented, followed by limitations and delimitations of the study.

4.1 Qualitative Approach

In order to be able to investigate the way general teachers in inclusive classrooms teach students with visual impairments and the challenges facing them, the study employed a qualitative approach. Qualitative research approach considers collecting information from the participants in order to understand the phenomenon under the study from the perspectives of those involved in the research (Ary, Jacobs & Sorensen, 2010). This study sought, therefore, to use this approach, in order to have a detailed account of teachers' own perspectives of their teaching, and the challenges these teachers face in teaching. Moreover, qualitative approach was considered relevant due to its nature of providing data from the respondents in the natural settings (Gall, Gall & Borg, 2007). The natural setting for this case was an inclusive classroom where the teaching process occurred. Teachers were observed in their classes, to see how they teach students with visual impairments and what challenges they face.

Since different people have different ways of seeing and perceiving the world (Creswell, 2009; Johnson & Christensen, 2012), it was ideal to get these different individual perceptions and how these teachers view their teaching to students with visual impairments, and the challenges they face in teaching them. Due to its characteristics of providing detailed information from the research participants (which is also a characteristic of a qualitative research), a case study design was considered useful in this study (Gall, Gall & Borg, 2007). This is discussed in the following section.

4.2 Case Study Design

The purpose of the study was, to investigate the way teachers teach students with visual impairments and the challenges they face. In order to maintain the requirement of detailed information, a case design was then used. Miles and Huberman (1994) define a case study as the investigation of a phenomenon occurring within a specific context. They insist that a case study approach is convenient when a researcher wants to describe and explain a phenomenon. The current study's phenomenon was teaching students with visual impairments in inclusive classrooms and the challenges facing them. Furthermore, Gall, Gall & Borg (2007), define a case study as an in-depth investigation of two or more phenomenon in natural settings considering the perspectives of the research participants.

In addition to have a detailed investigation of how general teachers in inclusive classrooms teach students with visual impairments in their natural setting and the challenges they face, a qualitative case study was deemed important. Furthermore, a case study was used because of its emergent nature. This means that, at any particular point in the course of collecting data, changes can be made to the predetermined procedures and settings in data collection. In a case study, it is possible to adopt new procedures in order to bring the desired findings (Gall, Gall & Borg, 2007). At one particular instance, an interview guide was modified to ensure obtaining relevant information from the respondents. The study was an embedded case study. An embedded case study design is defined as the kind of Case study consisting of more than one unit of analysis (Yin, 2003). The study is an embedded Case study because it involved four (4) general classroom teachers to provide information under the same phenomenon of study of which each teacher stands as an independent unit of analysis. Data collection was done through two methods of data collection, which are interview and observation methods discussed in the following section.

4.3 Methods of Data Collection

Johnson & Christensen (2012) points out that, Case study researchers advocate the use of more than one methods of data collection. Therefore, this study used two methods of collecting data which are interview and observation methods. Below is the detailed description of each method starting with interview method.

4.3.1 Interview

To allow collection of detailed information from the teachers about how they teach students with visual impairments in inclusive classrooms and the challenges facing them, interview method was deemed convenient. Interview is defined as the form of data collection that involves direct interaction between a researcher and the respondent. The interviewer uses oral questions to gain responses from the respondents (Gall, Gall & Borg, 2007). It allows respondents to speak out their opinions, feelings, beliefs, insights, attitudes and experiences about a phenomenon under investigation through the use of probing questions. By the use of interview method, it is possible to make follow up answers, respondents are available to clarify immediate concerns and ambiguous statements (Ary, Jacobs & Sorensen, 2010; Gall, Gall & Borg, 2007; Gay, Mills & Airasian, 2009). Furthermore, through the establishment of trust and rapport, with the respondents, a researcher is likely to gather information that he/she would not be able to get by any other method of data collection. Several interactions therefore, were made possible before the interview session, to build trust and rapport with the research participants (Gall, Gall & Borg, 2007).

Furthermore, to have detailed information about teaching students with visual impairments in inclusive classrooms and the challenges teachers face, semi structured interview was used. Semi structures interview can be defined as the type of interview having both closed ended and probing open ended types of questions, in order to get rich information from research participants (Gall, Gall & Borg, 2007). It was important to include both closed ended and open ended questions to get short responses like "yes" or "no" and detailed explanation respectively. Through semi-structured interview teachers had wide chance of expressing themselves and giving a lot of information about teaching students with visual impairments in their inclusive classrooms. The interview guide was used (see appendix 5). The questions in the interview guide were developed from the four sub-research questions presented in chapter one. Before the interview session, teachers were asked to choose their language of preference, and Swahili language was preferred the most. The duration of interview session for every teacher ranged from 45 minutes to 1 hour. Interview method was used in this study as a main method of data collection.

A tape recorder was used in this study to maintain the original data. Tape recording was also used because it ensured the continuity of the interview, and speeded up the interview session and thereby saving time (Cohen, Manion & Morrison, 2007; Gall, Gall & Borg, 2007; Gay,

Mills & Airasian, 2009). One of the disadvantages of the interview method is that it is time consuming (Ary, Jacobs & Sorensen, 2010). Interviewing teachers each one at time consumed a lot of time, especially when teachers were diverting from the questions.. It was the role of the researcher to keep the track of the research focus.

4.3.2 Observation

In order to see the reality of the process of teaching to students with visual impairments in inclusive classrooms, observation was important in this study. In a case study design several methods are recommended to get a richer description of the phenomenon. Observation was selected as the second method. Observation is suitable in a qualitative study because it takes place in the arena where the study phenomenon takes place - in an inclusive class with visually impaired students. Observation can provide more detailed and new information in addition to the interview, about how teachers teach visually impaired students.

In this study, the researcher assumed the role of non-participant observer. A non-participant observer is the one observing the situation without active participation in what is taking place in the research field. This type of observation does not require prolonged time for an observer to engage in a social setting where the phenomenon is being studied (Bryman, 2004). This type of observation was chosen because of the limited time that was available for data collection. Observation schedule (shown in appendix 6) was used to guide and maintain the focus of the observed behaviour. The behaviours observed from teachers were recorded through writing notes immediately as the behaviour was occurring. Gay, Mills & Airasian (2009) recommend that, it is better to take notes during observation to avoid some information being forgotten or being distorted, a situation that may occur when data are recorded after observation session.

On the other side, observation records may be biased by the observer through inferring meanings that are not those of the observed person (Ary, Jacobs & Sorensen, 2010). As an attempt to avoid this, an observer had to arrange a session with teachers to ask them if what was recorded from the observation matched their intentions. In addition, observation method is time consuming (Gall, Gall & Borg, 2007). This is the reason why only one classroom session was observed. The duration of observation depended on the length of the lesson a teacher had intended to use in the class, since it was the aim of this study to observe in detail

the whole teaching process, how teachers adapt their teaching to students with visual impairments from initial stages to final stages of teaching.

The study used interview and observation to collect data in order to ensure the quality of data. Nisbet & Watt (1980) contend that observation is important to reveal the reality of what people say they do, because interviews cannot do that. However, Bryman (2004) claims that, observation itself cannot provide a reason for the occurrence of behaviour; therefore it is better if it is used in combination with another method, because it is through the other method(s), where the reasons for occurring of a specific behaviour will be stated. The use of interview and observation methods therefore, meant to supplement each other.

4.4 A Pilot Study

In the current study a pilot study was also considered important. A pilot study is defined as the small scale, preliminary study conducted to test methods and other procedures for data collection (Gall, Gall & Borg, 2007). Researchers must practice the tools for data collection that they will use in carrying out their studies, before conducting the actual research to help them be acquainted with these tools before conducting the research (Drew, Hardman & Hosp, 2008). It is important also to note here that, a pilot study related to this study was done in Norway, where the conditions are different (as compared to Tanzania) with regard to inclusive education, thus having limited value, but was a good opportunity to try out the formulation of questions in the interview guide. This resulted in few questions to be reformulated because it turned out that, some questions were unclear. Interview situation was also a good experience before the study was conducted. Another pilot study related to this research was conducted prior to data collection process at the research site with one general teacher, and necessary changes on the interview guide were made to ensure collection of data that correctly answered the research questions.

4.5 Sampling

4.5.1 Site for the Study

Tanzania has few schools which are currently including students with visual impairments at a secondary school level. There are 16 Secondary schools including students with visual

impairments in the country (Appendix 2). A study was conducted in one region in southern part of Tanzania. This region was selected based on the two basic reasons. One is that, the region is among the few regions with schools including students with visual impairments at secondary school level. Practical reasons such as travel distances and options for places to stay were also reason that this region was chosen. Therefore, a secondary school found in the region explained above was selected for the study. This school was started in 1945. It is a co-education school with both, ordinary and advanced levels. It is the boarding school for students with visual impairments. Both science and arts subjects are taught. The school is officially recognized by the Government to include students with visual impairments (Appendix 2). But in real sense; there are students with other disability like the deaf, deaf blind, students with mobility impairment etc. (Appendix 4). Currently, the school has 1084 students including those with disabilities. Considering the reasons for selection of a research site stated above, this school was selected because it is the only inclusive secondary school having students with visual impairments in the region.

4.5.2 Sampling Techniques to Find Informants

To select general teachers and classrooms suitable for provision of relevant information, purposeful sampling was used in this study. Purposeful sampling attempts to select the respondents based on the certain characteristics or criteria (Johnson & Christensen, 2012). Purposeful sampling, is a common type of population sampling in Case study design, and qualitative studies in general, as it provide individuals or respondents with rich and relevant information for the study (Gall, Gall & Borg, 2007; Gay, Mills & Airasian, 2009).Being a case study, purposeful sampling was then used to obtain teachers for provision of detailed information about their teaching for students with visual impairments in inclusive classrooms and the challenges facing them in teaching. Teachers were selected based on two criteria.

One of these criteria was, a general teacher teaching in an inclusive classroom having students with visual impairments. The fact is that, in Tanzania, general teachers are the one responsible for teaching inclusive classrooms. It was therefore important that a general teacher, teaching a class having students with visual impairments is selected in order to see how students with visual impairments are included in the lessons. The second criterion was to have an experienced teacher with a minimum of five years of teaching. I assumed that, these teachers had gone through a lot of challenges teaching in inclusive classrooms, and therefore, they had

enough time to refine and polish their teaching through professional development courses, and therefore, improving their teaching practices in inclusive settings.

4.5.3 Sample Size

Qualitative sampling refers to selection of a small number of individuals that can provide enough information for the researcher to understand the phenomenon under the study (Gay, Mills & Airasian, 2009). It is also argued that; the number of respondents in a study depends solely on the purpose of the study as well as the nature of population under the study (Cohen, Manion & Morrison (2007). Furthermore, Patton (2002) argues that sample size selection is influenced by the time and resources available for collection of data in a particular research study. For this matter, this was a qualitative case study, which intended to gather detailed information about teaching students with visual impairments and the challenges facing teachers. To achieve this intention and compromise with time, then four general teachers teaching inclusive classrooms, having students with visual impairments, were selected.

4.5.4 Characteristics of the Sample

Teachers selected to provide information for the current study, were two males and two females teaching Form I and Form III classes. In Form I and III classes teaching was still in process unlike other classes which were in the process of doing national examinations. Therefore, observation was possible in Form I and III classes. Subjects involved were two art subjects (Kiswahili & Geography) and two science subjects (Biology & Physics). The aim was to capture and blend together the methods from the two distinct areas of arts subjects and science subjects. Age of teachers ranges from 27- 45 years, while their teaching experiences ranges from 2-15 years. These data are given in cumulative manner in order to maintain the anonymity of the respondents.

4.6 Data Analysis

In its original form, raw data collected from the field do not give much meaning. Data analysis is important as it is the way of describing and interpreting these raw data, in order to obtain the meaning and pattern from it (Bell, 2005). Data analysis in qualitative studies begins immediately after the first data collection process to discover if there is any information that

is necessary, missing. This helps the researcher to review, and restructure the tools for data collection in order to obtain information that mirror the research questions, and develop a deeper understanding of the phenomenon under study. This process of alternating data collection and data analysis in qualitative studies, is known as interim analysis (Miles and Huberman, 1994). In this study interim analysis of data was inevitable. This interim or preliminary data analysis was done after every interview to check if there was any information necessary for the study, missing.

When the process of data collection was over, raw data were then transcribed. Transcription is the process of transforming interview notes, observational notes, and audio recording into texts (Johnson & Christensen, 2012). These data were transcribed from Swahili to English language. Afterwards, thematic analysis was used to organize the transcribed data. Thematic analysis is the process that identifies, analyse and report the occurrence of themes in the data collected from the field (Braun & Clarke, 2006). According to Braun & Clarke (2006), thematic analysis follows six basic steps. These steps are summarized and presented in the following table.

S/N	Step	Description
1	Familiarizing with the data through thoroughly reading the transcriptions	This helps the researcher to have in mind what exactly is in the data.
2	Generation of initial codes.	Putting labels or descriptions on a list of ideas developed from the transcription as already read by the researcher.
3	Searching for themes	Related codes are organized under different themes.
4	Reviewing the themes	The themes developed are reviewed for their relevance and legitimacy of being called themes
5	Defining and naming themes developed	Defining the overall content of the themes and the message it carries in it before producing a report
6	Producing a report	Researcher is already satisfied with the themes developed.

Interview and observation responses of each participant were checked and presented in relation to research questions. In reporting the information collected, some direct quotations were used (emic perspective). Reporting direct statement from research participants is important, because it maintains the flavour of the original data (Cohen, Manion & Morrison, 2007). Also, researchers views based on the respondents' answers were given (etic perspective) backed up by literatures reviewed in chapter two and chapter three.

4.7 Validity and Reliability of Data

Validity and Reliability are terminologies used to address the issue of quality of a research in quantitative studies. The issue of quality of research is also a concern of qualitative researchers; however, different terms are used to address this scenario. Although the underlying concepts related to quality of the research are the same, differences in terminologies are brought about by the nature of data and philosophical assumptions that these two approaches have (Ary, Jacobs & Sorensen, 2010). To address the quality of this study, the following aspects were addressed.

4.7.1 Credibility

Credibility is a substitute to internal validity that is used in quantitative studies. Credibility in qualitative studies refers to the truthfulness of the findings. It is how the researcher represented the realities of the research participants as accurate as possible. Several techniques have been used to ensure credibility of the qualitative research study; some of which includes data, methods and theory triangulation, control of biases through reflexivity, peer review, member checking etc. (Ary, Jacobs & Sorensen, 2010; Bryman, 2004).

In this study method triangulation, member checking and reflexivity were used to ensure the credibility of the study. Method triangulation is when more than one method is used to collect data in the field (Gall, Gall & Borg, 2007). Member checking involves whether what was recorded by a researcher match with what the participants said or did, during interview and observation sessions respectively (Ary, Jacobs & Sorensen, 2010; Bryman, 2004). Furthermore, reflexivity is a self-reflection of one's own biases, recognize them and eliminate them from the study. The current study used two methods of data collection, namely interview and observation methods. The study also used member checking strategy for the same purpose. I asked the research participants to review observational data to check whether what was recorded represented what teachers said during interview and did in the classroom. Reflection on my own biases was done several times as an attempt to maximize neutrality and avoiding biases to interfere the data collection process, and data analysis was also ensured.

Finally, Gall, Gall & Borg (2007) point out that truthfulness can also be established through reporting the findings honestly and straightforward by using direct quotes from the research participants. In this study, reporting the findings honestly was observed. Moreover, verbatim

statements from the research participants were used in order to maintain the original content.It is anticipated that, the use of Swahili language in collecting data for this study ensured truthfulness of the data and findings, because this is the language well understood by the research participants and most of the Tanzanians. Because the language of communication was well understood by the research participants, it is likely that the questions were well understood and the responses provided were relevant to the questions. This is in accordance with Kirk & Miller (1986) who point out that qualitative research requires the use of the native language (a language that is understood by research participants) for data collection.

4.7.2 Dependability

In qualitative studies, concept dependability or trustworthiness is widely used rather than reliability (Bryman, 2004). Unlike in quantitative studies, where reliability refers to the consistency of the findings if the study is replicated, in qualitative studies there is a possibility of variability in findings, because the change in context and time matters (Cohen, Manion & Morrison, 2007). For example, two studies conducted at the same place may have two different findings and still remain to be reliable or dependable, provided that both represent what is really happening in the society concerned at that particular time (*Ibid,* 2007). Therefore, consistency is counted by the extent to which the variations can be tracked and explained (Ary, Jacobs & Sorensen, 2010). Several methods are used to establish dependability. These include audit trial, replication logic, data and method triangulation etc. In this study, to ensure dependability method triangulation was used. In qualitative studies, reliability is just a match between data collected from the field and what is really happening in a natural setting (Bogdan & Biklen, 1992). Therefore, two studies conducted at the same place may have two different findings and still remain to be reliable, provided that both represent what is actually happening in the society at a particular time (Cohen, Manion & Morrison, 2007).

4.7.3 Confirmability

Confirmability is an alternative term to the concept objectivity used in quantitative research studies. This represents the extent to which the research is free of bias in the procedures, and in the interpretation of the results (Ary, Jacobs & Sorensen, 2010). It is difficult to ensure complete objectivity in social research but acting in a good faith is a goal (Bryman, 2004).

Several methods can be used to address this issue and ensure confirmability of the study. These involve audit trial, peer review, triangulation, reflexivity etc. (Ary, Jacobs & Sorensen, 2010; Johnson & Christensen, 2012).Attempting to adhere to this criterion, triangulation and reflexivity were used. As said before, two methods were used for data collection. Reflexivity or self-reflection of owns biases were also considered important in this study. The intention was to remain as objective as possible in collection and interpretation of the data.

4.8 Ethical Consideration

Ethical consideration is part of the research works, and cannot be avoided (Bryman, 2004). Observation of research ethics helps to protect the rights of the research participants, develop a sense of trust with them, and promote the integrity of the research (Israel & Hay, 2006). As the way of observing ethics in research, several attempts were taken. Firstly, I filled a form to inquire permission from Norwegian Social Sciences Data Services (NSD). The letter I got from NSD was a sign of recognizing my project and approving me to continue with the project. Secondly, I sought permission from the relevant authorities in my country, Tanzania. As a University employer, a Research clearance from the University Vice Chancellor was sought. This helped me obtain permission from the Regional and District officers to go to a specific school where data were collected. According to Creswell (2009) and Kombo & Tromp (2006), it is mandatory that research participants get informed before they are approached for data collection. To comply with this, the respondents were informed before data collection through the use of consent letters. Consent letters contained important information about this particular research, and the importance of their participation in the study. The aim was to seek their consent, ensure voluntary participation and provision of information, as well as giving them free room to withdraw from the research participation any time they wished to (Creswell, 2009; Kombo & Tromp, 2006).

Creswell (2009) and Kombo & Tromp (2006) insist on anonymity and confidentiality in research study. In this study, the names of the region, school and participants in the entire study are kept anonymous. Teachers' names were represented by letters. Furthermore, the name of the region in the authorization letters was rubbed. This reduces the possibility of the participants being recognized. Additionally, the data collected from the respondents were kept confidential and erased after their use.

4.9 Limitations and Delimitations of the Study

Some factors were found to limit the study. One of them was the availability of teachers. Getting teachers to participate in the study was a bit challenging because the time data collection was done at the same time as the National Census, which normally takes place every ten years, and many teachers engaged in it as census officials. Additionally, this was a time of conducting Form II and Form IV national examinations, and many teachers were scheduled to invigilate these exams. The study intended to have six respondents, but due to this constraint, only four teachers were available for interview and observation. This might have affected the amount and quality of data. One-time observation was done; time was limited to make subsequent observations. Observing once might have caused reaction from the observed research participants (teachers). Gall, Gall & Borg (2007), say that when you observe for the first time the reaction from the research participants is high but it decreases in the subsequent observations, and slowly the respondents take the presence of the observer for granted and behave naturally. This might have affected the quality of data collected. The intention of this study was to have general teachers with a minimum of 10 years of experience in the teaching process. It is likely that these teachers have experienced teaching long time enough to be aware of how students with visual impairments should be taught and their learning environment should be adapted. Furthermore, they are aware of the challenges of teaching in inclusive classroom. Only one teacher, among the respondents, met this criterion. This also might have an effect on the quality of data collected.

On the other hand, the study was delimited by the ways teachers in inclusive classrooms teach students with visual impairments and the challenges they face in teaching them. The study was conducted in one of the southern regions of Tanzania, and confined to school X, which was selected based on the presence of students with visual impairments. Also the study, focused on the general teachers, teaching in inclusive classrooms having students with visual impairments. Classes observed were Form I and Form III. Furthermore, teaching involves a lot of aspects, but this study focused on the teaching methodologies teachers use to teach students in inclusive settings, and the challenges they face in this endeavor.

5 Data Presentation, Analysis and Discussion

This chapter presents, analyses and discusses the data collected from the field. The study's aim was to investigate how general teachers in inclusive classrooms teach students with visual impairment, and the challenges facing them. The study was guided by four research objectives. The first was to explore general teachers' knowledge on inclusive education. The second was to identify ways general teachers use to assess learning needs of students with visual impairments in inclusive classrooms. The third was to find out how general teachers adapt teaching methods for students with visual impairments. The fourth was to find out the extent of collaboration existing between general teachers and special needs educators, and parents of students with visual impairments for quality teaching in inclusive classrooms. Data were collected using interview and observation methods. Observation method was used to collect data for question three. It was important to use observation method for this question in order to have plenty of information on the adaptive methods, a key aspect of this study.

In presenting data, verbatim statements from the respondents are used to maintain the originality of the information collected. Data are presented in order of the research objectives. In each section, the presentation of the findings start, then discussion of these findings in relation to the literature reviewed in chapter two and three, immediately follows. The anonymity of the respondents is ensured by the use of letters **A, B, C** and **D** respectively. This chapter, therefore, starts with presentation of inclusive education, followed by identification of learning needs of students with visual impairments and adaptive methods teachers use to teach students with visual impairments. Finally is the discussion on collaboration between, general teachers and special needs teachers/parents of students with visual impairments. Challenges are not treated as separate entities, rather incorporated in their respective aspects, so that connections between particular aspects and their challenges are immediately seen.

5.1 Teachers' Knowledge on Inclusive Education

In answering the question about the meaning of inclusive education, two teachers had similar views and the other two had different views. While the first two were talking of inclusive education as "mixing together" other teachers involved some sort of acceptance and

welcoming attitudes towards students with disabilities in their definitions. To start with, is teacher **A** who talked of inclusive education in terms of putting together students with and those without disabilities as follows:

*Inclusive education is the education where by students with and without disabilities are **mixed together** in the class. In those days there were schools for disabled students and those for normal students but now we can see these students learning together.*

Similar to teacher **A**, teacher **D** on his side said that:

*Inclusive education is the process of **mixing together** students who are normal and who are not normal in the same class.*

Teacher **D** was asked to clarify the meaning of the term "normal" students and those who are "not normal". He elaborated that,

I say normal to mean students without disabilities and not normal to mean students with disabilities.

On the other hand, when she was asked the meaning of inclusive education, teacher **C** had the following to say:

……. Different people come to learn together in the same class.

When she was probed to clarify more on this statement, she narrated that:

*All **people are different, therefore should learn together** in the same class. Those with disabilities should be educated together with those without disabilities.*

Teacher **B** gave a definition of inclusive education as follows:

*Inclusive education is the consideration of how well children with disabilities are **welcomed and handled** by their fellow students. This is a result of education that the society has been getting about disability.*

Talking about the importance of inclusive education, teachers said inclusive education is important although the school environments are not supportive. To start with is teacher **B** who considered the importance of inclusive education in gaining life skills for students with disabilities. He said:

*If accompanied with good preparation Inclusive Education is good because mixing together children helps them to **gain life skills** that are helpful in their life.*

46

Teacher **C** was not far from this and she said that inclusive education helps students with disabilities to **learn together with people they will meet in the community** after they have completed their studies. On the same issue, teacher **B** in addition mentioned the advantage of inclusive education as the way of eliminating segregation. He said that:

> *Inclusive Education is good because it **does not segregate students with disability** to learn alone instead they learn together with other students in the same class.*

Teacher **D** also supported this and he said students with visual impairments should always be educated in inclusive settings. Challenges to inclusive education mentioned by teachers were, scarcity of teachers, and lack of knowledge of teaching in inclusive education, considering scarcity of teachers, teacher **D** said that:

> ***Teachers are not enough** and classes are many. This makes available teachers to have heavy teaching load. This situation is more severe for science subjects. Also there is a scarcity of special needs teachers.*

Teachers said they do not have enough knowledge of teaching in inclusive classrooms, and dealing with students with visual impairments. Teacher **A** said that:

> *Teachers **lack guidelines** of how to teach in inclusive classrooms. Teachers are using their creativity to deal with these diversities. There should be guidelines in these inclusive schools.*

Additionally, teacher **B** elaborated more focusing on the knowledge of writing and reading braille, he said that:

> *Many teachers including me **do not have the knowledge** of reading and writing in braille.*

Teacher **C** added that, due to the **lack of this knowledge**, it is possible that some students are left behind and do not acquire academic knowledge and skills they were supposed acquire.

Discussion

The teachers had something to say about inclusive education showing that they are aware of it. Teacher **A** and **D** defined inclusive education, and for them it means **putting together people** with and those without disabilities. However, their definitions do not seem to consider adaptations of teaching and learning environment because they do not reflect very much what is written in the Salamanca statement. The Salamanca definition and the principle of inclusive

education are not at all about "*putting together*". The principle of inclusion calls upon educationists to prepare flexible environments that are good enough for learning of marginalized groups in inclusive classrooms. Putting together is more physical, and does not necessarily involve needed changes and flexibilities. Considering the *"putting together"* definition, and the fact that teachers do not consider adaptation and modification of learning environments to students with special needs, one may argue that, teachers are defining inclusive education this way due to lack of knowledge of inclusive education.

The study conducted in Tanzania by Lewis & Little (2007) revealed that, teachers in inclusive schools in Tanzania, are not aware of inclusive education, and how to make environment become friendly and inclusive to all learners. Another study done in Temeke Municipality, in Dar-es-salaam showed that teachers do not have a uniform understanding of inclusive education. Inclusive education was seen to be confusing and complex (Miles, 2003).This argument can be strengthened by the answers given by teacher **A**, **B** and **C** who declared the **lack of enough teachers** with the comprehensive **knowledge of inclusive education.** Teachers may or may not have given correct answers of what inclusive education means, but the knowledge referred to here is not only the knowledge of what inclusive education means, rather the knowledge of how inclusive education can be practiced to bring about meaningful inclusive education. To justify argument, teacher **B** said they lack the knowledge of reading and writing in braille, a situation making students with visual impairments left out in the lesson. There might be several reasons as to why teachers understand inclusive education the way they do. One of the reasons could be that stated but teacher **A**. Teacher **A** said that, teachers **lack guidelines** of teaching in inclusive classrooms. This statement can be justified by the study done in Tanzania by Gronlund, Lim and Larsson (2010). The findings of the study revealed that, there are no clear policies and documents on inclusive education and how it should be implemented in schools.

Another reason can be the fact that, there are very few teacher training institutions in the area of special needs and inclusive education; therefore general teachers do not acquire sufficient training (ICC, 2008; Kapinga, 2012). However, the issue of not understanding inclusive education the way it is expressed in the Salamanca statement seems to be a global one, since the study conducted in Turkey and Spain, showed lack of knowledge among teachers towards inclusive education, and the whole philosophy behind it (Kesiktas & Akcamete, 2011; Simon *et al*, 2010). Proper handling of students with special needs in inclusive settings, is an

important feature of successful inclusive education, and depends very much on how teachers understand inclusive education. Therefore, lack of knowledge may hinder proper provision of inclusive education, for students with special needs. On the other hand, teacher **B** talked of inclusive education considering how the school community **welcomes and handles these children** with disabilities. This definition has some elements of *"acceptance and belonging"*, important features of the principle of inclusive education. Being accepted and having a sense of belonging makes students feel part of the community. It is argued that, respect for each other, being welcomed by the school community, and participating in the school activities like other students, regardless of the differences, is important to students with special needs in inclusive settings (Everett, 2009; NBACL, 2007).This definition seems to be relevant to the meaning of inclusive education given in the Salamanca statement which states that, inclusive education is the dynamic approach of responding to diversities among the students, by modifying the education systems to cater for the needs of all students in inclusive settings (UNESCO, 1994).

5.2 Identification of Students' Learning Needs

It was important to know how teachers assess the needs of students with visual impairments so as to apply appropriate adapted and modified teaching. Therefore, it was important to gather information from these teachers on how they assess learning needs and learning styles, of the students with visual impairments in their classes in order to plan and implement teaching properly. In answering this question, teachers mentioned three main ways they use to assess students with learning needs, which are; contacting a student to know his/ her background, using previous records and observing student's performance in the class.

The first one was direct contact with a student to know their learning problems. This was mentioned by teacher **B** and **C.** Teacher **C** said that:

> *I normally ask students about their life **background and learning problems** regularly when I notice some learning difficulties in them. I also share with my fellow teachers on the students' problems and find solution together.*

Another way was also mentioned by teacher **B**. This teacher pointed out to **use students' previous academic records** to assess students' learning and performance abilities. Teacher **A** mentioned another way:

*I look at **student's participation** in the class, and performance in different exams and assignments. If the performance is not good, I call and talk to him or her immediately.*

On the other hand, teacher **D** acknowledged the importance of assessing learning needs of students with visual impairment, but he said, has no way of doing this assessment. Challenges to assessment of students' needs were mentioned. For example, teacher **C** admitted that still there is lack of proper ways of assessing the students with special needs in inclusive classrooms, because of the **lack of knowledge** of identifying their special needs. In addition to lack of knowledge of assessing their needs, it was also stated that large numbers of students in the class limit the possibility of, not only assessing their learning needs and learning styles, but also appropriate teaching to meet the needs of students with visual impairments. Teacher **A** said that:

*Even though the focus is on students with visual impairments, **there are many students** and probably all of them have different special needs and learning styles which need to be met. For example, the style used by one student is not similar to the style used by another student, because students are not the same. But the large number of these students in our classes is a problem. The number of students in one of my classes is 56. Other classes have more students.*

Teacher **A** elaborated further by saying that:

The large number of students makes me as a teacher to fail to meet the specific needs of every student in the class.

Discussion

An assessment of student's learning needs, before the start of the course of study, is very important. Assessment is important because students have different cognition, learning needs and learning styles, due to different experiences, background and the way these children have been interacting with other members of the society (Vygotsky, 1978). Assessment will help a teacher to know the learning ability, learning styles and learning needs of the student, in order to plan teaching accordingly. Whether a student needs discussion groups, questions and answers strategies, large prints, magnifiers and lenses, braille etc., should be known before the process of teaching starts. These should also be shown in the Individualized Education Plan (IEP) for further implementation (Spungin, 2002). Teachers seemed to consider this importance; that is why they talked about ways they use to identify the needs of students.

Teacher **B** and **C** talked about communication with the students directly to **discover their backgrounds and learning problems**. This is also emphasized by Johnsen (2001) who points out that a student is the most important source of information, about his or her learning needs, through regular communication to discover their interests and priorities, as well as their preferred learning styles. Teacher **B** and **A** stressed on **previous academic records and participation in the class**, as ways of assessing the learning needs of the students. They said that through student's previous and current performance in the class, a teacher can be able to identify what a student needs in order to learn better. Also, a teacher can use activeness of a student in the classroom in answering questions, and participation in various classroom activities. Spungin (2002) stressed that, reading academic records, can help a teacher to know educational needs of the student. Johnsen (2001) supports this, and comments on the importance of formal and informal assessment of learner's performances in the class to identify the needs of the student.

The purpose of assessing students' needs, is to help a teacher plan teaching and prepare conducive teaching environment that is relevant to the assessed needs (Best, 1992). However, teacher **C** reported the **lack of knowledge** on how to identify the needs of students with visual impairments in inclusive classrooms among teachers. This seems true considering the statement from teacher **D**, who confirmed by saying that he has no knowledge of identifying the needs of these students. This supports the findings of the study done in Tanzania by Lewis & Little (2007), which revealed that there is a lack of awareness among teachers on the knowledge of inclusive education (Lewis & Little, 2007). Furthermore, the study conducted in Same district, also in Tanzania, found that, teachers teach without considering individual needs of students. Teachers were teaching as if all students in the class were sighted using talk and chalk methods (Mmbaga, 2002). Through this way, it is obvious that, students with visual impairment were the mostly affected. Furthermore, teacher **A** mentioned the **large number of students in the class** as the major setback to their failure to meet students' learning needs. He stated that many classes have a minimum of 56 students. It has always been emphasized that teaching in inclusive classrooms, and meeting the educational needs of students, is always difficult and challenging. This is because inclusive teaching intends to identify individual needs of the students and meeting them accordingly (Peters, 2003).

The lack of knowledge among teachers and large number of students in inclusive classrooms may suggest planning and implementation of a teaching process that does not meet the needs

of all students in inclusive classrooms. Due to the nature of their disability, it is likely that students with visual impairments are mostly affected.

5.3 Adaptive Teaching Methods

Through the interview, teacher **A** and **D** admitted that it is difficult to use a single method of teaching because like other students, students with visual impairments learn differently, and have different learning needs. So teachers claimed to use different methods depending on the situation. Teacher **A** narrated:

> ***It is difficult to use a single method*** *for teaching because they learn differently; Single method does not satisfy the needs of all.*

Supporting this same issue, teacher **D** also gave the following statement:

> ***I use many methods***. *For example, if I know that they have experience of the topic, I use questions. After some answers I elaborate then continue teaching. Other times I use group discussions or lecturing methods depending on the nature of the topic.*

Although the other two teachers did not say what teacher **A** and **D** said, they mentioned several methods they use to teach students with visual impairments in the class (these methods are discussed below). This is an indication that, they have the same belief that, students with visual impairments need different methods of teaching. Furthermore, classroom observation showed some teachers switching from one method to the other in a single lesson. However, these methods were mostly common to all students. No adaptation was observed. For instance, a teacher could change from question and answer to a lecture method without considering students with visual impairments.

Discussion

Responses given by teacher **A** and **D** above show that, teachers are aware that an inclusive classroom possess a variety of students with diverse learning needs, and therefore they should **adapt teaching and use different methods** in order to meet the needs of every student in the class (NBACL, 2007). However, teaching students with visual impairments in inclusive classroom is not easy; it is a challenge since teaching needs to be more specific aiming at meeting the needs of each student (Peters, 2003). It was observed from the teachers, that teaching and meeting the needs of students with visual impairments in inclusive classroom, is

very difficult, since most of the time teachers were using methods common to all students. Though, this argument is raised, Raymond (1995) argues that it is not always that the specific needs of these students can be met by the use of specialized teaching, instead they can be met by using strategies that are common to all students, regardless of their learning differences. It can be said that, this is the reason for the observed situation, for teachers using common strategies to teach all students. Still, when lack of participation and involvement of students with visual impairments is considered, one can maintain the argument that; lack of knowledge of teaching in inclusive classrooms was the reason for using common methods.

Studies done in Temeke and Same districts, in Tanzania prove that teachers do not have enough knowledge of teaching in inclusive classrooms (Lewis & Little, 2007; Miles, 2003; Mmbaga, 2002). However, lack of knowledge among teachers seems to be a global problem, since the study done in Turkey and Spain, also showed lack of knowledge among teachers who are teaching students with visual impairments (Kesiktas & Akcamete, 2011; Simon *et al*, 2010). At this juncture, there are two major reasons that can be convincing, to believe that, teachers were teaching that way because of the lack of knowledge of teaching students with visual impairments. One of the reasons is that, the answers given by teachers during the interview session and the nature of their teaching which was not aiming at meeting the needs of students with visual impairments. Another reason is that, lack of knowledge among teachers of teaching students with special needs and with visual impairment in particular is a global issue. Many studies documented the lack of knowledge among teachers. Therefore, one can be easily convinced that, teachers were teaching that way because of the lack of knowledge and not otherwise.

The following are different methods mentioned by teachers to be used in teaching students with visual impairments in inclusive classrooms.

5.3.1 Questions and Answers

All teachers mentioned questions and answers as one of the major ways of teaching in inclusive classrooms. Some of them said that it helps to make students active during lessons. Teacher **A** and **C** said that, they prefer to use questions and answers, because it is simple to use. They said, through this method it is easy to observe activeness of students with visual impairments in the lesson. Furthermore, Teacher **D** elaborated by saying that:

***Brainstorming and asking questions** about the previous lesson before continuing with the new lesson is important for all students and for students with visual impairments.*

Similarly, teacher **B** said that:

*.....Only what I do is to give students **exercises and assignments.** I encourage the good performance. **I create a kind of competition** in the class.*

In addition to this, teachers specified that students with visual impairments have limitations in answering questions so they assign them only some types of questions. To start with is teacher **A** who pointed out that he uses alternative questions to calculations:

*There are some questions that these students do not perform, for example questions involving calculations. In that case I find an **alternative question** in order to measure the same skill that would be measured by calculation question.*

Teacher **B** said he uses explanatory questions instead of questions involving drawing questions. He said that:

*……They are not asked questions involving drawing diagrams and maps because they cannot draw them. Sometimes I require **oral responses** to answer questions.*

The challenge of using questions and answers method, especially written ones, mentioned by all teachers was the **problem of marking**. These teachers do not have knowledge of reading and translating braille, so they rely on special teachers who help them to mark scripts of students. Sometimes, these special teachers delay to mark the scripts. This is what teacher **C** said:

Due to lack of braille knowledge ……., special teachers take the role of marking. But sometimes there is a delay on the whole process of marking the scripts.

Insisting on the same issue, teacher **A** exemplified that he had given students an assignment that needed to be marked by a special teacher, who was always busy. As an alternative to the delay in marking, teacher **D** said that,

We are sometimes forced to use their fellow students who know Braille to help us translate the braille writings so that we can mark ourselves.

On the other side teacher **D** said that due to lack of braille knowledge, he mostly uses oral questions instead of written ones.

Observation showed teacher **A** using lecture method switching to questions and answers in the later stages of the teaching process. Whereby, teacher **C** started and continued teaching, using questions and answers throughout the lesson. However, the involvement of students with visual impairments was rarely considered by these teachers. Moreover, teacher **C** continued teaching in the absence of students with visual impairments, after some minutes she discovered their absence, and sent a student to go and call them. In addition, teacher **D** mostly used lecture method while teacher **B** used discussion groups.

Discussion

It is said that, a paradigm shift from the traditional teaching approaches to modern ones which involve interaction between a teacher and a student, is required (Mmbaga, 2002). One of these interactive approaches to teaching is questions and answers which was used by these teachers. Questions and answers, particularly open ended questions, have been found to be useful in uncovering learning deficits in conceptual experiences and understanding in the students with visual impairments due to lack of vision. Through this way, a teacher can know the students' understanding of the concepts and take measures to ensure that students understand the concept (Best, 1992; Bishop, 1996). Likewise, teacher **A** and **C** consider questions and answers very important for teaching students with visual impairments. In addition, many teachers were observed using it in some ways in their teaching. This may suggest that, what was said by these teachers and observed in classes, is what happens most of the times, because they said this methods is easy to use. These teachers used this strategy in an adaptive way. Some teachers, such as teacher **B**, tried to use oral questions to get oral answers instead of using written ones. Using oral questions and responses instead of written ones can be a good strategy of adapting questions. This agrees with the argument that; assessment may quite apply similar tools to the tools used to assess students without visual impairment. However, these tools need to be adapted if they are to work appropriately. Oral questions and answers can be an example of this (Spungin, 2002).

But, sometimes teachers said they use written questions to students with visual impairments, while exempting them from some forms of questions. For example, teachers **A** and **B** said that questions involving calculations, drawing diagrams and maps, are not used to assess academic progress of students with visual impairments. This might be good if alternative questions could be found to compensate the knowledge provided by the questions they are exempted

from. ICEVI (n.d), states that; students with visual impairments in secondary schools are automatically placed out of the top grades (Division I & II), because they are exempted from some subjects and topics due to their inability to see. Considering this proposition, it can be said that students with visual impairments may be performing poorly, and later on eliminated from the education system, because they are denied some of the knowledge and skills that would help them perform better in the class. It is interesting to note that, teacher **B** said, he creates competitions in performance among the students in the class to encourage performance among the students, including those with visual impairments. It is good that teachers, such as teacher **B,** wish to see students perform better; however, this endeavor is not one of the aims of using Individualized Education Plan (IEP) in inclusive classrooms. IEP focuses on accomplishment of individual goals set for a student. It does not focus on what a student can do in comparison to other students (competitive learning) (Salisbury, 2008; Spungin, 2002). Furthermore, Johnsen (2001) suggests that, teachers insisting on competitive learning facilitate norm kind of assessment, which focuses on ranking and grading students based on their performances. This system creates poor self-image among the students with visual impairments. Alternatively, a modern way of assessment in inclusive classrooms is proposed. It demands teachers to focus on creating cooperative learning among the students. It also insists teachers to plan teaching and implement it aiming at meeting individual student's needs (*Ibid,* 2001).

5.3.2 Group Discussions

Group discussion is another strategy mentioned; all teachers said they use it in inclusive classrooms because it helps students to learn from each other. Likewise, teacher **B** and **D** acknowledged that discussion groups are very important for students with visual impairments but they are rarely used because of shortage of time. Teacher **D** pointed out that:

I use many methods…… I use group discussions rarely…….. So they discuss in specific groups. In the next period they present in front of others.

Supporting this statement is teacher **C** who narrated that:

I rarely use group discussions for teaching because it is wastage of time, when I use it frequently; I will not finish the syllabus……

Furthermore, teacher **A** pointed out that:

Discussion is more helpful to a student with blindness than to a student with any other kind of disability because they cannot see things but they can hear what is said. Therefore, I teach them using group discussions ……when time allows.

Teacher **A** emphasized on the challenge of using group discussion, she said, it is a good to use but it is an obstacle when it comes to finishing the planned syllabus. With group discussion little content is covered.

Classroom observation showed that teacher **B** being the only one observed to use this kind of method for teaching. He arranged students into groups of five students for discussion. Students discussed for 10 minutes after which one member was selected for the presentation in front of the class. This teacher was observed to emphasize participation of students with visual impairments. Other teachers did not use group discussion although they mentioned it.

Discussion

These teachers stressed on the importance of group discussions to the learning process of students with visual impairments in inclusive classrooms. This view is supported by Johnsen (2001) who points out that in order for learning to happen, an interactive process between a teacher and students in an adaptive teaching and learning environment, is needed. Furthermore, Wade (2000) recommends cooperative group discussions in inclusive classrooms to discuss a complex assignment. According to Johnson & Johnson (1986), cooperative groups in inclusive classrooms have proved to be good in promoting academic achievement, positive attitude towards the subject, and social interaction. Despite the importance of group discussions, teachers admitted that they don't apply it often. This was clearly proved in the classroom observation, because only teacher **B** used it. What teachers said, and what was observed, reflects the fact that participatory methods are rarely used in these classes (Mmbaga, 2002). However, Mitchell (2008) suggests the use of group discussions in these classes, because of the large number of students. Group discussions, seems to be suitable in these classes mostly found in developing countries, because it is like creating small classes within the big class and many teachers out of one teacher. If teachers would consider this, we would expect them adopting group discussions and using it frequently in their teaching, because they said their classes have large number of students.

The obstacle to the use of this method, as mentioned by teachers themselves, however, is not the large number of students but time limitation . This means that time allocation for their

lessons annually is not enough to finish the course of study. Therefore, teachers avoid using group discussions and other participatory methods, and opt to use methods which do not allow participation of students in the lesson. An inclusive classroom requires the use of adaptive participatory methods to deliver the content to meet the needs of students. Meeting the needs of students also requires flexible curriculum. However, the study done by Lewis and Little (2007), to review the policies on inclusive education in Tanzania, reported rigidity in the curriculum used in inclusive classrooms. This curriculum does not allow flexible teaching, testing and setting learning objectives of the students. Instead it emphasizes teachers to finish the syllabus within the time frame, and teach according to the guidelines shown in the general curriculum, without taking into consideration the quality of education provided. Similar results concerning the rigidity in the curriculum were observed in the study conducted in New Brunswick (NBACL, 2007). In this way, implementing IEP becomes difficult.

5.3.3 Lecture Method

In addition to questions and answers, all teachers also mentioned the lecture method as one of the methods they use in inclusive classrooms. They said they prefer to use this method, because it saves time. But they also said that it is easier to use in larger classes. Talking on saving time as the reason to use lecture method, teacher **C** said:

> *Using participatory methods in inclusive classrooms is very difficult and consumes much time, for example letting them discuss a subtopic and later on present takes time. Therefore most of the times I use **lecture method because it saves time.***

On the other side, large class size is the problem that forces them to use lecture method, teacher **B** stated:

> *I mix different methods……with the lecture method dominating. The reason behind is to be able to finish the syllabus. Another limitation is the **large number of students** in the class.*

Teachers did not say anything when they were asked how they use lecture method to benefit students with visual impairments in their classes. According to teacher **B**, the use of lecture method is challenged by the presence of slow learners in the class, because they have to repeat teaching several times for these students to understand properly. However, this creates another problem to fast learners as they become bored and as a result, teachers face a dilemma in teaching. He said:

58

> *Sometimes I repeat so that **other students can understand** the concept, for other students repeating the same thing that has not been understood by other students, is also boring.*

Classroom observation showed that, most of the teaching for teacher **A** was dominated by lecture method. Teacher **B** mostly used discussion groups in addition to lecture method. On the other side, teacher **C** did not use lecture method at all; she taught the whole lesson by asking students question and getting responses from the students. It is only teacher **D** who used it throughout the lesson. Generally, involvement of students with visual impairments was only observed for teacher **B,** especially when he started using group discussions.

Discussion

Non-participatory methods, such as lecturing, have been part of teaching in developing countries including Tanzania (Mmbaga, 2002). This agrees with the statements from teachers, and observation revealed that. All teachers said they use lecture method in inclusive classrooms. Observation also suggested that these teachers are widely using lecture method in their daily teaching, because one time classroom observation done, showed many teachers using it in one way or another. Teachers said they go for it, because inclusive teaching is more challenging than using lecture method, and that lecture method help them to **finish their syllabi on time**. This might be the result of a rigid curriculum (Lewis & Little, 2007). It has always been emphasized for teachers to make sure that they finish the syllabus at every end of the year. This pressure makes them use lecture method, which is discouraged and said not to be appropriate for inclusive teaching, especially for students with visual impairments (Mmbaga, 2002).

Furthermore, teachers said they use lecture method very often because of **large classes** in which application of participatory methods is difficult. They said the minimum number of students in their classes is 54. The issue of large number of students in inclusive classrooms, is supported by a study done by Polat & Kisanji (2009).This study revealed that many inclusive classrooms in the country, have large number of students with an average of 80 students per class. It is true that this situation may threaten the use of participatory methods, and therefore affecting the quality of teaching in these schools. A paradigm shift in teaching, from non-participatory approaches, to a teaching that involves interactions between a student and a teacher, is needed (Mmbaga, 2002). But this shift cannot be accomplished if the teaching conditions remain the same. There is a need to make a lot of deliberate measures to

implement, monitor and evaluate the guidelines mentioned in the policies (Grol, 2000). These will help teachers to use instructional approaches, allowing participation of students with visual impairments in these inclusive classes. From these teachers' perspective, the **presence of students with special needs** is a challenge. Similarly, the findings from the study conducted in Same district, showed teachers ignoring students with special needs and concentrating only with the so called "bright students" (Mmbaga, 2002). The principle of inclusive education, demands teachers to cerebrate differences among students and that, these differences should be catalysts for teachers to nourish their teaching (UNESCO, 1994). This spirit was lacking among these teachers.

5.3.4 Encouraging Peer Support

Some teachers considered the help from fellow students as helpful to students with visual impairments. Teacher **C,** said to put efforts encouraging fellow sighted students to help students with visual impairments by providing notes and clarifying difficult concepts to them. In order to be motivated to help, these helpers are exempted from other duties. Teacher **D** gave this statement:

> *I encourage their fellow students to help students with Visual Impairments academically and in various activities in the class because their performance is not good. The good thing is that, these students are not doing other outside activities in order to motivate them to help these students with visual impairments.*

In order to make sure this strategy works, on the other side teacher **A** said she encourages students with visual impairments to use their friends to help them, whenever they need assistance from them. Consider this statement:

> *I encourage students with visual Impairments to use their friends to get lesson notes. I also use extra time if available for the slow learners so that they understand better.*

Classroom observation revealed some kind of assistance to students with visual impairments from their fellow students. But this assistance did not result from teacher's encouragements but it was sighted students' own initiatives.

Discussion

Peer assistance and support, is very helpful in improving academic achievements of all students in the class (Lipsky & Gartner, 1997). It is even more helpful to students with visual

60

impairments. It is suggested that, students with visual impairments in inclusive classroom, should be paired with their fellow students without visual impairments. For example, through their fellow students, they will be able to organize their works and find correct page. These fellow students will also help them to repeat teacher's instructions (UNESCO, 2001). Peer support seems important to students with visual impairment, considering what teacher **D** said, that, their performance is not good as compared to other students without visual impairments.

Understanding this importance of peer assistance the teachers, especially teacher **C** and **D**, claimed that they encouraged it in the class. Classroom observation revealed several help and assistances from sighted students directed to the students with visual impairments. This is consistent with the claim that, assistance from other students can help students who are academically lagging behind to accomplish activities, and achieve higher performances, they could not do achieve on their own (Vygotsky, 1978; Wade, 2000). This is what Vygotsky (1978) called the Zone of Proximal Development (ZPD). ZPD is the gap in knowledge between what a student can achieve alone and what he/she can achieve when assisted by more capable peers. Through peer assistance, the gap of knowledge becomes filled. However, in the observation teachers were not seen encouraging students towards helping students with visual impairment; rather it was students' own initiatives. But it might also be true that students' initiatives to provide help and assistances to students with visual impairments observed today, are the results of long term efforts and encouragements that has been instilled into the minds of students by their teachers. Therefore, students have developed a spirit of helping them even without teachers' daily encouragement.

5.3.5 Teaching Resources

All teachers claimed to use teaching materials. They said they are very important for students with visual impairments. The challenge is the availability of teaching materials and knowledge to adapt them, if they happen to be available. Teacher **A** and **C** said they use them when they are available. Teacher **A** stated that:

>   *I use teaching materials but they are **rarely available**. They are very important to be used especially in inclusive classrooms.*

When teacher **A** was asked if she makes any efforts to modify these teaching materials, when they are available, the answer given was similar with what teacher **B** said. They said that they

do not adapt them, because they do not have knowledge of adapting them. Teacher **B** narrated:

> *Frankly speaking, I cannot adapt teaching materials because myself **I do not know how to modify** them to specific needs of students in the class. I think this is the task of special teachers.*

Insisting on adapting teaching resources, with the focus to the use of models, teacher **D** stated:

> *Using models for students with visual impairments would have been better to help them understand different concepts in the class but **preparation of these models is difficult**.*

Not only teacher **D** but also teacher **B** added that:

> *My subject is good **if there could be enough materials** like touching maps. This makes them to rely their learning through imaginations.*

To overcome the problem of teaching materials, teacher **A** stated to take initiatives, through exerting pressure on the department to provide them with teaching materials, and arranging academic tours to help students with visual impairment explore the natural environment and learn better. Classroom observation showed that; all teachers did not possess any other teaching material except the lesson notes and lesson plans. In addition, teacher **A** and **D** had some text books in their hands which they did not use in the class.

Discussion

Answers from teachers and classroom observation suggest that teachers see the importance of teaching materials in the class for students, not only for the students with visual impairments but all students in general. This is consistent with the proposition put forward by studies done in the country. The findings of these studies propose that, inclusive education for students with visual impairments, becomes successfully implemented if appropriate teaching materials are available (ICC, 2008; Mboya *et al*., 2008; Mmbaga, 2002; URT, 2008). Furthermore, the findings from this study, and other studies in the country, are consistent with the global view of this contention. Pauline (2003) claims that, the use and adaptations of teaching materials to suit the needs of students with visual impairments in inclusive classroom, is very important. For instance, the use and adaptation of printed text through enlargement, increasing the font sizes, bolding the printed materials, increasing contrast, is very important for students with low vision (Bishop, 1996; Mastropieri & Scruggs, 2010). If a videotape has to be shown, it is wise to show it to students with visual impairment so that through a specialized teacher's or a

classmate's explanation, they understand all the visual concepts in it before the class watch it. For a film with sub titles, a classmate or teacher can read aloud to the class to help those with visual impairment (Spungin, 2002).

Moreover, teachers said that; they are not using teaching materials, because **teaching materials are not available**. These findings agree with the opinions that relevant teaching materials, to students with visual impairments, are not readily available due to lack of enough funds (Mboya *et al*, 2008; URT, 2008). This situation is said to affect mostly the developing countries including Tanzania and, therefore, hindering inclusive practices in these countries (Zindi, 1997). Apart from lack of these teaching materials, teachers acknowledged that, they **lack the knowledge and skills** of adapting these teaching materials to become relevant to the needs of students with visual impairments (Lewis & Little, 2007; Miles, 2003; Simon *et al*, 2010). These reasons also maybe suggestive to why classroom observation showed no teacher entering the class with teaching materials. Considering their importance, the lack of teaching materials to teach students with visual impairments in inclusive classrooms, suggests a big gap between the needs of students with visual impairments, and what is actually achieved by these teachers in inclusive classrooms. This situation makes the quality of education to these students to be questionable.

5.3.6 Voice Projection and Calling Students' Names

Another strategy mentioned by teachers, was calling names of students with visual impairments, and using loud voice in order to capture the attention of the students with visual impairments. Teacher **B** and **C** said they use loud voice when they are in the class. This is the statement by teacher **C** on this aspect:

> *I normally **talk loudly** in the class in order that all students hear what I teach because some students with low vision prefer to sit at the back of the class.*

In addition to the use of loud voice, teacher **B** together with teacher **D** pointed out calling students' names as important in attracting attention and making the lesson interactive. In this regard, teacher **B** said that he calls the names of students with visual impairments to ensure their presence in the lesson, and make them feel that they are included. Furthermore, teacher **D** supported this by saying that:

*In the class I normally **call their names** to make them participate especially when I ask them questions and they have to answer these questions.*

The challenge to voice projection and calling students' names is, understanding the language of instruction (English) is the barrier to whatever a teacher talks in the class. Teacher **C** stated that, this is a problem even if loud voice is maintained. In addition, teacher **B** said that, even if you call their names to answer questions, they do not respond appropriately because many students do not understand the language of instructions (English). Teachers are forced to mix with Swahili language, the National language. This is revealed in this statement by teacher **C**:

*Students **do not understand English language**; therefore teachers sometimes must mix with Swahili language. Sometimes they may ask you to elaborate a concept in Swahili. This makes them to rely on creaming the concepts instead of understanding them.*

Classroom observation showed teachers mastering students' names. Teachers were also observed to project and maintain loud voice in the class, except for teacher **A**. Teacher **A** could not sometimes talk loudly to enable students at the back to hear well. Furthermore, teachers were using ambiguous language. These teachers were using words and phrases that possibly put the students with visual impairments in dilemma, because they could not see what/who exactly their teacher was pointing or referring to. For example teacher **A** was heard using phrases like "this region", "that region", "do you remember this one?" etc. Also, teacher **D** was saying words like "this" or "that" to show things written on the blackboard.

Discussion

Verbal information remains to be one of the most important sources of information to students with visual impairments (Spungin, 2002).Teachers equally saw verbal information its adaptations as important to these students in inclusive classroom. Teacher **B** and **C** mentioned the **use of loud voice** as their strategy to attract attention from the students. Teachers were also observed to maintain the voice at an audible level. This is important to help all the students in the class hear what their teacher says. Similarly to this, Best (1992), comments that, it is important for the voice of the teacher to be loud and pleasant. By pleasant it means that it should produce a relaxed tone and pitch. The voice of the teacher also, needs to be interesting to listen to. Speed of talking, volume and pitch are very important to make the voice interesting for students. Likewise, for the same reason stated above, it is seen as important for a teacher to **call students' name**, when a response is required or if a teacher wants to encourage them to ask questions, instead of using words like "you" in order for a

64

student to know exactly who is addressed. It is good that teachers considered this, and they were able to maintain this requirement in inclusive classroom for the benefit of students with visual impairments. The one time observation, was enough to prove the motives all teachers have towards accomplishing this, although it was mentioned only by teacher **B** and **C**. According to Mastropieri & Scruggs, (2010) & Salisbury (2008), if names of students with visual impairments are directly called, their attention towards the lesson is going to be drawn. UNESCO (2001) adds that, it is important to use students' names during class discussions so that students with visual impairment, are in the position to understand who is talking.

However, these teachers especially teacher **A** and **D** were observed using ambiguous language. Mastropieri & Scruggs (2010) discourages the use of ambiguous language and phrases like "over here", "this and that". They say that, ambiguous language should be avoided when a teacher is teaching, because it cannot help students with visual impairments to understand what the teaching is referring to. Teacher **B** and teacher **C** also stated a barrier to the use of this strategy, especially on the use of loud voice. They said that, students do not understand English language. Hannell (2007) and Grace & Gravestock, (2009), stress that, language is an important tool used to transfer information between a teacher and a student; and that it is important in the learning and thinking process of the student. This means that, students should be able to understand the language used to communicate in the class. Since teachers mentioned this language problem of their students, it can be anticipated that failure of these students, with visual impairments, to understand the language of communication, leads to failure to grasp the lesson content, and finally leading to poor performance of students including those with visual impairments in inclusive classrooms.

5.3.7 Enlarging Hand Writing

Only teacher **A** pointed out this strategy as helpful to students with low vision. This teacher pointed out that he always writes large figures and characters on the blackboard for students to see clearly. She said that:

> *My hand writing on the board is always big enough for those with low vision. I am not doing this for these students but it is the nature of my handwriting.*

Classroom observation revealed what teacher **A** claimed during interview session. She was writing large characters as she said. The intention being to help all students in the class to see

the letters clearly regardless of their positions. This was observed not only to teacher **A**, but all teachers, although they did not say anything about it.

Discussion

Enlarging the written or printed characters is by itself an adaptation. All teachers were observed to enlarge written characters on the blackboard. Furthermore, teacher **A** mentioned enlargement of written text, as one of the strategy to use for students with low vision. Consideration of enlarging written texts by teachers, is an indication that teachers are aware of the needs of students with visual impairments, especially those with low vision, and they want to meet them. This practice of teachers, is in accordance with the suggestion that teachers should use large writing text on the blackboard or on visual aids. In addition, teachers are encouraged to use colored chalks whenever possible (UNESCO, 2001). Meanwhile, students with low vision should be provided with a copy of notes, which are written on the board or presented on a projector (Spungin, 2002). Furthermore, if these notes are in printed text, they can be adapted through enlargement, increasing the font sizes, bolding the printed materials, increasing contrast, adding colour, and adjusting spaces between characters (Bishop, 1996; Mastropieri & Scruggs, 2010). However, it should be made clear here that; it is very difficult for these teachers to fulfill some of these requirements, because some of these requirements are beyond their capacity. For example, it is the Government and school management that should provide things like colored chalks, computers, printers and photocopiers to produce the desired texts. These responsible authorities do not facilitate this requirement; sometimes due to lack of funds making the attainment of inclusive education practices, to students with visual impairments in these classes, unrealistic (Zindi, 1997).

5.3.8 Additional Time

Time allowance in doing classroom activities, is another strategy mentioned by teachers as useful to students with visual impairments. Two teachers said that it is important for students with VI to be allocated extra time during assignments and examinations due to different reasons associated with their inability to see. Teacher **B** narrated that:

……sit for their exams and they are given extra time. There is a time to read questions for them before they start doing it……I also add them time for doing assignment.

On the same issue teacher **D** added that:

In all kinds of examinations, students with visual impairments are given 20 minutes extra for every 1 hour. This is because a student using Perkin's braille or stylus is slower in writing than a sighted student. Also, when I give them assignment, I add them extra time.

However, during observation there were no deliberate measures taken by teachers to ensure addition of time for the students with visual impairments in the assignments. Although there were some activities and assignments given in the class but a one-time classroom observation, is not enough to reveal this.

Discussion

Teachers understand that time allowance for students with visual impairment, is crucial to accomplish their written and practical assignments, that is why teacher **B** and **D** took this into consideration. They referred 20 minutes additional time considered by the Government for National wide examinations. They also stated adding time for these students at their personal level. It is true according to Mastropieri & Scruggs (2010) that, students with visual impairments spend more time in many of the activities they do in the class, as compared to other students without visual impairments. For example, reading printed papers for students with low vision, as well as reading and writing in braille for students with blindness, takes a lot of time as compared to the time spent by other students without visual impairments.

Considering the need of much time for students with visual impairments, the Government through the Ministry of Education was also said to take initiatives to have an addition of 20 minutes for every one hour in Mathematics examination, and 10 minutes for every one hour for other examinations, for students with low vision and blindness (URT, 2007). It might be that, the implementation of this initiative has already started; that is why teachers mentioned those 20 minutes decided by the Ministry. Addition of time for students with visual impairment, as considered by the Government, seems to be a good thing, but this added time is not enough, especially for students with blindness using braille machines to write and read. Writing and reading through braille consumes more time than that mentioned above. Supporting this Spungin (2002) stresses that, it is generally acceptable to add half of the time for students with low vision, and twice as much for students with blindness (Spungin, 2002). As an implementation of this, Salisbury (2008) comments that many external examiners recognize this extra time requirement, and propose 100% additional time for students with visual impairments. The Government should plan adding more time to students with visual impairment, because of the high extra time demands these students have for their learning.

5.4 Collaborations

Collaboration here reflects the importance of general teachers collaborating with special needs teachers, and parents, for effective teaching and implementation of the Individualized Education Plan (IEP) for students with visual impairments. It is, important to start with IEP; thereafter collaboration of teachers with SNE teachers and parents will follow.

5.4.1 Individualized Education Plan (IEP)

When teachers were asked if they knew what Individualized Education Plan (IEP) means, teacher **A** and **C** said "**Yes**" they know it. The other two teachers, **B** and **D** gave a response "**No**" meaning that they don't understand IEP. Teacher **A** and **C** were asked further to give the meaning of IEP according to their understanding. Teacher **C** explained IEP as the plan used to teach students in inclusive classrooms while teacher **A** gave the following definition:

IEP is a plan that involves teachers preparing learning objectives for a student in collaboration with a student and parents.

When teacher **A** and **C** were asked for implementation of IEP, for students with visual impairments, all of them denied implementing it. While teacher **A** could not give a reason as to why she is not implementing IEP, teacher **C** gave the following reason:

*I do not implement IEP because the **system does not allow** me to. There is general teaching and learning plan that the educational system has set therefore no room for a teacher to plan his/her teaching plans aside the ones set.*

The phrase "the system does not allow" seems to be a **challenge** to the implementation of IEP. Teacher **B** and **D** were not asked for implementation of IEP because they said that they do not understand anything about it.

Discussion

Individualized Education Plan (IEP) as a result of team planning, seems to be important, because it is not possible for a single person to possess all the important and necessary skills of service delivery to a student with special educational needs. All scholars holding this view, believe that team planning and implementation of IEP of a student with special needs, is crucial if the maximum potentials of a student with special needs is to be reached (Mitchell, 2008). Teacher **C** said, that IEP is a plan of teaching students in inclusive classrooms. Teacher

A talked about IEP and how it should be prepared, by talking about parents as important partners in preparation of IEP. She explained it in terms of the objectives which are prepared for students in inclusive classrooms. The way teacher **A** and **C** talked about IEP, is almost similar with how Spungin defines it. Spungin (2002) defines it as a plan of study, consisting of a list of goals extracted from the general curriculum, which is designed specifically to meet the needs of a student with special needs. This plan of study is prepared by a team of specialists, including parents, who work together to determine the specific academic needs, and how to accomplish them to a specific student.

On the other side, teacher **B** and **D** said they had no understanding of the concept IEP. The lack of knowledge for teacher **B** and **D** on IEP, can be a result of lack of general knowledge among teachers about the entire inclusive and special needs education. Kapinga (2012) argues for lack of sufficient in-service training among teachers on the area of special needs education. This has a great impact on the education of students, not only with visual impairments but all students with special academic needs in the class. Inclusive education knowledge has not yet been spread enough, and therefore the concept is not well understood among teachers, since it is a new approach in Tanzania (Miles, 2003; Mmbaga, 2002). The lack of knowledge on inclusive education, and its underlying concepts, including IEP, may bring a problem to its implementation in inclusive classroom for teachers (Miles, 2003), such as for teacher **B** and **D**. Furthermore, teacher **A** stated that she does not implement it because the system does not allow her to do so. This is true because there is a problem of curriculum rigidity in Tanzanian education system, due to rigid curriculum, teachers are supposed to follow the rigid guidelines in the syllabi. They are not free to plan and implement the curriculum differently (Lewis & Little, 2007). In this way, IEP cannot be implemented and the specific needs of the students cannot be met.

5.4.2 Teachers Collaboration and Implementation

It was of special interest also to know how teachers understand, and implement co-teaching in inclusive classrooms, having students with visual impairments. It was interesting to hear from all teachers responding "**Yes**" to the question, "Do you understand what co-teaching means?" Their definitions did not vary so much, but the issue was on its implementation. The common thing observed from their definition of co-teaching, was two teachers teaching together a

lesson in the same class at the same time. Teacher **B** went further defining co-teaching this way:

> *Co-teaching is two teachers helping each other to prepare and teach the class. For example, while the main teacher teaches the assistant teacher puts the teaching aids on place. Also there are some topics cutting across two or three subjects. The two teachers may decide to teach collaboratively and supplement each other's knowledge and understanding.*

However, despite the understanding of co-teaching teachers have, no single teachers claimed to implement it in the classroom. The challenge to the implementation of Co-teaching being the scarcity of teachers as mentioned by teacher **B** and **C,** lack of commitment among teachers towards Co-teaching, and co-teaching having no importance for students with visual impairments. Teacher **C** stated that:

> *Co-teaching has never been practiced because of the **scarcity of special needs teachers** although it has been talked about several times in our department…..*

According to teacher **A**, the problem as to why co-teaching is not implemented in inclusive classrooms is the **lack of commitment** among teachers. This teacher was asked if scarcity of teachers is a problem to this implementation. She said that, the scarcity of teachers is not a problem, because the number of teachers is enough if they would really need to practice it. However, teacher **D** said that Co-teaching is not important to students with visual impairments, therefore no need of implementing it. He said that:

> *Co teaching is not used in the class and **should not be used**. I think Co-teaching is suitable for a class with students having hearing impairments who understand sign language and not for students with Visual Impairments who cannot even see the teacher.*

Discussion

Teacher **B** defined Co-teaching in a similar way to that explained by Dalen. Dalen (1982) says that, Collaborative teaching (Co-teaching) involves two teachers teaching the same class at the same time, a general teacher taking the responsibility of the main teaching and a special needs teacher, who deals with disability specific learning needs for the aim of meeting the needs of student. Lypsky & Gartner (1997) contend that, co-teaching is important because one teacher cannot have all the skills and competences needed to meet the diverse needs of all students in an inclusive classroom. This argument shows that, the role of special needs teacher, and therefore co-teaching in inclusive classroom is paramount. Similarly, teachers insisted the importance of co-teaching in inclusive classrooms for students with visual

70

impairment. Furthermore, Spungin (2002) states that a teacher with the knowledge of visual impairments, should be part of the teaching in inclusive classroom having students with visual impairments. A special needs teacher will be responsible for preparation of learning materials for students with visual impairments, and teaching students with visual impairment the knowledge and skills necessary to help them participate in the lesson, such as reading and writing braille, and the use of optical devices like glasses and lenses.

Despite stating the meaning of Co-teaching and its importance, no single teacher stated to practice Co-teaching in the class. This can be a point of departure to state that Co-teaching is not practiced in these classes, considering two reasons mentioned by these teachers. One is the **lack of enough special needs staff**, as stated by teacher **B** and **C**. The scarcity of teachers has been a major challenge to inclusive education system in the country. This is due to few training institutions in the area of special needs education. Currently, there are three universities that train teachers in the area of special needs education. However, these cannot produce enough teachers to teach in inclusive schools in Tanzania (Kapinga, 2012). Participatory Workshop held in Dar-es-salaam, revealed that the scarcity of teachers is the problem to the implementation of inclusive education and co-teaching (ICC, 2008).

However, the fact that classroom observation proved no practices of Co-teaching, regardless of the presence of some special teachers at the school, brings a question to whether the problem of scarcity of teachers stated above is really a reason for lack of Co-teaching practices. This opens a door to consider the view given by teacher **A**, that scarcity of teachers is not a problem if teachers really want to practice it. The problem is the **lack of commitment among teachers** towards Co-teaching and teaching in general. There is, therefore, a question to ask here as to why there is a lack of commitment among teachers towards Co-teaching and even the whole teaching process? One of the answers for this might be the lack of motivation among teachers towards teaching. This is a result of long term disagreement between teachers and the Government over salary increments. There have been a lot of demonstrations and strikes as a result of failure of negotiation between the Government on one side, and teachers through Tanzania Teachers Union (TTU) on the other side. According to Daily News (2012a), TTU demanded a 100% salary increment, and special motivational allowance to the teachers working in remote and difficult environments. In addition, MoEVT (2008) reported lack of motivation among teachers due to low salary. Lack of motivation can be a result of lack of morale, motivation and commitment among teachers.

5.4.3 Collaboration with Parents

All teachers appreciated the importance of collaborating with parents, for the provision of necessary information about their children, which could help teachers in the teaching process. However, all teachers "**No**" when they were asked if there is collaboration between themselves and the parents of students with visual impairments. Teacher **D** said:

No collaboration with parents of students with visual impairments because these students come from outside the region, therefore it is difficult to trace back their parents….

Teachers said that, it is a **challenge** to collaborate with parents of students with visual impairments, because **many of them are from upcountry** hindering them to collaborate with teachers. As a result teacher **B** said that:

……due to lack of this collaboration sometimes students lack necessary learning facilities like machine, papers etc. because parents are not involved in their student's development.

Teacher **D** also pointed out that, they lack important information about the students with visual impairments, because their parents whom they would collaborate with to understand their children, are not readily available. Teacher **A** and **D** extended this further by saying that sometimes they have to contact the Department to call the parents, as teacher **A** said:

…… I communicate to parents only when there is extreme problem through the administration which contacts them.

Discussion

Teachers understand that it is important to collaborate with parents of these students. All teachers acknowledged this with teacher **B** stressing on the importance of parents in provision of learning facilities to these students. Indeed, parents are responsible for the education of their children, therefore, they are needed to provide important equipment like books, pens, pencils, glasses, magnifiers, braille papers etc. to their children (Mastropieri & Scruggs, 2010; Spungin, 2002).Furthermore, teachers understand the importance of parents in the provision of important information about their children, meaning that teacher **D** and other teachers do understand, that without this important information from parents, they may not be able to provide quality teaching. Information about social, physical and emotional development, can be obtained mainly through a student's family members, especially parents (Garner & Davies, 2001; Johnsen, 2001; Smidt, 2009). Parents know their children better; they know their

educational needs, their interests and what is good for them, therefore, they can plan for the future on behalf of their children (Webster & Roe, 1998).

Despite the importance, these **parents are not available around the school** according to teachers. Parents cannot be blamed for this, because they live far away from the school. Studies done in Spain and in New Brunswick, show similar trend, that participation and awareness of parents towards the education of their children with visual impairments and disabilities, in general is very poor (NBACL, 2007; Simon *et al.*, 2010). This may be due to negative attitude towards disability. It is still a belief that children or people with disabilities cannot do or achieve anything. This is why some of them are reluctant sending their children to school for education (URT, 2008). Studies done in both Spain and New Brunswick, reported that parents believe and have a conception that, education is clearly a role of teachers, and therefore they are not in any way responsible in the academic progress and achievement of their children (Mitchell, 2008; NBACL, 2007; Simon *et al.*, 2010). Due to lack of these parents, for collaboration and provision of information for their children, material support and relevant students' information are lacking to teachers and the schools (Johnsen, 2001; Smidt, 2009). As a result, teaching continues without thoroughly exploration of students' academic needs and how these students learn in inclusive classrooms.

5.5 Summary of the Findings

5.5.1 Teachers' Knowledge on Inclusive Education

If the definition of inclusive education according to Salamanca statement is taken as points of reference to judge the knowledge among teachers, then these teachers have little knowledge on inclusive education. They have little knowledge in the sense that, although they did not explain better what inclusive education means and all their claiming of lack of knowledge, to some extent their statements and practices in inclusive classrooms, showed a sense of awareness on what inclusive education entails, and how it should be practiced.

5.5.2 Identification of Students' Learning Needs

In this regard, the findings show that teachers acknowledge the importance of assessing learning needs and learning styles of students with visual impairments in inclusive

classrooms, before teaching commences. The findings still suggests that, teachers have some strategies that help them to assess students' needs and learning styles, although they said they are not satisfied with the knowledge they have on how to assess the needs of students with visual impairments in inclusive classrooms. However, the problem lies in to implementation of teaching, to meet these assessed needs of the students with visual impairments. Indeed, the classes are big to the extent that they sometimes intentionally or unintentionally overlook assessing and teaching to meet the needs of students with visual impairments.

5.5.3 Adaptive Teaching Methods

Regarding this theme, findings show the teachers understanding that students with visual impairments require an adaptive and modified teaching to achieve their needs. Findings also, showed teachers struggling to modify their teaching as much as they could to help students with visual impairments. However, the findings suggest that, teachers have insufficient knowledge on how these methods and teaching resources should be adapted to suit the needs of students with visual impairments. Moreover, teachers are constrained by so many challenges in teaching students with visual impairments. As a result, they decided to teach students mostly using common strategies which do not help students with visual impairments.

5.5.4 Collaboration between General Teachers and Special Needs Teachers/Parents

Findings show that some teachers do not understand Individualized Education Plan (IEP) but all of them understand what Co-teaching is. IEP and Co-teaching, were deemed important by teachers who claimed to understand them. However, when it comes to implementation of these two concepts there is a problem, because many of them, if not all, admitted that they do not implement IEP and co-teaching either due to lack of knowledge about them, or lack of supportive environments for implementation. It was also found, that collaboration between general teachers and their fellow special needs teachers, as well as parents, is lacking. Collaboration with special needs teachers is lacking, because of scarcity of special needs teachers and lack of commitment among the teachers. Furthermore, parents are not available, because they live far away from the school to the extent that general teachers cannot reach them for various issues related to the education of their children.

6 Conclusions and Recommendations

This chapter gives the concluding remarks based on the findings of the study. It also points out some of the recommendation for improvement of inclusive practices, and for further studies the area the current study ventured on.

6.1 Conclusions

The aim of the study was to investigate ways general teachers teach students with visual impairments in inclusive classrooms, and the challenges they face in teaching them. The study was built around four specific objectives/research questions. The first objective was exploring the knowledge of teachers on inclusive education. Findings show that, teachers acknowledge the importance of inclusive education for students with special needs in order to gain important life skills and to eliminate elements of exclusions and segregations. The results also seems to show that, teachers' knowledge of inclusive education for learners with special needs, does not embrace the important features expressed in the Salamanca statement, such as creation of conducive environments to accommodate differences existing among the students.

Furthermore, the little knowledge teachers have, is contributed by lack of specific policies and guidelines surrounding the whole process of inclusive education. Lack of policies and guidelines of how inclusive education should be implemented; affect the overall process of preparing conducive environments for inclusive practices, such as training of teachers (Gronlund, Lim & Larsson, 2010). It is argued that, the presence of few universities offering courses on both, inclusive and special needs education and lack of sufficient inclusive education training in the existing universities are obstacles to inclusive practices (Kapinga, 2010; Mboya et al., 2008; Seya, 2008). On the other hand, few universities and lack of sufficient training may be also a reason to the few numbers of teaching staff mentioned by respondents. It is evident therefore that, the little knowledge teachers have on inclusive education , affects the process of teaching and rendering services to students with visual impairments in inclusive classrooms.

Another objective was to find out ways teachers use to identify learning needs of students with visual impairments. Regarding this aspect, teachers as well appreciated importance of assessing learning needs of students with visual impairments before the process of teaching

commences. Findings revealed that, three strategies are used by teachers to assess learning needs of students with visual impairments in inclusive classrooms. These strategies include: Asking students their life backgrounds and learning problems, using students' previous academic records and monitoring students participation in the classroom. These strategies the teachers mentioned seem to gain support from different scholars. Johnsen (2001) stresses the importance of talking directly to a student to discover learning problems, because it is a student who knows better his/ her problems. Furthermore, she points out that, formal and informal assessment of a learner in the classroom assignments is an important step to know what exactly is/are the learning problem(s) of a student. On the other hand, Spungin (2002) emphasizes on the importance of academic records of a student to help the teacher understand the educational needs of a student. However, assessment of learning needs of students with visual impairments is interrupted by the lack of knowledge among teachers and large number of students in the classes. All together, the two reasons seem to impede not only the process of assessing the educational needs of students but also the process of teaching to meet the diverse needs of students. If specific needs of students with visual impairments are not met, either due to the reasons found in this study or any other reasons, then teaching students with visual impairments in inclusive settings brings no meanings and the realization of EFA goal remain to be far from the reality (Mmbaga, 2002).

The third objective was to find out ways teachers adapt teaching methods for students with visual impairments in inclusive classrooms. It was found from the interview that, teachers use several adaptive methods to teach students with visual impairments. Such methods include: oral questions, group discussions, voice projection and calling students' names, enlarging handwritings and addition of time. Other adaptive methods includes: the use of teaching resources, encouraging peer support and the use of lecture method. However, through observation, teachers did not seem to adapt methods the way they said. This might be due to a lot of challenges that hinder their adaptations. Teachers claimed to lack knowledge necessary for adapting the methods for teaching. Lack of knowledge causes the problem of marking and preparation of teaching materials that suit the learning of students with visual impairments. Teaching materials themselves for students with visual impairments were also found to be lacking. Also, teachers mentioned limited time as an obstacle to finish the syllabi and to the use of participatory methods such as group discussions. Furthermore, understanding the language of instruction, English was seen a barrier for communication between a teacher and student. Language was also seen a problem for students to understand the lesson content. The

76

presence of students commonly termed as slow learners and fast learners at the same time in the class was also found to put teachers in dilemma of teaching, although it was seen that mostly teachers opted to fulfil the needs of fast learners. Due to these challenges, adaptations of different methods for students with visual impairments seemed to be problematic. In this situation, how should we expect teachers to teach better and meet the needs of students with visual impairments in inclusive classrooms? It is argued that, students with visual impairments will not be able to understand the lesson and have good performance as long as the teaching methods applied in inclusive classrooms, are not conducive to them (Daily News, 2012b; Gronlund, Lim & Larsson, 2010; Mmbaga, 2012). This means that, the process of teaching students with visual impairments in inclusive classrooms is vastly affected.

Lastly, the study intended to find out the extent to which teachers collaborate with special needs teachers and parents of student with visual impairment for effective teaching. Findings showed that, collaboration between general teachers and special needs teachers through co-teaching is lacking, because of scarcity of special needs teachers and lack of commitment among teachers. Co-teaching is said to be important to deal with diverse needs of students because no teacher possess all the necessary skills to meet the diverse needs of students (Dalen, 1982; Lypsky & Gartner, 1997). Lack of co-teaching therefore means learning needs of students are not properly met. Furthermore, it was also found that, collaboration between general teachers and parents of students with visual impairments is lacking due to the fact that, these parents are live outside the region, so they cannot manage to come every time they are needed. Parents are important in provision of information for learning of their students. This information helps in preparation of IEP. It is through this IEP that a general teacher will be able to plan their teaching in an inclusive classroom (Garner & Davies, 2001; Spungin, 2002; Webster & Roe, 1998).

Additionally, findings revealed that, teachers understand co-teaching but do not have knowledge of the concepts Individualized Education Plan (IEP). Further, it was found that, implementation of IEP is the problem. The problem emerged from the fact that, collaboration between general teachers and special needs teachers as well as parents is lacking. General teachers, special needs teachers, parents and other stakeholders are important partners in the process of preparation and implementation of IEP. Lack of knowledge on IEP, an important aspect of inclusion and failure to implement it, due to lack of collaboration among these

important partners, means that, students with visual impairments in inclusive classroom will not benefit from the teaching process.

It was interesting to hear from teachers appreciating the importance of inclusive education and adaptation of teaching methods to help students with visual impairments benefit from the lesson. However, teachers do not have sufficient knowledge of teaching students with visual impairments in inclusive settings. For instance, teachers do not have the knowledge of reading and translating braille writings, adapting and modifying teaching methods, teaching resources and implementing IEP. This means that teachers are not informed and therefore there is a gap of knowledge among them. This reflects one of the reasons stated earlier, for conduction this study. Furthermore, the findings generated from the study conducted in Same district by Mmbaga (2002), showed this gap in knowledge. That is why Mmbaga suggested for more studies in the area of inclusive education so that teachers becomes aware of it and how to implement it more appropriately. Furthermore, the presence of many challenges in this study surrounding provision of inclusive education, as revealed from this study, suggests that achieving realities of inclusive education in this school and other schools facing similar challenges is a difficult endeavour (Abosi, 2000; Zindi, 1997).

6.2 Recommendations

This was a Qualitative case study, therefore its findings cannot be generalized to the entire inclusive secondary schools in Tanzania, but they can be applicable to other inclusive schools facing the same situation as the one used in this study. Therefore, these recommendations are particular to the school studied and other similar schools in Tanzania.

6.2.1 Recommendations for Improvements

It was found from teachers that, there is a lack of teaching staff with enough knowledge on inclusive education and special needs education. This has been a major challenge to the implementation of inclusive practices among teachers. The Government, therefore, should take measures to provide enough pre-service and in-service training concerning special needs education and inclusive education to teachers. They should be educated on how to make the classrooms inclusive to learners with special needs, and visual impairments in particular, through adaptations of teaching and learning environments.

78

The lack of teaching and learning materials for use in inclusive classroom, was also mentioned by teachers as the main problem to the implementation of inclusive education. The Government should provide enough teaching and learning resources to these inclusive schools, and to students with visual impairments in particular. Things like models, talking books, printers and photocopiers etc., should be made available. Also, the Government in collaboration with parents, should provide devices like perking's braille, magnifying glasses, lenses etc., to improve teaching and learning of students with visual impairments in inclusive classroom.

There have been also practices among teachers emphasizing to finish the syllabus using the guidelines stipulated in the curriculum. There has been a challenge for teachers to consider individual needs of a student in inclusive classrooms. This suggests that the curriculum is not flexible. It is a time to call upon curriculum developers to prepare a flexible curriculum, that will allow flexibility in teaching to make sure that, the needs of students with special needs in inclusive classrooms particularly those with visual impairment are met.

6.2.2 Recommendations for Further Studies

The present study, focused on teachers and on how they teach students with visual impairments in inclusive classrooms. Data were collected from four general teachers. This study should therefore open doors for further research on this area. There is a need to conduct the same study using more samples than used in this study. It is important also, that further studies should focus not only on general teachers but also on special needs teachers for students with visual impairments, and on students with visual impairments who are affected by the teaching process. Furthermore, other studies should be done in different settings to enhance transferability of the findings using the same or different methodologies.

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82

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Appendices

Appendix 1: Table showing enrolment rate of students at Primary and Secondary School by type of Disability.

		Primary Education			Secondary Education		
		M	F	T	M	F	T
1.	Visual Impairment	2498	1533	4031	452	418	870
2.	Autism	332	225	557	18	15	33
3.	Deaf	2541	2207	4748	300	220	520
4.	Deaf-Blind	745	600	1345	64	91	155
5.	Mental Impairment	4655	3281	7936	115	55	170
6.	Multiple Impairment	413	293	706	37	24	61
7.	Physical Impairment	8138	5798	13936	1814	1011	2825
8.	Other Impairments	1951	1375	3326	389	242	631
	Total	**21273**	**15312**	**36585**	**3189**	**2076**	**5265**

Source: URT (2010).

Appendix 2: Table showing Secondary Schools Currently Enrolling Children with Visual Impairments in Tanzania

S/N	SCHOOL	STATUS	DISTRICT	REGION
1.	Shinyanga Sec.	'O'level-Boys Only	Shinyanga Mun.	Shinyanga
2.	Mwenge Sec.	'O'& 'A'level-Boys Only	Singida Municipal	Singida.
3.	Moshi Sec.	'O'level-Boys Only	Moshi Municipal	Kilimanjaro
4.	Tumaini Sec.	"O" Level – Girls Only	Iramba	Singida
5.	Kilosa Sec.	'O'level-Boys Only	Kilosa	Morogoro
6.	Korogwe Girls Sec.	'O'level-Girls Only	Korogwe	Tanga
7.	Tabora Girls Sec.	'O'& 'A'level-Girls Only	Tabora Municipal	Tabora
8.	Kantalamba Sec.	'O'level-Boys Only	Sumbawanga Mun.	Rukwa
9.	Songea Boys Sec.	'O' Level Boys	Songea Municipal	Ruvuma
10.	B.W. Mkapa Sec.	'O'& 'A'level-Co-Edu.	Ilala Municipal	Dsm
11.	Lugalo Sec.	O'& 'A'level-Co-Edu.	Iringa Municipal.	Iringa

12	Longido Sec.	"O" Level Co-Edu.	Longindo	Arusha
13.	Mkolani Sec.	"O" Level Co-Edu.	Mwanza City	Mwanza
14.	Lugoba Sec.	"O'& 'A'level-Co-Edu.	Bagamoyo	Pwani
15.	Mtwara Tech. Sec.	O'& 'A'level-Co-Edu.	Mtwara Municipal	Mtwara

Source: The Tanzania Schools Directory (n.d).

Appendix 3: Table Showing Percentage of Disabled Children Aged 0-14 years Using Assistive Devices

	Male	Female	Total
Using Assistive Devices	2.7	1.5	2.5
Not using Assistive Devices	97.3	98.5	97.8
Total Percent	100	100	100
No. of Individuals	211,085	163,986	375,071

Source: National Bureau of Statistics (2009).

Appendix 4: Table Showing Categories of Disabilities at a Case school, 2012

Disability type	Mobility Impairment	Visual Impairments	Deaf	Deaf-Low vision	Total
No. of students	4	36	1	1	**42**

Source: Head Master of the School

Appendix 5: Interview Guide for Teachers

Interview Guide for Teachers

Background information

Name: ……………………….

Age: ……….

Years of Experience: …………….

Sex: ………..

Interview Questions:

1. How do you understand inclusive education?

2. What challenges do you face when teaching in an inclusive classroom?

3. How do assess the learning needs of students with visual impairments in inclusive classrooms?

4. What challenges are associated with assessment of special educational needs of students with visual impairments in an inclusive classroom?

5. What teaching methods do you use to teach students in inclusive classrooms?

6. How do you adapt each of the teaching methods you use in order to meet the needs of students with visual impairments in inclusive classrooms?

7. What challenges do you face in using and adapting teaching methods for students with visual impairments in an inclusive classroom?

8 (a) Do you understand Individualized Education Plan (IEP)?

  (b) (i) If the answer is "Yes", how do you understand it?

    (ii) How do you implement it to meet the needs of students with visual impairments in

inclusive classrooms?

9 (a) Do you understand the meaning of Co-teaching? If "Yes" How do you understand it

  (b) How do you implement Co-teaching to help students with visual impairments in an

     inclusive classroom?

  (c) Do you collaborate with parents of students with visual impairments? If "No" Why?

10. What challenges do you face in the collaboration with special needs teachers and parents of students with visual impairments in an inclusive classroom?

11. What other information would you like to add concerning inclusive education and visual impairment?

THANK YOU FOR YOUR PARTICIPATION!!

Appendix 6: Observational Schedule

Observation Schedule

Observation was conducted to answer the sub-question 3. The question was:

How do teachers adapt their teaching methods for students with visual impairments in inclusive classrooms? Under this question, the following aspects were considered.

The following is check list for classroom observation

(i) Using group discussion/ Collaborative learning

………………………………………………………………………………………………

………………………………………………………………………………………………

(ii) Using questions and answers

………………………………………………………………………………………………

………………………………………………………………………………………………

(iii) Extra time allowance

………………………………………………………………………………………………

………………………………………………………………………………………………

(iv) Calling student' names

………………………………………………………………………………………………

………………………………………………………………………………………………

(v) Sound projection

………………………………………………………………………………………………

………………………………………………………………………………………………

(vi) The use of teaching materials eg. Visual and audio devices and tactile materials

………

………

(vii) Encouraging the use of learning devices

………

………

(viii) Adapting written texts

………

………

Appendix 7: Approval letter from NSD

Personvernombudet for forskning

Prosjektvurdering - Kommentar

Prosjektnr: 30970

The project investigates the experiences of Tanzanian teachers in teaching students with visual impairment in inclusive classrooms.

The sample will consist of 4 teachers recruited through the head master, who will establish initial contact with the teachers via letters sent by the student.

The Data Protection Official for Research finds the letter of information satisfactory, granted that the contact information of the student's supervisor is added.

The Official presupposes that registrations of observations from teacher-student interactions will be made anonymously (using pseudonyms for instance). It strongly recommends that parents, despite that no personal data will be registered about children/pupils during observations, are given information that the student will observe the class.

The Official assumes that the teacher's professional secrecy/duty of confidentiality is not compromised throughout the research.

When the project ends (30.06.2013), all data will be anonymized or deleted. In order for the data to be fully anonymized, all direct identifying data in audio recordings must be deleted, and indirectly identifiable information in the remaining data must be deleted or changed.

Appendix 8: Permission letter from University of Oslo

UiO **:** **Faculty of Educational Sciences**
University of Oslo

MWAKYEJA, Baraka Michael
Olav M Troviks vei 14 – HO211
0864 OSLO

Date: 15 June 2012
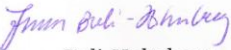Your ref.:
Our ref.:   int./2012 JBH/db

TO WHOM IT MAY CONCERN:

This is to certify that **MWAKYEJA, Baraka Michael,** date of birth 20.04.1979, is a full-time student pursuing a course of study at the Department of Special Needs Education at the University of Oslo, Norway, leading to the degree of Master of Philosophy in Special Needs Education (M. Phil. SNE).

This is a continuous two-year programme run on the "sandwich" principle, which involves periods of study and field work/research in both Norway and the home country. The student has successfully completed both the first and second semester of the initial study period in Norway and will be working on the collection of data and the writing of a thesis during the autumn semester 2012. This involves a period of field work in Tanzania. The student will return to Norway at the beginning of January 2013 and the period of study will be completed at the end of May 2013 in Norway.

The main responsibility for supervising the research, developmental work and thesis remains with the Department of Special Needs Education, University of Oslo, Norway. However, we would kindly request that the relevant authorities give the student the access required to the schools and educational establishments necessary in order to undertake field work and research. We would also be most grateful for any assistance that is afforded to the student which enables him to carry out this work, particularly the use of facilities such as access to telephone, fax, e-mail, computer services and libraries at the various educational establishments.

Yours sincerely

Associate Professor Jorun Buli-Holmberg

Academic Head of International Master's Programme

Department of Special Needs Education

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The Department of Special Needs Education (DSNE)
Postal addr.: PO Box 1140 Blindern, 0318 Oslo
Visiting addr.: Helga Engs hus, 4. etasje, Sem Sælands vei 7, 0371 Oslo

Phone: (+47) 22 85 80 59
Telefax: (+47) 22 85 80 21
postmottak@uv.uio.no
www.uv.uio.no/isp/
Org. no.: 971 035 854

96

Appendix 9: Research Clearance Letter from the Employer

UNIVERSITY OF DAR-ES-SALAAM

OFFICE OF THE VICE-CHANCELLOR
P.O. BOX 35091 ♦ DAR ES SALAAM ♦ TANZANIA

Ref. No: AB3/12(B)
Date: 12th September, 2012
To: The Director,
         Municipality,
         ▬▬▬ **Region.**

UNIVERSITY STAFF AND STUDENTS RESEARCH CLEARANCE

The purpose of this letter is to introduce to you **Mr. Baraka M. Mwakyeja** who is a bonafide member of staff of the University of Dar es Salaam and who is at the moment conducting research. Our staff members and students undertake research activities every year especially during the long vacation.

In accordance with a government circular letter Ref.No.MPEC/R/10/1 dated 4th July, 1980 the Vice-Chancellor was empowered to issue research clearances to the staff and students of the University of Dar es Salaam on behalf of the government and the Tanzania Commission for Science and Technology, a successor organization to UTAFITI.

I therefore request you to grant the above-mentioned member of our University community any help that may enable him to achieve his research objectives. What is required is your permission for him to see and talk to the leaders and members of your institutions in connection with his research.

The title of the research in question is **"Teachers' Experiences in Teaching Students with Visual Impairment in Inclusive Classroom"**.

The period for which this permission has been granted is **September, 2012** to **December 2012** and will cover the following offices: **Secondary Schools.**

Should the offices be restricted, you are requested to kindly advise him as to which alternative places could be visited. In case you may require further information, please contact the Directorate of Research, Tel. 2410500-8 Ext. 2087 or 2410743.

Prof. Rwekaza S. Mukandala
VICE-CHANCELLOR

VICE CHANCELLOR
UNIVERSITY OF DAR-ES-SALAAM
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Direct +255 22 2410700
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Telefax: +255 22 2410078

Telegraphic Address: UNIVERSITY OF DAR ES SALAAM
E-mail: vc@admin.udsm.ac.tz
Website address: www.udsm.ac.tz

Appendix 10: Permission Letter from the Regional Officer

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

██████ REGION:

Regional Commissioner's Office.
P.O. Box ████

Tele:2702021/2702715
Fax:2702082

For Reply please quote:
Ref. FA.265/255/01/Vol.B/216   22nd October, 2012

Municipal Director,
████████

District Executive Director
P.O.Box 223
████████

RE: A PERMIT FOR MR BARAKA M.MWAKYEJA A BONAFIDE MEMBER OF STAFF OF THE UNIVERSITY OF DAR-ES-SALAAM TO CONDUCT AN EDUCATIONAL RESEARCH IN YOUR COUNCILS.

With reference to the above heading.
I hereby inform you that one **Baraka M.Mwakyeja** who is a bonafide member of of staff of The University of Dar-Es-Salaam ,has been granted a permit by The Iringa Regional Administrative Secretary (in exercise of powers vested upon her post by Regional Administration Act.CAP.97 of 2002), to carry out an educational research in your Councils.The title of his Research is **"Teachers' Experiences in Teaching Students with Visual Impairment in Inclusive classroom"**
This permit is valid from September to December, 2012.

We therefore, kindly implore you and your supporting staff to be forthcoming to him by availing the same with any needful support which is within your reach in order to help him realize accordingly the cherished objectives of this study.

Please accept my profound appreciation of your co-operation in this endeavour in advance. Also I wish you all the best for the season.

Yours sincerely,

Nasibu A.Mengele
For REGIONAL ADMINISTRATIVE SECRETARY

Copy : Vice Chancellor,
University of Dar-Es-Salaam,
P.O. Box 35091,
DAR-ES-SALAAM

Mr Baraka M.Mwakyeja
University of Dar-es-Salaam.

Appendix 11: A Consent Letter for Teachers

A CONSENT LETTER

Dear Teacher,

I am a second year Master student at the University of Oslo, Norway pursuing **Master of Philosophy in Special Needs Education**

I am doing my project on the teachers' experiences in teaching students with visual impairment in inclusive classroom. Therefore these experiences are going to be investigated through the ability of teachers to incorporate various teaching strategies and how these teachers adapt the whole teaching and learning environment for students with visual impairment in an inclusive classroom in order to enable them understand the lesson just like their normal peers without visual impairment.However,knowing that teaching in inclusive classroom where there are different students with varied educational needs is very challenging, the study is also going to investigate challenges these teachers are facing in the whole process of teaching and leaning, focusing on the challenges facing a teacher when including students with visual impairment.

Information that will be collected is about first, the strategies teachers are using to include students with visual impairment in a mainstream class. Second, efforts teachers are imposing to adapt the teaching and learning environment in order to help students with visual impairment learn better in inclusive classroom. Third, are the challenges that teachers face when trying to use these specific strategies as well as adapting the teaching and learning environment for students with visual impairment.

The interview conversations will be recorded through tape and notes in order to have all the important information provided. No body will have access to your data except me and you will not be recognized by anyone and soon after the submission of the thesis in June, 2013 all these records and personal data will be erased.

I consider your opinion as very important and will appreciate your participation very much, however the participation is voluntary and you have the right to withdraw from this participation any time you wish to.

If you would like to participate in this interview please complete the attached letter of consent and return it to the Headmaster by 24 August 2012.If you have any question, you are welcome to ask anytime.

Thank you very much in advance!

Your sincerely,

Baraka Mwakyeja.

+255767244677/+255715244677

Email: benediction2@ymail.com

A CONSENT FORM

I have received oral and written information about Teachers experiences in teaching students with visual impairment and

☐

Would like to participate

Full name of a teacher:…………………………………………………

Signature:………………………….

Date:…………………………………

Phone number:…………………………

☐

Do not want to participate

Name of a teacher:…………………………………………………….

Signature:…………………………………….

Date:………………………..