Examination of Learning and Participation of Visually Impaired Students in Inclusive Schools
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February, 2018
Acknowledgments

This report was written by Dr. Luka Mkonongwa and Alcuin Mwalongo of the University of Dar es Salaam College of Education. Technical advice was provided by John Kalage, Makumba Mwemezi and Rose Kalage. We also thank Mr. Robert Mihayo and Judith Kapinga for their editorial contribution to this report.

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<td>Closed-circuit Televisions</td>
</tr>
<tr>
<td>EFA</td>
<td>Education for All</td>
</tr>
<tr>
<td>ILE</td>
<td>Inclusive Learning Environment</td>
</tr>
<tr>
<td>MKUKUTA</td>
<td>Mpango wa Kukuza Uchumi na Kupunguza Umaskini Tanzania (National Strategy for Economic Growth and Poverty Alleviation)</td>
</tr>
<tr>
<td>MoEST</td>
<td>Ministry of Education, Science and Technology</td>
</tr>
<tr>
<td>NVI</td>
<td>Non-Visually Impaired</td>
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Executive Summary

The Government in Tanzania has adopted the National Strategy for Inclusive Education as one of her basic mechanisms for providing quality Education for All (EFA). Inclusive education is an approach that looks into how to transform education systems and other learning environments in order to respond to the diversity of learners. The present study aimed at exploring the learning and participation of visually impaired learners in inclusive schools in Tanzania. Specifically, the study focused on how the learning environment and materials affect children with visual challenges in inclusive schools, teachers’ facilitation of learning for visually impaired learners in inclusive classrooms and examining if Visually Impaired learners are learning required skills at their level of education. The study also looked into performance of Visually Impaired learners in the national examinations and the extent to which Visually Impaired learners socially interact with peers and their teachers; and participate in the teaching and learning process.

A mixed methods study design was adopted in the collection, analysis and presentation of study findings. This means that qualitative and quantitative methodologies were used in such a way that they complement each other. Specific data collection tools such as survey questionnaire, interviews, focus group discussions, documentary review and observations were used. Data were analysed by using Statistical Package for Social Sciences (SPSS 24) and MAXQDA. A thematic data analysis approach was adopted. The study involved nine regions and 13 public inclusive primary and secondary schools. A sample of 497 participants was sampled from the population of teachers, learners, parents, education officers at district level and heads of schools.

The findings of the study were presented in accordance with the objectives of the study. The results revealed that the inclusive teaching and learning environment was not very friendly for Visually Impaired learners. Although there were efforts by the government to improve the inclusive education schools, still Visually Impaired learners experienced some difficulties when they move around the school compound and in learning in the classrooms. Such challenges include unclear pathways, unqualified and incompetent teachers, shortage of teachers and inadequate teaching and learning materials. Based on these challenges, it was suggested by participants that Visually Impaired learners were not learning the required skills in inclusive education settings. The majority of the Visually Impaired learners were not comfortable to study in inclusive schools. Therefore, Visually Impaired learners could learn better in special schools than in inclusive classrooms. However, it was found that the performance of Visually Impaired learners and the non-visually impaired learners in the final examinations was relatively the same and in some cases Visually Impaired learners performed better than their counterparts.

Despite the difficulties mentioned above, overall, the study revealed that Visually Impaired learners interacted well with teachers and their peers in and outside the classroom. The interactions to a larger extent helped Visually Impaired learners to receive both academic and social support from their peers as well as teachers. There were only a few cases reported where Visually Impaired learners were mistreated by either teachers or fellow students especially Non Visually Impaired learners. The mistreatment was mainly associated with stigma. Nevertheless, the Visually Impaired learners’ participation in out-door activities such as sports and games was limited due to their physical conditions.

Based on the findings of the study, it was concluded that although inclusive education has become an education policy options for schools in Tanzania, there are still many issues which need to be resolved in order to implement inclusive education effectively, particularly for Visually Impaired learners. Such issues include improving quantity and quality of teaching and learning materials, ensuring an adequate number of teachers, improving physical school infrastructure, and providing regular training for teachers on special education. Other issues include ensuring security and safety of Visually Impaired learners in inclusive schools. Finally, the Government should conduct...
feasibility studies before the schools are declared inclusive in order to ascertain their requirements and equipping them with all the necessary resources before enrolment of children.

Finally, some recommendations were made to the Government, parents and schools. Such recommendations included the Government taking measures such as providing in-service training for teachers, incorporating sign language and Braille writing in teacher training curriculum and ensuring quality and adequate teaching and learning materials for Visually Impaired learners. The Government should also minimize teacher-student ratio in inclusive classrooms and ensure an adequate number of teachers in inclusive schools. It was also suggested that the Government should train and employ auxiliary teachers to support learners with special needs during lessons. The schools are supposed to regularly inspect lavatories, dormitories, pathways and playgrounds to remove barriers; and ensure learners with special needs including Visually Impaired ones participate in out-door activities. Teachers in inclusive classrooms should employ different modes of assessing learners’ achievements to give equal opportunities for all learners to demonstrate their skills. Teachers in inclusive schools should also give Visually Impaired learners more time for doing examinations and tests. The parents were urged to visit their children in inclusive schools to motivate and make follow-up of their children’s social and academic progress.
1. Introduction

Governments all over the world have been struggling to implement quality education for all as one of the Sustainable Development Goals (SDGs). Inclusive education is considered as an important strategy towards the provision of quality education for all. Essentially, inclusive education is an approach that looks into how to transform education systems and other learning environments in order to respond to the diversity of learners. UNESCO emphasizes that education systems, schools and teachers should focus on generating inclusive settings that uphold the values of respect and understanding of cultural, social and individual diversity. Removing barriers to participation in learning for all learners is at the core of inclusive education systems (UNESCO, 2005). Focusing on inclusive education can be useful in guiding development of policies and strategies that address the causes and consequences of discrimination, inequality and exclusion within the holistic framework of EFA goals.

Inclusive education has been adopted by the Government of Tanzania as a strategy toward achievement of quality education for all. The National Strategy on Inclusive education aims at contributing towards achieving the goals set in the MKUKUTA -Mpango wa Kukuza Uchumi na kupunguza Umaskini Tanzania (National Strategy for Economic Growth and Poverty Alleviation) in line with the Education Sector Development Programme 2008-2017 which puts forward the fundamental principle of inclusion as a key strategy. The government has committed itself to identifying the needs of each child with disabilities and to create a favourable learning environment for every child regardless of background, gender, ethnicity, ability and socio-economic status. The National Policy on Disability in Tanzania (2004) recognises the importance of education as a key to developing the potential of children with disabilities. It also acknowledges that children with disabilities have limited access to the education system. Despite the progress made in the past decades to improve basic education, a large number of children with disabilities have continued to be kept out of school. Even those enrolled in schools raised doubts as to whether they learn effectively as other students. This study focuses on the learning and participation of visually impaired students in inclusive classrooms.

1.1. Context of the study

HakiElimu is currently implementing its New Strategic Plan 2017-2021, which among other things, is addressing issues about inclusion of children with special needs and circumstances affecting their learning. This is informed by the National Strategy on Inclusive Education (2009 - 2017). The goal of this strategy is to ensure that all children, youth and adults in Tanzania have equitable access to quality education in inclusive settings. The objectives of the strategy are to:

a. Ensure inclusive values and practices inform education policies and programmes
b. Respond to the diverse needs of learners during teaching and learning
c. Provide educational support to all learners
d. Widen and strengthen professional capabilities for inclusive education
e. Enhance community ownership of and participation in inclusive education

In addressing issues about inclusion of children with special needs, the research study aimed at examining the learning process and participation of visually-impaired children in inclusive schools in order to provide evidence to support HakiElimu’s advocacy campaigns to promote inclusive education in Tanzania in the next five years.
2. **Methodology**

The study employed a mixed methods approach where both qualitative and quantitative data were collected and analysed. According to Creswell (2014) mixed methods research is both a method and methodology for conducting research that involves collecting, analyzing, and integrating quantitative and qualitative research in a single study or a longitudinal program of inquiry. The idea behind the use of this form of research is that both qualitative and quantitative researches, in combination, provide a better understanding of a research problem or issue than either research approach alone. In that regard, the purpose of using mixed methods research approaches was to complement and triangulate the results; that is, to compare results from quantitative and qualitative research, to use qualitative research to help explain quantitative findings and augment quantitative data with qualitative data. Thus, the use of the mixed methods approach helped researchers to gain deeper insights about the learning environment, participation in the learning process and the academic performance of visually-impaired learners in inclusive primary and secondary schools.

2.1 **Population**

The study involved public primary and secondary schools with visually-impaired learners in nine regions of Mainland Tanzania. The regions were purposively selected depending on the availability of both inclusive primary and secondary schools. The regions included: Tanga, Dodoma, Iringa, Lindi, Ruvuma, Tabora, Shinyanga, Morogoro and Mwanza.

The study involved primary and secondary school pupils/students (visually-impaired and non-visually-impaired), classroom teachers, heads of school, parents/guardians of visually impaired learners, and education officers.

2.2 **Sampling procedures and Sample size**

Three sampling techniques were used to select participants for the study. They included convenience, purposive and simple random sampling techniques. Purposive sampling was used to select heads of school, parents/guardians, education officers and visually-impaired learners. A combination of convenience and simple random sampling techniques were used to select teachers and non-visually impaired learners. Initially, the plan was to select four inclusive schools (2 primary schools and 2 secondary schools) from each selected region. However, due to variations in the number of inclusive schools, convenience sampling technique was used to select schools to be studied. This means that in some regions only inclusive primary schools were available and in others few inclusive primary and secondary schools were available as shown in Table 1.

**Table 1: Distribution of Schools by Region**

<table>
<thead>
<tr>
<th>S/N</th>
<th>Region</th>
<th>Primary Schools</th>
<th>Secondary Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dodoma</td>
<td>Hombolo</td>
<td>Mpwapwa</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buigiri</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Iringa</td>
<td>Makalala</td>
<td>Lugalo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pomelini</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Lindi</td>
<td>Mtanga</td>
<td>Nyangao</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Morogoro</td>
<td>Mazinyungu</td>
<td>Kilosa</td>
</tr>
<tr>
<td>5.</td>
<td>Mwanza</td>
<td>Mitindo</td>
<td>Mkolani</td>
</tr>
<tr>
<td>6.</td>
<td>Ruvuma</td>
<td>Ruhila</td>
<td>Songea Boys</td>
</tr>
</tbody>
</table>
In each school, five respondents were selected from among visually impaired learners, non-visually impaired learners, teachers and parents or guardians. The head of each of the selected schools was involved in the study by virtue of his position. The study also involved Education Officers in districts where the schools were located. This included District Education Officers responsible for Special Needs Education, Secondary Education and Primary Education. Table 2 shows the distribution of respondents by region.

Table 2: Distribution of respondents by region and level of school

<table>
<thead>
<tr>
<th>Region</th>
<th>Primary</th>
<th>Secondary</th>
<th>DEOs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pupils</td>
<td>Teachers</td>
<td>HoS</td>
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<tr>
<td></td>
<td>NV</td>
<td>VI</td>
<td>NV</td>
</tr>
<tr>
<td>Dodoma</td>
<td>10</td>
<td>10</td>
<td>9</td>
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<tr>
<td>Irингa</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Lindi</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Morogoro</td>
<td>5</td>
<td>5</td>
<td>5</td>
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<tr>
<td>Mwanza</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Ruvuma</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Shinyanga</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Tabora</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Tanga</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>70</td>
<td>60</td>
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Note: Missing data

2.3 Data collection methods and instruments

To get deeper insights about this study, the following methods were used to collect data: survey, documentary review, one-to-one interviews, and observations in the classroom. For clear understanding, the research instruments developed were in two versions, Kiswahili and English. However, the Kiswahili version was used in the field and the English version is appended in this report. These methods are briefly described below.

2.3.1 Survey

In order to collect data from a large population a survey questionnaire was developed. The questionnaire was piloted before it was administered to the target population. Piloting of the questionnaire was conducted for the purpose of helping researchers to see the relevance of the instrument and clarity of the questionnaire items. After piloting, the questionnaire was revised and administered to the research participants. The questionnaire was used to collect data from primary and secondary school teachers. Teachers were asked to fill-in the questionnaire on their own.
2.3.2 Review of documents

Several documents related to this study were reviewed. They include independent research reports related to inclusive education in particular and the field of special education in general. The reports include those generated by HakiElimu, Government ministries and international organizations such as UNESCO, UNICEF, WHO, and the World Bank. Other documents were obtained from heads of school particularly records on enrolment and academic performance of visually impaired pupils/students over a span of years.

2.3.3 Interviews

To gain more insights and supplement data from survey and documentary reviews, one-to-one interviews were conducted with a few pupils/students and teachers in each selected school. A simple interview guide was used. In line with mixed methods research approach, these participants were drawn from those who were involved in the survey.

2.3.4 Classroom observations

Apart from administering interviews and surveys, researchers spent sometimes in observing the nature of physical school compounds, the teaching and learning materials and various activities in the schools. The main purpose of the observation was to gain eye-witness of the total school life of Visually Impaired learners. In addition, the researchers observed some services which children in inclusive schools received such as food and water services. The researchers used observation checklist which guided them on what to observe.

2.4 Data analysis

The study generated both quantitative and qualitative data. After data collection, all data were sorted out and processed ready for analysis. Quantitative data were coded and analysed by using SPSS 24 to determine statistical significance of the findings obtained from the field. Descriptive statistics were presented through frequencies, mean and standard deviations. Similarly, some inferential nonparametric statistical tests were calculated.

Qualitative data were transcribed and summarised accordingly. Transcribed qualitative data from the one-to-one interviews were analysed using NVivo 10. In this case, findings were categorised into themes based on the research objectives.
3. Key Findings

3.1 Learning Environment and Materials for Visually Challenged Learners

The first objective examined how the learning environment and materials affect children with visual challenges in inclusive schools. Special attention was paid to the extent to which the learning environment could affect the visually impaired students from learning effectively. Respondents had different views on this issue as analysed below.

3.1.1 Learning environment

According to the findings; most of the inclusive schools visited had poor quality of learning environment and some exceptionally critical. An inclusive learning environment is an environment which welcomes all learners, giving them time and space to learn. In order for learning to be effective in inclusive schools, a good and caring learning environment is very important. The majority of teachers and students who were interviewed on this subject matter reported that Visually Impaired learners were fully supported in terms of mobility in and outside the classroom, and that classroom arrangement and infrastructure were designed to support their learning. The teachers were also asked whether Visually Impaired learners could learn well in special schools or in inclusive learning environment (ILE). In response to these questions, teachers and students had mixed feelings.

3.1.1.1 Visually-Challenged Learners’ mobility within the school compound

According to this report’s findings, the majority of the teachers (81%) believed that the learning and teaching environment in most public schools were friendly for Visually Impaired learners because they were able to easily move around within the school compound.

Unlike teachers, the interviewed Visually Impaired learners registered prodigious dissatisfaction with the environment they are living and studying in. Some Visually Impaired learners raised their concern regarding the physical conditions of the schools. For instance, they complained about rough pathways, lack of school fence, poor toilets and long distances from the hostels to the classrooms. This is evident from the words of one of the Visually Impaired learners who said:

“The roads here have holes all over. Larger areas of the school have trees and stones scattered everywhere. It is a problem. To get lost is a common phenomenon. The dormitories are also located far from classrooms. This distance limits our freedom to do things in hurry”.

Another Visually Impaired learner added:

“The environment is bad and the roads are unfriendly to us because we have difficulties in accessing classrooms, hostels and toilets”.

In this study teachers were asked to state if the classroom arrangement was favourable to Visually Impaired learners. The response was, 34% believed that the classroom arrangement was suitable for Visually Impaired learners whereas 66 per cent were unsatisfied with the class arrangement. This implies that classroom arrangement in many inclusive schools continues to be a barrier to learning, development and participation.

3.1.1.2 School infrastructure

Concurrently, 69 per cent of the teachers pointed out that the school infrastructure such as classrooms, toilets, pathways and other related facilities were not specifically designed to cater for the needs of Visually Impaired learners. Based on their views about the classroom environment and school infrastructure, 81 per cent of the teachers had the view that Visually Impaired learners learn well when placed in special schools unlike in inclusive schools.

The Visually Impaired learners were also asked to provide their views with regard to the quality
of learning environment. The result indicated that less than half of Visually Impaired learners interviewed were satisfied with the learning environment whereas 36 percent were dissatisfied with the situation. Figure 2 shows the Visually Impaired learners’ level of satisfaction with the learning environment.

![VCL's satisfaction with the Learning Environment](image)

Figure 1: Visually Impaired learners’ level of satisfaction with the learning environment

The results are also supported by the comment made by one of the Visually Impaired learners during interview:

“I am satisfied with the learning environment because I love the school and the compound has places where you can sit and study well….and all other services such as dormitories and food are good”.

The results imply that the learning environment in many inclusive schools is relatively unfriendly to the Visually Impaired learners.

3.1.2 Adequacy and quality of teaching and learning materials

The availability of quality teaching and learning materials is critical to effective learning. Respondents were asked about the adequacy and quality of teaching and learning materials for inclusive schools. Their responses are presented below.

3.1.2.1 Adequacy and quality of teaching and learning materials

In this study teachers were also asked to give their views on the quality and design of teaching and learning materials used by Visually Impaired learners in inclusive schools. In terms of adequacy, many teachers (87%) reported that the teaching and learning materials were inadequate while only 13% felt they were adequate. The majority of the heads of school also acknowledged that the teaching and learning materials for Visually Impaired learners were not enough to cater for the students’ needs. The insufficiency of teaching and learning materials was also reported by more than 60% of Visually Impaired learners as shown in Figure 2.
The shortage of learning materials was also reported by students during interview sessions. One of the visually impaired students in one of the secondary schools had this to say about the adequacy of teaching and learning materials:

“[The teaching and learning materials are inadequate and thus more materials are needed especially for lower classes with mathematics and science options. The Braille and the science books are few. ...] When the machines are damaged, it takes long to repair and for this reason we [Visually Impaired learners] are left far behind our fellow students.”

In spite of the insufficient teaching and learning materials, the majority of the teachers (82%) reported that Visually impaired learners to a larger extent used special learning resources designed for them. Only in some situations, Visually impaired learners were able to share similar learning materials with non-visually impaired learners. The sharing of the materials happened perhaps because many Visually impaired learners had mild visual impairment, and therefore only needed a magnified font of the materials used by all students in the classroom.

3.1.2.2 Design of teaching and learning materials

With regard to design of the teaching and learning materials, the researchers observed that there were books for Visually impaired learners which were bound by using plastic spiral materials and their outer covers had pictures as if they were meant for non-visually impaired learners. The use of light materials (plastic spirals) to bind books which are used on daily basis by students resulted to regular and massive damage of the books. The picture below shows a sample of the books used by Visually impaired learners in one of the primary schools.
Apart from the deficiency observed on learning materials, it was also observed that the physical environments of some schools were not favourable for children with visual challenges. For instance, in some schools there were open pits (see Figure 3) on the open spaces used as playgrounds for children. In other school compounds there were sharp-pointed stones and roots of trees along the pathways used by both Visually impaired learners and Non Visually impaired learners (see Figure 4). All these were seen not only as potential dangers to the Visually impaired learners but also as barriers to free movements of VCL within the schools.
3.1.3 Support for teaching and learning materials

Regarding the support for teaching and learning materials, 55% of the interviewed heads of school, reported that resources were provided by the government, while 34% indicated that they are provided by NGOs and only 10% pointed out that they are provided by individuals.

In support of the findings, during the interview, one of the Visually impaired learners commented:

“There are no teaching materials provided by the school. You cannot say these are funds set aside by the school to buy sports facilities for visually impaired students. The facilities such as tape recorders and Perkins braille we have are donated by donors. The donors also provide funds to repair broken machines”.

Figure 5: Open pits on the students’ playground

Figure 6: The front of the class with sharp-pointed stones and roots of trees lying on the way
The findings reveal that there is a need to allocate adequate capitation funds in inclusive school to ensure the purchase of teaching and learning resources for children with special needs.

3.2. Teachers’ Facilitation for Learning of Visually impaired learners

The main focus was on examining the teachers’ competences and abilities to support Visually impaired learners to learn effectively in inclusive learning classrooms. Specific attention was on the teaching skills the teachers have, classroom management, students’ involvement in the lesson, assessment skills and sensitivity to the needs of Visually impaired learners.

3.2.1 Teachers’ competences to teach in inclusive classrooms

Teachers’ qualifications and competences are crucial aspects to effective and efficient teaching at any level of education. In this study, one of the concerns was to assess the teachers’ qualifications and competences to teach in inclusive learning environment.

3.2.1.1 Teachers’ views on their competences to teach in inclusive classroom

While 49 per cent of the teachers believed that they had the required skills for teaching in inclusive classrooms, 44 per cent admitted that they lacked the necessary skills to teach in such learning environments. The remaining 7 per cent of the teachers were not sure if they had the required skills. These findings are consistent with the results from interviews held with teachers where the majority admitted that they had not received any training for teaching in inclusive classrooms. In support of these results, one of the teachers had this to say: “I did not receive any training to teach in inclusive schools”. This implies that the adoption of inclusive education compel teachers to plan, devise learning resources, teach, and evaluate learners accommodated in a classroom where there are pupils with diverse learning needs of which they were not trained on the techniques to hand diverse classes.

3.2.1.2 Visually impaired learners’ views on teachers’ competences to teach in inclusive classrooms

The Visually impaired learners were also asked to present their views on their teachers’ knowledge, skills and competence to teach in inclusive classrooms. The response of the Visually impaired learners on the matter indicated that 63% believed that their teachers had the required knowledge and skills to teach in inclusive classrooms, while 33% believed their teachers lacked the required skills. The following responses from one of secondary school student during the interview support the results:

“It is true….but some have the training and the others do not have training and therefore there are some problems. ...For instance some teachers cannot read the dotted letters. This type of a teacher can simply be regarded as teaching the non-visually impaired alone. But one who knows the Braille is teaching us all.

Another primary school Visually impaired learner added by saying:

“Teachers have the skills to teach but those trained for special needs are few. From STD 3 to 7, we are taught by all teachers but our assignments are submitted to special education teachers for marking. When the marking is over, the grades and the papers are submitted back to the subject teachers who finally do corrections for all of us in the class”.

These findings imply that special in-service training is required in order to equip teachers with the necessary skills to teach in inclusive schools.
3.2.2 Availability of teachers

During the interview, 67% of the heads of school admitted that they had inadequate number of teachers, whereas only 33% reported that they had enough teachers. The comment made by one of the heads of school shows a clear picture of the magnitude of the problem:

Truly, we do not have enough teachers who can claim to have specialised in teaching visually impaired children. But we normal teachers teach them and because they study together with their peers who have no visual challenges, we usually ask them to sit in the front of the class so that they can see what I am writing. And if there are serious visual problems we tell parents to buy looking glasses for them.

Concurrently, another head of school made the following comment on the number of teachers:

“The school has twenty five teachers in total. Out of these, only seven are special education teachers. The recommended teacher-student ratio is 1:4. Therefore, the school requires more than five teachers in order to teach effectively. There are also shortages of teachers for science subjects (especially Physics, chemistry, Mathematics) unlike for art subjects”.

The results indicate that there is a need for more teachers in inclusive schools especially following the rapid increase in enrolment at the basic level of education geared by the policy of fee free education.

3.2.3 Teachers’ Sensitivity and support to visually impaired learners in the classroom

It is well known that every learner is unique and different. In order for learners to learn effectively, teachers have to understand their learners’ individual circumstances and needs. For a sensitive teacher, learners are always treated as individuals rather than a group. One of the major concerns in this study, therefore, was to assess whether teachers had the ability to recognise and respond to the needs of learners with special needs including those with visual challenges in the classrooms.

3.2.3.1 Teachers’ views on their sensitivity to the Visually impaired learners needs

In response to this question, 86 per cent of the teachers reported that they considered learning needs of Visually impaired learners when teaching whereas 10 per cent did not consider the needs of Visually impaired learners during teaching. The remaining 4 per cent were not sure of their sensitivity to the matter.
3.2.3.2 Teachers’ views on their sensitivity to the Visually impaired learners needs

Similar results were reflected from interviews with Visually impaired learners and Non Visually impaired learners. For example, when the Visually impaired learners were asked if they were satisfied with the support they received from the teachers, the response indicated that 80% of Visually impaired learners believed that they were satisfied by support given by teachers; however, 13% of them indicated that they were not satisfied with support given by teachers. The comment made by one of the Visually impaired learners during focus group discussion indicated some students’ satisfaction with the support they receive from teachers:

“I am satisfied because the teachers always help us and they recognize our presence in the class. They teach us on extra hours and if we have failed the examinations, they call us and encourage us to continue”.

However, students who were not satisfied with the teachers’ support to Visually impaired learners raised serious concerns about the teachers’ attention to the Visually impaired learners needs in the classroom. Some teachers treated Visually impaired learners in the same way as Non Visually impaired learners when they teach. This is evident from the complaints made by one of the secondary school Visually impaired learners during focus group discussion that:

“No. I am not satisfied because many teachers lack knowledge and skills to teach visually impaired learners and therefore in the lessons most of the time we are made to be mere listeners. The only way to cope is to use our own efforts to understand the lesson”.

Another secondary school Visually impaired learner added:

“No. In the classroom, many teachers deal with non-visually impaired learners and there is no mentoring. Many teachers here lack knowledge and skills to support visually impaired students”.

The testimonies from students imply that teachers have been creative in accommodating children with special needs in inclusive classrooms even though many of them have no formal training to teach students with visual challenges. In order to enable the teachers to teach inclusive classrooms confidently and more effectively, they need special education training.

3.2.4 Participation of visually impaired learners in the lessons

According to the findings, most of the teachers (76%) reported that they integrated Visually impaired learners with normal students during group tasks, and almost all of the teachers reported that they encouraged non-visually impaired learners to help their peers in the classrooms. These results are further justified by the argument made by one of the Visually impaired learners during focus group discussion:

“I am satisfied because teachers involve us in answering questions in class. Sometimes, they teach us in extra hours in order to make us understand well. The teachers are always close to us to monitor our learning”.

3.2.5 Treatment received by visually impaired learners in the classroom

The way teachers and students treat visually impaired learners in the class has great impact on their academic and social life. This section aimed at exploring the type of treatment the teachers and Non Visually impaired learners provided to visually impaired learners in their classrooms.

Special concerns here were on how teachers could use multiple pedagogical skills to meet diverse learning needs of their learners in the classroom, sitting arrangement, the type of assessments used and time given to accomplish tasks. The responses indicated that the majority of teachers treated visually impaired learners in the same way as non-visually impaired learners. For instance, 65 per cent of them indicated that when they taught, they assumed that visually impaired learners learn in the same way as non visually impaired learners. This means that they used the same
teaching approaches in their lessons. However, the majority of teachers (80%) reported that when teaching, they ensured that classroom arrangement was suitable for visually impaired learners, and that visually impaired learners used learning resources that were specifically designed for them. Moreover, in terms of learning tasks, 80 per cent of the teachers reported that they gave similar assignments to both non visually impaired learners and visually impaired learners. Concurrently, 67 per cent admitted that they gave similar time for completion of assignments to both Non Visually impaired learners and visually impaired learners.

a. Non-visually impaired learners' views on teachers' treatment of visually impaired learners

The way students are treated by teachers in the classroom has impact in the child learning. Since visually impaired learners are always in regular interaction with non visually impaired learners in inclusive classrooms, the researchers sought to hear views from non visually impaired learners on how they felt about the teachers' treatment of visually impaired learners in and outside the classroom. Figure 8 shows the level of satisfaction of non visually impaired learners about the teachers' treatment of visually impaired learners.

The results imply that though many teachers treated well the Visually impaired learners, there is still a need for them to improve further the treatment children with visual challenges.

![Figure 8: Level of satisfaction of Non visually impaired learners with teachers' treatment of Visually impaired learners](image)

This is also evident from the views of one of the Non Visually impaired learners who made the following remarks during interview:

“I am satisfied with the way visually impaired learners are treated because their special education teachers are always close to them for the purpose of helping”.

In contrast, one of the Non Visually impaired learners who indicated that they were not satisfied with the way students were treated by teachers in the classroom made the following comment:

“Personally, I am not satisfied with the way Visually impaired learners are treated by the teachers because sometimes they do not give them adequate support when needed. For instance, some teachers have inadequate knowledge and skills and therefore they teach inclusive classes without considering the learners with special needs in their classes. For example, some teachers speak in very low voice when they teach. In other occasions, visually impaired learners cannot read notes from the chalkboard because some teachers do not bold the letters when they write notes for students”.

The results imply that though many teachers treated well the Visually impaired learners, there is still a need for them to improve further the treatment children with visual challenges.
b. Visually impaired learners’ views on treatment received from non-visually impaired learners

Similarly, the researchers wanted to know the views of Visually impaired learners about the way they were treated by the Non Visually impaired learners in the school. During interview, majority (61%) of Visually impaired learners acknowledged that their peers treated them well in and outside the classroom. However, 39% of the Visually impaired learners reported that they were not well treated by their peers who had no visual challenges. In support of these results, one of the Visually impaired learners made this remark during interview: (....) Yes, I am satisfied because to a larger per cent we live together, love each other and help each other. There is no any form of stigma.

3.3 Learning Required Skills and Performance of Visually impaired learners

The third objective of the study was to examine whether Visually impaired learners learnt the required skills at their level of education. It also assessed their performance in the national examinations as compared to their Non Visually impaired peers. The results are discussed in the subsequent sections.

3.3.1 Visually impaired learners’ Learning of required skills

The main focus here was to assess whether Visually impaired learners learnt the required skills including writing, reading, and arithmetic. These are regarded as basic skills which prepare a learner to the next level where a learner is able to conceptualise, analyse, synthesise and apply the knowledge and skills acquired. The results indicated that many teachers (75%) believed that Visually impaired learners learnt the required skills in inclusive classrooms. Additionally, 68 per cent of the teachers reported that Visually impaired learners learnt these skills from all school subjects. Moreover, more than 80 per cent of the teachers believed that they helped Visually impaired learners master the required skills and that Visually impaired learners learnt new skills when they interacted with their non-visually impaired counterparts. However, while a significant proportion of teachers (49%) believed that Visually impaired learners cannot learn new skills as fast as Non Visually impaired learners, 55 per cent believed that VI learners can learn all skills other students can learn in inclusive classrooms. This implies that a reasonable number of teachers acknowledge that Visually impaired learners need special attention in the classroom because their pace of learning is different from Non Visually impaired learners.

3.3.2. Parents and Visually impaired learners satisfaction with the education in inclusive schools

During interviews, Visually impaired learners and parents/guardians were asked if they were satisfied with the education provided in inclusive schools. As shown in Figure 9, more than 90 per cent of the parents reported that they were satisfied with the education their children received from inclusive schools. This implies that many parents closely followed up the school progress of their children.

Figure 9: Parents’ satisfaction with their children’s education
Like the parents, the majority of the Visually impaired learners interviewed also admitted that they were satisfied with the education they received in inclusive schools. This is indicated in Figure 10 below.

![Figure 10: Visually impaired learners’ satisfaction with the education provided](image)

3.3.3 Performance of Visually impaired learners in national examinations

The teachers were asked to provide their views on the performance of Visually impaired learners in the national examinations as compared to their peers. The responses from teachers during interview indicated that there were times Visually impaired learners performed well and other times they performed poorly.

Table 3: Performance of Visually impaired learners in National Examinations

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3.4 Social Interaction and Participation of Visually impaired learners in Inclusive Schools

This objective aimed at exploring the social interaction of Visually impaired learners in learning and participation in inclusive schools. Specifically, the focus was on how Visually impaired learners interact with teachers and their peers in and outside the classroom.

3.4.1 Visually impaired learners’ involvement in sports and games

Children’s engagement in sports and games not only provides them recreation but also enhances their intellectual growth. Teachers and Visually impaired learners were asked for their views on the participation of Visually impaired learners in outdoor activities such as sports and games. The findings are presented below.
In terms of the participation of Visually impaired learners in activities outside the classroom, 43 per cent of teachers reported that Visually impaired learners did not participate in activities conducted outside the classroom with normal students. The reason could be many outdoor activities students engaged in were not appropriate for Visually impaired learners due to their visual challenges. In the case of stigma, 79 per cent of teachers admitted that Visually impaired learners were stigmatised by fellow students.

During interview sessions, Visually impaired learners were also asked about their involvement in sports in the school. About half of them (52%) reported that they were involved in various sports such goal ball and jogging, while 48% reported that they were not involved in any sports in the school, mainly because the required facilities were not available at school. The following quotes elucidate these views.

“I like playing sports and games but I have never played and the school has no facilities to support visually impaired students in sports and games”.

Another visually impaired secondary school student said:

“I do not participate in sports and games because there are no sports facilities for visually impaired learners in the school and the play grounds are not friendly for us. There are no balls and the play grounds have so many holes”.

However, some Visually impaired learners admitted that they participated in some games. For instance, one of the Visually impaired learners in one of the primary schools said:

“Goal ball is the main game here for visually impaired learners. There are no other games such as football, jumping, or marathon…… We only participate in jogging with our fellow students. During the run non-visually impaired students hold our hands and we run together”.

3.4.2 Visually impaired learners’ ability to make friendships

Particular concern was on whether Visually impaired learners can make friendships with other learners. It also explored the extent to which Visually impaired learners were free to express their social and learning needs to their teachers. The results indicated that 70 per cent of the teachers believed that Visually impaired learners can easily make friendship with normal students, and 81 per cent of teachers reported that Visually impaired learners were active in group tasks.

3.4.3 Visually impaired learners’ perception on studying with Non Visually impaired learners

In addition, Visually impaired learners were asked about their feelings when they study with Non Visually impaired learners in the classroom. The response from the Visually impaired learners indicated that the majority of Visually impaired learners were comfortable studying with Non Visually impaired learners. When she was interviewed, one of the Visually impaired learners argued that: “I feel happy because we are all one… I have never felt bad because our peers comfort us and they have never hated us”.

3.4.4 Non Visually impaired learners’ perceptions on studying with Visually impaired learners

Similarly, students who have no visual challenges were asked to explain how they felt when they studied with children with visual challenges. Like their counterparts, more than 90% reported that they felt very well studying with Visually impaired learners. One of the Non Visually impaired learners made this remark during interview: “I feel good to study with them because they are also human beings like us”. Moreover, most of the Visually impaired learners (94%) reported that they have friends who are Non Visually impaired learners; likewise, most of the Non Visually impaired learners (89%) indicated that they have friends who are VI learners.
3.5 Education officers’ knowledge on inclusive education strategy

Tanzania has established an inclusive education strategy to guide the implementation of inclusive education in the country. During interviews with education officers at the district level, researchers sought to examine the level of awareness about the inclusive education strategy among district education officers who essentially are the key implementers at the district level. The results indicated that 84% were familiar with the strategy whereas 11% were not aware as indicated in Figure 11.

![Figure 11: Education Officers’ knowledge of education strategy](image)

The results imply that although the strategy is well known to the majority of the education officers, there are still a significant number of education officers are not aware. This lack of knowledge may consequently lead to failure in implementing the strategy in some districts. To overcome this problem, a seminar is required to familiarise all officials with the strategy in order to simplify its implementation.

4. Differences in Perceptions by Gender

There were differences in perception by gender amongst teachers. These differences were in terms of teachers’ competences in teaching, and on whether Visually impaired learners learned the required skills in inclusive classrooms.

4.1. Teachers’ competences in inclusive classrooms

Further analysis using Mann-Whitney U test showed that there was a statistically significant difference in perceptions between female teachers and male teachers on their beliefs on having the required skills to teach Visually impaired learners in inclusive schools, $U (96,107) = 4238.5, p = 0.05$, where male teachers were more confident ($M = 110.4$) than female teachers ($M = 92.7$).

4.2. Learning required skills for Visually impaired learners

The Mann-Whitney U test revealed that there was a statistically significant difference in perceptions between female teachers and male teacher on whether Visually impaired learners learn the required skills or not, $U (96, 108) = 4479.000, p = 0.05$, where male teachers showed a higher agreement ($M = 109.0$) than female teachers ($M = 95.2$).

Similarly, there was a statistically significant difference in perception between female teachers and male teachers on teachers helping Visually impaired learners master the required skills, $U (92, 107) = 4479.0, p = 0.05$, where female teachers showed a higher agreement ($M = 106.1$) than male teachers ($M = 94.8$).
5. Differences by School Level

Further analysis using Mann-Whitney U test indicated that there were differences in perceptions between primary and secondary school teachers in terms of learning environment, teachers’ competences in teaching in inclusive classrooms, whether Visually impaired learners learned the required skills in inclusive classrooms, and the social interaction of Visually impaired learners in inclusive schools.

5.1 Learning environment

The Mann-Whitney U test revealed that there was a statistically significant difference in perceptions between primary school teachers and secondary school teachers on accessibility of Visually impaired learners within the school compound, U (116, 107) = 5414.0, p = 0.05), where primary school teachers showed a higher agreement (M = 118.8) than secondary school teachers (M = 104.6).

Similarly, the Mann-Whitney U test showed that there was a statistically significant difference in perceptions between primary school teachers and secondary school teachers on the suitability of classroom arrangement for Visually impaired learners, U (115, 107) = 5124.5, p = 0.05), where a higher proportion of primary school teachers showed a higher agreement (M = 120.4) than secondary school teachers (M = 101.9).

5.2 Teachers’ competences in inclusive classrooms

There was a statistically significant difference in perception between primary school teachers and secondary school teachers on the frequency of integrating Visually impaired learners with non-visually impaired learners during group tasks, U (115,107) = 5298.0, p = 0.05, where primary school teachers frequently integrated Visually impaired learners with non-visually impaired learners in group tasks (M = 119.5) than was the case with secondary school teachers (M = 104.1). This finding was in line with interview data, where there was frequent use of group tasks in secondary schools than in primary schools.

Furthermore, the Mann-Whitney U test showed that there was a statistically significant difference in perceptions between primary school teachers and secondary school teachers on ensuring that Visually impaired learners used resources that were specifically designed for them during teaching U (113,105) = 4929.5, p = 0.05, where a higher proportion of primary school teachers used resources specifically designed for Visually impaired learners during teaching (M = 118.4) than was the case with secondary school teachers (M = 100.0). This finding was similar to observations in the schools. Observation indicated that primary schools had more resources tailored for Visually impaired learners than was the case with secondary schools.

5.3 Learning required skills for Visually impaired learners

Further analysis using the Mann-Whitney U test showed that there was a high statistically significant difference in perceptions between primary school teachers and secondary school teachers on whether Visually impaired learners learn the required skills from all subjects, U (112, 106) = 4475.0, p = 0.05, where primary school teachers showed a higher agreement (M = 122.5) than secondary school teachers (M = 95.7).

The Mann-Whitney U test revealed that there was a statistically significant difference in perceptions between primary school teachers and secondary school teachers on the role of teachers for helping Visually impaired learners master the required skills, U (110, 104) = 5162.0, p = 0.05), where primary school teachers showed a higher agreement (M = 112.6) than secondary school teachers (M = 102.1).
5.4 Social interaction and participation of Visually impaired learners in inclusive schools

Finally, using the Mann-Whitney U test, there was a statistically significant difference in perceptions between primary school teachers and secondary school teachers on Visually impaired learners interacting well with non-visually impaired learners in out-of-class activities in inclusive classrooms, \( U(113, 107) = 4832.0, p = 0.05 \), where primary school teachers showed a higher agreement (\( M = 121.2 \)) than secondary school teachers (\( M = 99.2 \)). These findings are similar to what was observed in the school environments. It was found that many primary schools had more outdoor activities that could encourage Visually impaired learners interact with non-visually impaired learners outside the classrooms than was the case with secondary schools.

6. Challenges facing Visually impaired learners in inclusive schools and ways of overcoming them

One of the major issues the research team sought to explore was the challenges facing Visually impaired learners in inclusive learning environment and the ways of overcoming them. The challenges identified during interviews and survey questionnaire and the suggested ways of overcoming them are summarized below.

6.1 Challenges

In this study researchers were also interested in identifying the challenges facing Visually impaired learners in inclusive schools. When the participants were asked to point out the challenges which Visually impaired learners encountered in inclusive schools, they identified the following:

- Shortage of teaching and learning materials for Visually impaired learners
- Inadequate funding for inclusive schools
- Limited access to various places within the schools due to unfriendly infrastructure
- Poor quality teaching and learning materials particularly books
- Shortage of qualified and competent teachers
- Stigma from some teachers and sighted learners
- Lack of support staff for Visually impaired learners
- Late identification of Visually impaired children

6.2 Ways of overcoming the challenges

The respondents were also asked to give out their opinions on ways of overcoming the challenges identified. The following suggestions were given:

- Ensure adequate supply of teaching and learning materials for Visually impaired learners
- Ensure adequate funding for inclusive schools
- Provide friendly infrastructure for Visually impaired learners
- Improve the quality of teaching and learning materials particularly books
- Employ qualified and competent teachers
- Discourage stigma among learners and teachers on Visually impaired learners
- Employing support staff for Visually impaired learners
Examination of Learning and Participation of Visually-Impaired Pupils/ students in Inclusive Schools

- Parents should regularly visit their children to encourage them and hear their needs
- Fencing schools with Visually impaired learners to avoid encroachment by vagabonds
- Ensuring constant supply of electricity in inclusive schools
- A special private room should be set up for out of classes self-study
- Early identification of Visually impaired children in the community to simplify school placement

7. Suggestions for improving the provision of inclusive education

Participants were also asked to suggest improvements to be made in order to provide effective and efficient inclusive education system. The following suggestions were made:

- Early identification of Visually impaired learners
- Preparing and training teachers for inclusive schools
- Teacher-student ratio in inclusive schools should be minimized to maximize interaction
- Increase teaching and learning resources for Visually impaired learners including Braille machines, stylus, typewriters, and tape recorders
- Ensure regular communication between parents and teachers regarding Visually impaired learners’ welfare
- The Government should employ special readers for Visually impaired learners instead of depending on peers

8. Discussion of findings

The main purpose of this study was to examine learning and participation of visually-impaired children in inclusive primary and secondary schools in Tanzania. Specifically, the study sought to examine how the learning environment and materials affect Visually impaired learners, the extent to which teachers facilitate learning for Visually impaired learners, whether Visually impaired learners learn the required skills and their performance in national examinations, and explore the social interaction of Visually impaired learners in learning and participation in inclusive schools.

8.1 Learning environment and materials

Studies have shown that school environment is one of the barriers to learning, development and participation. According to UNESCO (2015) inclusive, learning-friendly and barrier-free environment is crucial for children to develop to their full academic, social, emotional and physical potentials. This study has revealed that both teachers and learners view the learning environment in inclusive schools in Tanzania is relatively unfriendly. It was also observed that the environments of many inclusive schools were not favourable for visually impaired learners. For instance, some schools had pit holes (including uncovered demolished old latrines), rough pathways and sharp-pointed stones lying on the playgrounds and passages. A study by TENMET (2014) noted that toilets and water facilities in inclusive schools were very hostile, especially to girls. Based on these findings, it is clear that many schools were declared inclusive without a thorough preparation of the school environment.

The quality and quantity of teaching and learning materials have a direct impact on the academic success of the learners. Lack of specialized equipment and teaching/learning materials suitable for children with disabilities, especially for the Visually impaired learners, have been reported as one of the reasons for exclusion of children with disabilities from the education system. This study has revealed that Visually impaired learners face acute shortages of teaching and learning materials. Even the few materials available were not of good quality. For example, the books were made of
plastic spiral binding and their covers had pictures as if they were used by Non Visually impaired learners. Similar results were reported in a study by Kiomoka (2014) who found that teaching and learning materials was a problem for all learners particularly the visually impaired children.

These teaching and learning resources included Braille materials, computers, embossers (Braille printer), Closed–Circuit Televisions (CCTV's), Braille papers, A4 frames and pens. In the same study, teachers also admitted that materials were a major challenge for Visually impaired learners. From the findings, it is clear that teaching and learning materials are a major barrier for Visually impaired learners in many inclusive schools. This suggests the need for heavy investment in education if inclusive education is to be effectively implemented.

8.2 Teachers’ Facilitation for Learning of Visually impaired learners

In order to teach effectively in inclusive learning environment, teachers are required to have appropriate knowledge and skills. It is imperative for teachers who include all pupils in their classroom practices to have knowledge on how to handle different types of disabilities. This study sought to examine teachers’ knowledge and skills in facilitating learning to visually impaired learners among other things. The results of the study revealed that although a small fraction of teachers had special training for teaching visually impaired learners, the majority lacked such ability. When teachers were asked about their ability to teach visually impaired learners, many of them admitted that they had no formal training for teaching such classes. Similar results were also revealed by visually impaired learners when they were asked the same question.

Concurrently, a study by HakiElimu (2008) on education for children with disabilities indicated that many teachers admitted their inadequacy and incompetence in teaching and addressing the needs of children with disabilities, which are largely attributable to the lack of training in the fields of special needs and inclusive education. Only a very small proportion of teachers in very few schools had been trained in these fields. A study by Kiomoka (2014) also showed that there were not enough qualified teachers for inclusive education. These results bring an impression that many teachers use their skills to teach non visually impaired learners to facilitate learning for visually impaired learners. Consequently, many teachers leave behind the visually impaired learners when they teach because they treat all learners in the same way.

8.3 Learning Required Skills and Performance of Visually impaired learners

The declaration on quality Education for All (EFA) requires that the education provided in any education system should enable every learner regardless of their race, gender, physical conditions, socio-economic background and ethnicity to reach their life potentials. This study among others, intended to explore if visually impaired learners learnt the required skills in inclusive primary and secondary schools; and if their performance in the final examinations were comparable to learners without visual challenges. The results from interviews and surveys administered to teachers and learners revealed that visually impaired learners learnt the required skills in inclusive primary and secondary schools; and if their performance in the final examinations were comparable to learners without visual challenges. The results from interviews and surveys administered to teachers and learners revealed that visually impaired learners learn better when they are in special schools than in inclusive classrooms. However, the difficulties the visually impaired learners encounter in inclusive learning environment are attributed to poor learning environment, poor and inadequate teaching and learning facilities and lack of knowledge and skills among teachers. Such difficulties are likely to amount to drop out among visually impaired learners. As reported by Kalanje (2002), some visually impaired learners are forced to leave regular schools when their parents or guardians realize that their children are not profiting or gaining anything in schools.

In terms of performance in the final examinations, this study indicated that the visually impaired learners can perform as well as the non visually impaired learners and sometimes even better. This is also supported by the results of the study by HakiElimu (2008) which reported that children with disabilities have great potential if they are given the right facilitation. The study also reported that the performance of children with disabilities particularly the visually impaired students in
national examinations were very impressive. These results imply that given a conducive learning
environment, competent and qualified teachers, adequate teaching and learning materials and
the appropriate assistive devices, visually impaired learners have the ability to perform highly
academically.

8.4 Social Interaction and Participation of Visually impaired learners in Inclusive
Schools

Interaction among learners and between the teacher and learners is crucially important for effective
learning. One of the objectives of the present study was to assess the level of social interaction and
participation of visually impaired learners in inclusive learning environment. Specific focus was
on how teachers involve learners particularly the visually impaired ones on the one hand and how
visually impaired learners interacted with their peers in inclusive learning classes on the other.

The findings of the study revealed that many teachers lacked knowledge and skills for teaching
visually impaired learners and consequently treated all learners the same. In some instances, visually
impaired learners were punished just like the non visually impaired learners. This kind of treatment
minimised the participation of Visually impaired learners in the lessons because their needs were
often ignored. Tilya (2008) argues that for pupils to be able to participate in the teaching and
learning activities teachers need to have knowledge in planning instructions, establishing learning
climate, improving strategies for instruction, and making teaching as interesting, effective, and
efficient as possible. The author further points out that it is the teacher’s knowledge and skills
that would make a teaching strategy more active and participatory. The active teaching strategy
is likely to develop pupils’ skills on learning how to learn as they are given opportunities to
work together in constructing knowledge and assessing their understanding. Through enhancing
teachers’ knowledge teachers are expected to be able to know the method of teaching and when to
use it, especially in this era of implementing inclusive education. Therefore, teachers’ knowledge
and skills in special education would enhance the effectiveness of teaching and learning.

However, many visually impaired learners reported that they were able to make friends with
Non visually impaired learners and interacted well with their peers. They pointed out that the
non visually impaired learners always assisted the visually impaired learners in moving within
the school compound and doing their assignments in the classrooms. The non visually impaired
learners helped the visually impaired learners in writing notes. The support visually impaired
learners received from their peers made them feel comfortable and happy to continue with studies.
This implies that if non visually impaired learners were encouraged to assist their visually impaired
peers, there were possibilities of increasing academic performance among visually impaired learners.

9. Conclusion

Inclusive education has become an education policy options for schools in Tanzania. The National
Strategy for Inclusive Education (2009 – 2017) has been implemented in many primary and
secondary schools in the country since 2013. It is important to note that since inclusive education
was adopted, the enrollment of visually impaired learners in particular and children with disabilities
in general has increased significantly (Stone-McDonald, 2015). Despite the many successes achieved,
there are still many issues which need to be resolved in order to implement inclusive education,
particularly for visually impaired learners. Such issues include ensuring sufficient supply of and
quality teaching and learning materials, adequate number of teachers, improving physical school
infrastructure, and regular training for teachers on special education. Other issues include security
and safety as well as involvement of visually impaired learners in outdoor activities.
It is also concluded that visually impaired learners will continue to suffer in inclusive schools if prior feasibility studies are not conducted before the schools are declared inclusive. There is a need to prepare schools in terms of equipping them with all the necessary resources before children with special needs are enrolled.

10. Recommendations

Based on the findings of the study the following recommendations are made to various groups of key stakeholders:

10.1. Recommendations to the Government

- In-service training programmes for primary and secondary teachers should be established to equip teachers with knowledge and skills required to teach in inclusive classrooms.
- MoEST should make some aspects of special education such as sign language and Braille writing compulsory for all teacher trainees.
- The teaching and learning materials especially those used by Visually impaired learners should be well designed.
- The teacher-student ratio in inclusive classrooms should be minimised to give opportunity for teachers to have more time to facilitate students learning.
- The Government should increase the number of inclusive schools.
- The government should ensure adequate numbers of teachers are posted to schools particularly inclusive ones.
- The government should provide seminars and workshops to DEOs and REOs to familiarise them with the inclusive education strategy.
- Since inclusive learning environment requires special facilities for supporting children with various challenges including Visually impaired learners, the government should allocate adequate funds to these schools.
- In order to help Visually impaired learners to follow smoothly the lessons in the classroom, assistant/auxiliary teachers can be trained and posted to inclusive schools to support impaired learners during the lessons.
- There is a need for MoEST to conduct a thorough inspection of all-inclusive schools with a view of identifying challenges facing the schools and finding solutions.
- The Government should station technicians for maintaining machines used by Visually impaired learners such as Braille machines.

10.2. Recommendations to schools

- The school environment especially pathways, lavatories, classrooms, dormitories and playgrounds should be regularly inspected in order to remove all potential barriers for Visually impaired learners.
- Inclusive schools should ensure that children with different challenges such as Visually impaired learners are given opportunity to participate in outdoor activities of their choice including, art, sports and games.
- Teachers of inclusive classrooms should employ different forms of assessment approaches
so as to give equal opportunity for all children to demonstrate their knowledge and skills.

- Visually impaired learners in inclusive learning environment require special treatment during examinations. This includes giving them more time during exams or tests.

- Inclusive schools should ensure proper storage of machines used by Visually impaired learners.

- Schools should keep proper records regarding enrollment of students particularly Visually impaired children.

10.3. **Recommendation to parents or guardians**

- The parents/guardians should regularly visit their impaired children to understand their problems which they cannot easily disclose to teachers. In addition, regular visits by parents make children feel valued and encourages or motivates them to continue with studies.
11. References


