Challenges Facing Students with Physical Disabilities in Using School Infrastructure in Public Secondary Schools: A Case of Iringa Municipality, Tanzania

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Abstract

This study investigated the challenges posed by school infrastructure on the learning of students with physical disabilities in public secondary schools in Iringa Municipality. The study used qualitative research approach, and cross-sectional research design. The target population was students with physical disabilities, teachers and the heads of schools. The sample comprised 26 participants; 8 teachers 2 heads of school and 16 students with various physical disabilities such as musculoskeletal, wheelchair users, creeping, clipped hands, and one-legged., selected using criterion purposively sampling technique. The data were analyzed qualitatively revealing themes and categories of description. The findings revealed that students with physical disabilities encountered various learning challenges in the course of interacting with the school infrastructure which included: reduced movement within and outside classrooms and reduced access to quality education. In addition, the study found limited social and academic interactions causing them to have persistent social isolation and poor peer interaction thus, limiting their opportunity to fully engage in extra-curricular participation. Based on these findings, the study concludes that students with physical disabilities are not learning adequately as required due the prevalence of unsupportive learning school environment. Thus, the study recommends that the government should strive hard to improve the school infrastructure in order to make secondary schools conducive for students with physical disabilities to learn.

Keywords: education, disability, learning challenges, school infrastructure, physical disabilities

1.0 Introduction

Effective learning in schools is facilitated by different factors including the school infrastructure (Munayi, 2015). A school with conducive infrastructures such as landscapes, pathways, ramps and climbing steps within the buildings contribute significantly to the learning of students particularly those with physical disabilities. However, research has noted in-effective infrastructure in schools which do not favour the learning of students with physical disabilities

(Opini & Onditi, 2016). In this regard various scholars have drawn much concerned to the challenges that face students with physical disabilities in learning due to the fact that if deliberate effort is not made this group of students will continue lagging behind their peers in academic attainment. Thus, there is a need to reveal those challenges so that soon or later strategies can be taken to address these challenges hence improve the learning of this group of students. In this regard, different researchers have identified numerous challenges worldwide that confront students with physical disabilities in schools (Munayi, 2015; Opini & Onditi, 2016).

Munayi (2015) argues that student with physical disabilities is succumbed to limited movement within and outside classrooms, they face difficulty in accessing resource centers such as libraries and classrooms, they fail to climb the stairs in some of the buildings especially for the creeping and musculoskeletal students, accessing books and attending their lessons in classrooms respectively Gorai and Karmakar (2021). Consequently, some students fail to attend classes because classrooms were located upstairs and the students who used wheel chairs failed to climb to attend their lessons (Kabuta, 2014). The author commented that schools should have friendly infrastructure that accommodates all kinds of learners their diversities.

Further, research has indicated that such challenges have tremendous effects on the learning of students with physical disabilities in schools such effects include; low performance, isolation from class group discussion (Munayi, 2015). Thus, students with physical disabilities face problems of participate effectively in school activities such as games, sports and group discussion which in turn because them fail to effectively and in efficiently access the school curriculum. In its wholistic manner (Kuresoi, Lyamtane & Koda, 2022);

Furthermore, Kassaw, Abir, Ejigu and Mesfin (2017) conducted a study to investigate the challenges and opportunities in inclusion of students with physical disabilities in physical education practical classes in Ethiopian secondary schools. The study found that students with physical disabilities could not participate in sports because the school infrastructures such as play grounds were not designed for them to participate. The study recommended that schools' infrastructure such as play grounds should be constructed in such away that it accommodates students with physical disabilities.

Al Masa'deh (2020) argues that students with physical disabilities are limited in terms of participation with their peer interaction due to un-friendly school infrastructure. Consequently, develop isolated -mindset and becomes less motivated to learn and also lack self-esteem and self-confident. In the case of classroom interaction students with physical disability experience problems when trying to participate in classroom discussion Ans other activities that require movement such as plays or demonstrations due to things like the way the classroom setup is made particularly the arrangement s of chairs and desks which in most cases are fixed and dint allow any quick rearrangement as to enable those students move freely especially those with multiskeletral conditions (e.g. Creeping students).

More research reports regarding the challenges facing students with physical disabilities are from Nigeria for example, Ammani (2024) examined problems facing students with physical disabilities in tertiary institutions in Katsina state, Nigeria. The study revealed that 75 percent of tertiary institutions' infrastructures were available but inadequate. Eighty 85% of the infrastructure was accessible with difficult to students with physical disabilities whereby 35 percent and 25 percent of all infrastructure conditions were average and poor respectively. The argued the federal government to find ways of improving the school learning environment essentially on the aspect of infrastructure.

In the same vein, schools in Tanzania including secondary school face the same problems when it comes to the learning of students with physical disabilities. For example, a study by Kabuta (2014), Mbwambo (2015) and Mgimba (2021) found that some students failed to attend classes because classrooms were located upstairs and the students who used wheel chairs failed to climb to attend their lessons. However, there are scanty researches that have specifically focused on the challenges facing students with physical disabilities in public secondary schools in Iringa Municipality. Therefore, this aimed investigating challenges facing students with physical disabilities which are attributed by the school infrastructure. It was important to carry out this study because data shows that in Iringa Municipality there are good number of students with physical disabilities enrolled in public secondary schools but, the learning environment were not conducive (Kabuta, 2014). For this reason, there was a dire need to carry a study that would among others reveal the reality about the learning of students with physical disabilities in relation to the existing school infrastructure in public secondary schools.

2.0 Materials and Methods

2.1 Research Approach and Design

This study employed qualitative research approach which aimed at examining challenges facing students with physical disabilities in using school infrastructure in public secondary schools. The study used cross-sectional research design. The use of this kind of design was based on the idea that it was important to gather detailed information by contacting different respondents from different age as well as varied experiences about the learning of students with physical disabilities in the context of Tanzania secondary schools

2.2 Participants

The target population for this study was students with physical disabilities, teachers and heads of schools from two secondary schools which have students with physical disabilities. The study sample size comprised 26 participants; 8 teachers 2 heads of school and 16 students with various physical disabilities such as musculoskeletal, wheelchair users, creeping, clipped hands, and one-legged. The study employed Criterion purposive sampling technique to select the respondents.

2.3 Data Collection Methods

The data collection methods for this study were interview and observation methods. Interview was administered to heads of school, teachers and the students with physical disabilities. In addition, participant observation was used where by the researcher observed various school infrastructure from the residential places to the different areas such as; toilets, offices, laboratory, dinning, dormitories and library and saw how they designed. The researcher spent time in classrooms and common areas to observe interactions and behaviors of students with physical disabilities in the context of the school infrastructure. During field observation, the researcher noted how the physical layout of the school environment affects student's mobility and participation in activities and overall engagement in learning. This method helped the researcher to collect the information from natural settings which were free from participants' biasness as the researcher recorded whatever was observed from the real environment in its observed reality (Kothari, 2004). When observing, the researcher consciously recorded all the relevant information that were observed for analysis. Moreover, the students with physical disabilities, teachers and heads of schools were interviewed on the learning challenges faced by students with physical disabilities when using school infrastructure. Interviews allowed the collection of

detailed data from the participants' own words and expressions, which could reveal their feelings, motivations, and meanings (Leedy & Ormrod, 2001); and they enabled a researcher to establish rapport and trust with the participants, which enhanced the quality and depth of the data (Orodho, 2004).

2.4 Data Analysis and Ethical Considerations

The collected data were analyzed using thematic analysis in which the focus was to identify the underlying meanings and experiences conveyed through the data. In order to generate meaningful insights applicable to study objective, the researcher followed a systematic process by identifying, analyzing and reporting the themes (data) as proposed by Braun and Clarke (2006). The process involved familiarizing with the data through reading and re-reading the data collection forms; coding by systematically labelling relevant features; searching for themes by grouping the related themes; reviewing the identified themes; defining and naming the themes

Ethical considerations in research are critical. The researcher obtained clearance letter for data collection from the office of Postgraduate Coordinator of the Ruaha Catholic University (RUCU). Thereafter consulted the office of the Regional Administrative Secretary (RAS) and District Executive Director (DED). Then, district authorities permitted the researcher to contact the school management which eventually allowed him to meet and interact with participants in the field. While in the field, the researcher ensured confidentiality of the information gathered. Also, the researcher made sure that names or any identifying information of the respondents was not associated with their responses. This encouraged honest and open responses as participants were more likely to share accurate information without fear. The respondents were free to either to be part or not without being forced or pressurized. The researcher also ensured that the heads schools and teachers who participated in the study did so voluntarily and without feeling obligated. and reporting them (Braun & Clarke, 2006).

3.0 Results and Discussion

This study investigated the learning challenges posed by school infrastructure on the learning of students with physical disabilities in public secondary schools. The findings revealed that students with physical disabilities encountered various learning challenges posed by the school

infrastructure such as; limited movements within and outside classrooms, poor participation in social and academic interaction, and limited peer interactions.

3.1 Limited Movement within and Outside Classrooms

The findings revealed that many of the students with physical disability had very limited chances to access the learning resource available in the school learning environment for example; the library which had no ramps was a headache for those who used wheelchairs. The presence of non-adjustable wooden chairs, tables and desks in classrooms restricted movement and limited comfortability among the physically disabled students especially the creeping. They could not participate in collaborative learning activities such as group discussions.

During classroom observations, the researcher witnessed that some of the physically disabled students, the creeping and musculoskeletal, remained isolated when a teacher assigned students to discuss in groups. They remained isolated because the way the tables and chairs were arranged (all fixed) could not allow free movement of the disabled students. Also, the absence of assistive devices like screen readers, voice recognition software limited students with physical disabilities mainly the hand-clipped, creeping and musculoskeletal to access the materials taught as they struggled to write notes on time. This situation was exemplified by one of the students claimed:

> In our classrooms, the desks, seats, and tables are fix, they cannot be easily moved around to adjust spacing or enable us move from none place to another place easily. Therefore, it is difficult for us to maximize interaction with those kinds of furniture for instance engaging with our friends in group discussions to share ideas. (Interview with student 2, on 22 – April 2024).

In that sense, students with physical disabilities had difficult making full participation in the learning process. The findings of this study are in line with the findings obtained by Mbwambo (2015) who argues that many schools in Tanzania lack the necessary infrastructure and facilities for classroom interaction to take place and accommodate students with physical disabilities during the learning process. Emphasizing on this point one of the heads of school from one of the secondary schools said:

> Honestly, students with physical disabilities in schools experience a lot of learning problems due to the manner in which the infrastrut8re is being designed. It does not process easy access to those students during classroom interaction. It goes without saying that this limits their ability to talk to their peers or share ideas with them in groups (Interview with head of school 1, on 22 – April 2024).

This is to confirm that the heads of school were aware of the difficulties that students with physical disabilities experience in those schools due to unsupportive infrastructure. It seems that head of school is aware of those challenges faced by students with physical disabilities, which consequently impede their intellectual abilities and eventually fail to develop intellectually and socially.

3.2 Reduced Access to Quality Education

Reduced access to quality education was one of the major challenges students with physical disabilities encountered in their interaction with the school infrastructure. This was regarded as a challenge because it affected the quality of learning of those students hence, underachieving. The fact that those students were not able to full participate in the learning process due to unsupportive infrastructure, consequently fall behind other academically. The findings had indicated that schools had no assistive technology and equipment to assist those students in their learning for example, computer and communication aids like speech recognition software, text-to-speech and speech-to-text programs, note-taking aids and voice recorders. For the creeping, musculoskeletal and hand-clipped, whose writing speed is slow. This was also found from the interview data whereby the respondents expressed their concern about the future of those students after school in respect of career prospects. The following extracts were made important for this concern:

> One of the challenges we face is the lack of adjustable furniture and assistive technological equipment that could improve our academic performance. We don't do better in our subjects per requirements not just because we cannot learn, but we struggle to learn using the non-adjustable tables, chairs and desks. Sometimes it is difficult for us, the

> hand clipped to write the notes because of our physiological implications (Interview with student13, on 25 – April 2024).

Similarly, it seems that under achievement of academic performance for students with physical disabilities is caused by unconducive school infrastructure like adjustable table was not available in the classroom.

One of the students had this to say:

> The major challenge we face is poor interaction which cause us perform poorly in academics. We struggle much in learning, but, we don't pass exams as the result we fail even to attain our future goals for our future dreams. (Interview with student 1, on 22 – April 2024).

It is obvious from this quote that school infrastructure plays a vital role in enhancing learning of students with physical disabilities and even the normal ones. This was also opined by one of the teachers who said:

> From my experience, the main challenge our students with physical disabilities encounter is the academic underachievement which results from unsupportive school infrastructure. Our physically disabled students struggle much to learn using the furniture that are not adjustable which obstruct them from writing especially the musculoskeletal, creeping and hand-clipped. Majority of them do not perform competitively. I think, they can perform better when they are provided with supporting school infrastructure (Interview with head of school 1 on 22 – April 2024).

The findings of this study are in line with the findings obtained by Mbwambo (2015) who observed that many of the students with physical disabilities perform poorly in school subjects. The authors recommended that school should be bult taking into account the presence of students with this kind of disabilities. Thus, there is a dire

need to find out ways of addressing this challenge for the sake of our students' education.

3.3 Limited Social and Peer Interaction

The findings of this study also revealed that most of the physically disabled students for example, creeping, musculoskeletal, and one-legged suffered from social isolation and poor peer interactions. During break time, it was observed that the physically disabled students remained in classes while other got outside the classrooms in groups talking. This was also reported by the teachers and the students during interview, as one of the creeping students said:

> One among the challenges we face in our learning is social isolation and limited peer interactions. We don't interact with our colleagues, it being in classes or outside. We always wish to integrate with others, but the school infrastructure such play grounds do not favour us to interact with them. Teachers are encouraging our friends to socialize with us, but the infrastructure restricts us to interact (Interview with student10, on 25 – April 2024).

According to explanation from respondent, there is sign of stigmatization and marginalization accelerated by poor school infrastructure which tends to isolate them from others. This was also reported by one teacher as quoted saying:

> My experience shows that the physically disabled students suffer from social isolation and limited peer interaction. The school infrastructure and facilities including those for game and sports do not give the access to participate in games and sports activities. They only opt to watch television while other go for games and sports (Interview with teacher2, on 22 – April 2024).

The findings of this study are in line with the findings by Al Masa'deh (2020) who argued that students with physical disabilities fail to associate adequately due the presence of unsupportive school infrastructure .by

3.4 Limited Participation in Extra Curricula Activities

The findings obtained from observation indicated clearly that inaccessible school facilities and lack of tailored support excluded students with physical disabilities from participating in extra curricula activities such as games and sports, limiting their overall educational and social experiences. They are minimally involved in collective learning and extracurricular activities. For instance, it was shown that the physically disabled students did not take part in game and sports that could promote their talents and foster interaction and socialization with their fellows. This was also supported by one of the students who remarked:

> We are not engaged fully in school timetable particularly in extracurricular activities such as game and sports. Our school does not have facilities for us to showcase our talents. The pitch and play grounds available only fit our fellows who are not physically challenged. Even though the school routine needs us to participate in games and sports, we don't participate because of the unsupportive facilities (Interview with student3, on 22 – April 2024).

This quote suggests that students would like to participate in all the indoor and outdoor activities but, limited by the school infrastructure. Therefore, it is imperative for the school administration to find out alternative way that can make them maximize their participation in the school activities without much difficulty.

Overall, the findings reported in this study indicate that students with physical disabilities encounter various learning challenges posed by the school infrastructure which include reduced access to some of the educational activities such as extracurricular, experiencing academic underachievement, social isolation and poor peer interactions. The findings of this study are in line with Al Masa'deh (2020) who argues that students with physical disabilities face various challenges in their school learning which include: limited participation and peer interaction which limit their ability to interact and collaborate with their peers. In the same note, (Munayi, 2015) observed that insufficient infrastructure in schools significantly hinder the educational experiences of the physically disabilities students, limiting their access to resources, peer interaction, and ultimately their academic performance and social inclusion.

5.0 Conclusions

Based on the findings, it is evident that school infrastructure plays a significant role in inhibiting the learning pf students with physical disabilities in the studied schools in Iringa Municipality. Consequently, such students experience reduced access to quality education, exhibit academic underachievement, social isolation and poor peer interactions. They also experience limited participation in extracurricular activities.

6.0 Recommendations

The study recommends improvement of the school learning infrastructure so as to accommodate students with disabilities in the learning process. It is also recommended that educational stakeholder should strive hard to upgrade the school infrastructure in order to meet the maximize equerry in educational provision. The study further, recommends more funds be allocated to improve school infrastructure, whereby a synergy could be established between the government and private organizations to improve school infrastructure.

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