

Investigating Current Classroom Practices in the Teaching and Learning of Geography among Pupils with Visual Impairment in an Inclusive Classroom at Munali Boys' Secondary School

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Abstract: This manuscript investigated current classroom practices in the teaching of geography to students with visual impairment in inclusive classroom at Munali Boys' Secondary School in Lusaka district of Zambia. The researcher employed purposive sampling to selected the school and geography teachers. This study found that teachers with little or no knowledge of braille face difficulties to teach geography to students with visual impairment. It also found that teachers never adapted their teaching methods to accommodate students with visual impairment. The teaching methods teachers adopted in the teaching of geography was mainly talk and chalk or lecture method which made it hard for students with visual impairment to follow the lesson clearly. In summary, while students with visual impairment have the capacity to learn geography, teachers did not use embossed maps, auditory or models to assist students with visual impairment in grasping concepts.

Key Words: Braille, Inclusive Education, Perkins Brailier, Standardised Curriculum, Stylus, Visual Disorders, Visual Impairment.

I. INTRODUCTION

Since the introduction of inclusive education in Zambia over two decades ago, the government has undertaken a number of initiatives to ensure quality, equity and accessibility of education for all (Focus on Learning, 1992; Educating our Future, 1996). Although educational trends have seen an increase in a number of students with disabilities being taught within general education settings where possible (Turnbull et al 1995; Educating our Future, 1996), students with visual impairment in Zambia are still facing challenges (Kalabula, 1993; Penda et al, 2015). Moreover, current research indicates that students with visual impairments should be taught in general education settings (Bultjeans, et al, 2002; Rae, et al, 2010). However, this has posed challenges to teachers, as students with visual impairment struggle to learn the contents that are expected of them owing to the problem imposed by vision loss. One area that that needs investigation is the teaching of geography to students with visual impairment in an inclusive setting. Geography is a complex subject that involves the use of various techniques both qualitative and quantitative especially in carrying out inquiries (Ndegwa, et al 2015). It also includes skills like drawing, analysing,

computing, and interpretation among others. Some concepts in geography are based on landform formation and changes, soils and minerals, lakes and rivers, climate and the atmosphere, plant and animal distribution, ocean and coastal processes which are blended with practical techniques that includes cartographical techniques which require visualisation hence needs a lot of observation skills (Ibid). As an important subject, geography incorporates classroom-based teaching, field trips and lots of opportunities to get involved with extracurricular activities. Since there is a long tradition in academia to favour vision and textually, perceived as the best or only way to produce and share knowledge (Martin, 1993), the teaching of geography to students with visual impairment in schools is rather difficult especially among teachers with little knowledge in teaching students with visual impairment.

While students with visual impairment often miss to grasp concepts during lessons, it remains upon them to put together all the ideas and concepts missed in their resource rooms. Research has demonstrated that the implications of teaching geography to visually impaired students cannot remain closed within the students' resource rooms but must become part of mainstream teaching and learning (Adam and Brown, 2000). Therefore, regardless of barriers, students with visual impairment can get as much out of understanding the environment as their sighted peers. Some studies of visual perception have revealed that there are tendencies to pay attentional bias towards visual modality when it comes to the general understanding of learners with visual impairment (Sham, 2000). Therefore, in order to unlock visual bias, instructive methods of instruction should be adopted through the use active learning techniques to teach geography to the visually impaired (Damar, 2004).

Although geography is one of the key subjects studied in secondary schools in Zambia, several challenges exist in the area of teacher's adaptation of materials for students with visual impairment. Notwithstanding the importance of inclusive setting, students with visual impairment are expected to muster and adapt to the same educational contents as their sighted peers. Despite their vision loss imposing restrictions on their ability to access the same curriculum, teachers should

not use that as a scapegoat for not teaching geography to students with visual impairment in a typical manner. Moreover, at the end of the year, students with visual impairment are expected to sit for the same National Examinations with their sighted peers with minimal adaptation or adjustments for them. A study conducted by Mulenga (2007) clearly showed that despite learners with visual impairment successfully completing secondary school and a significant proportion of these furthering their education in tertiary institutions, the majority are either unemployed or underemployed. It is prudent that students with visual impairment are taught the necessary skills in order for them to obtain information in a highly stake content standardised curriculum. Johnsen (2001) contends that teachers should modify and adapt their teaching in order to meet the learning needs of students with special educational needs.

Research relating to educating student with visual impairment in in general education setting documents that educational needs of students with visual impairment are not met due to lack of competent teachers to handle students with visual impairment in inclusive classrooms. A study conducted in four countries (Tanzania, Nepal Vietnam and Zambia) by Lewis and Little (2007) found that teachers are no educated in braille, tactile diagrams and maps to be able to face the challenges of inclusive education. Another similar study conducted in Tanzania, by Karakoski and Strom (2005), documents that only 0.9% of about 118, 000 general teachers in Tanzania have had teacher training in special education. Lamichhane (2017) clearly states that, unfamiliarity of mainstream teachers on the needs of students with visual impairments and failure to offer sufficient educational materials may negatively affect the notion of inclusiveness of these students. Their study also reported that whatsoever teaching adjustments teachers apply in their teaching of students with visual impairments was thus not direct outcome of special training they were provided rather was based on their own experience. Additionally, the same study found that students with visual they had difficulties to learn some of the contents in the subjects such as social studies and geography as they impairment felt were not taught properly about pictures. Their findings also revealed that teaching methods are not supportive of inclusive settings.

Although student with visual impairment are given hand frames, styluses and Perkins Braille, there are other resources that are vital in aiding them to understand concepts and contents in geography. A limited supply and utilisation of instructional materials such as braille textbooks, embossed maps (sketches and topographic or Atlases), real objects do not add up to anything in the teaching of geography to students with visual impairment. A study conducted by Simon et al (2010) with the aim of analysing the process of inclusion of students with visual impairment found that schools do not have appropriate teaching and learning resources to help students with visual impairments learn better in inclusive classrooms. Dennis as cited by Obasi (2011) postulates that

the essence of teaching geography with teaching resources is to bring the teacher and students into closer contact with the subject matter. In a study that was conducted. in Tanzania, an observation suggested that teachers see the importance of teaching resources not only for students with visual impairment but all students in general (Mboya et al 2008). That study proposed that, inclusive education for students with visual becomes successfully implemented if appropriate teaching resources are available. While the focus on teaching geography concentrates in a classroom situation, Ajibade and Raheem (1999) postulates that ‘the only true geographical laboratory in the world outside the classroom’. Therefore, if the teaching of geography is ton have an impact on students with visual impairment, the geography teacher should explore the materials outside the classroom. According to Aun et al (2020), all the classroom knowledge, no matter how meticulously designed and or are delivered remains a model of which reality resides outside in the field.

Statement of the problem

Students with visual impairment often receive instructions from teachers who are not qualified to teach critical skills such as braille, orientation and mobility and other travel skills. This problem presents challenges to students with visual impairment who are taught in the general education setting. Research argues that students with visual impairment need to be taught by teachers with expertise in visual disorders and sufficient training braille. Nyoni et al (2011) indicate that general educational teachers need to possess appropriate skills and attitudes in order to adequately and meaningfully assist students with visual impairment in the general classroom settings.

Research Objectives

1. Assess the current trends and practices in the teaching of geography to students with visual impairment.
2. Examine the suitability of the classroom environment for teaching and learning of students with visual impairment.
3. Explore methods, teaching and learning aids applied in the teaching of students with visual impairment.

II. RESEARCH METHOD

Descriptive survey was adopted. This design was used because it deals with the phenomena as they are and it has the potential to provide vital information from the teachers’ perspectives and their teaching (Creswell 2003). This approach was favoured because the researcher was interested in the subjective experiences of students with visual impairment. In order to gain insights on classroom practices, the researcher undertook a three-week observation in the teaching of geography at Munal Secondary school.

Participants

The research participants involved a group of 9 students with visual impairment aged between 12 and 18 years, who attend inclusive classroom at Munali Secondary School and three geography teachers of the same school.

Instruments

The researcher used interview schedule and observation sheet to collect the data for this study. The interviews were transcribed and the observations were also recorded accordingly on the teaching of geography

Procedure

Before undertaking the classroom observations, permission was sought from the school authority. Thereafter, the researcher undertook routine lesson observations on the teaching of geography in inclusive classroom which lasted for three weeks. In order to capture elusive experiences among students with visual impairment, a walking interview with students around the school campus was also undertaken.

III. RESULTS AND DISCUSSION

Pupils' Learning centeredness in the Learning process

In most of the lessons observed, teachers were not so keen on pupils' learning centeredness. Very often, the involvement of learners with visual impairment was minimal since teachers were using expository methods. Since learning is from known to unknown, it is important for the teachers to seek the learners' attention in order to build from the pupils' weakness. For example, when the teacher was teaching a topic on measuring the weather conditions using a Wet and Dry Bulb thermometer, indicating positive (+) signs and negative (-) signs, she later presented a pictorial form of the thermometers to the entire class, that was beneficial to sighted learners but that yielded nothing for learners with visual impairment since the teacher did not bring to class the actual aid of the wet and dry bulb thermometers found in the Stephenson Screen. However, I later discovered that there was a Weather Station located within the school premises which the teacher could have taken advantage of it by walking out with his class there to have a closer look at the aids. That would have been benefitted students with visual impairment and she would have made her lesson very lively to all her learners.

Learning needs identification within the subject area

During observation, teacher-learner contact was noted during the teaching of geography. While the teacher was busy writing on the board, she could digress a bit and go to were the pupils with visual impairment where sitting, to check whether they had written the correct spellings for specific words. For instance, when she was explaining on weathering process of rocks she wanted to ensure that they got the correct spelling and meaning of the words. What was peculiar about the teaching process was that the teacher was not using any teaching aids as there were no braille books or model to show

pupils with visual impairment in order for them to touch and feel so as to understand what she was talking about, since the sighted learners were using ink print geography text books with pictures showing weathering process for them to see. It is important for the teacher to use appropriate teaching aids for the different categories of pupils. Without the use of teaching aids, learners with visual impairment are lost and would not draw any substance from the lesson.

Individualisation in the learning process

Looking at the number of students per class teachers were teaching in the classes observed, there were no individualisation in the learning process. Regarding the sighted learners, it was easy for the teachers to meet their individual learning needs, this was so because the teachers could easily not on their faces while learners with visual impairment had their heads stooped down trying to capture the voice of the teachers making it rather hard for the teacher to read from their faces. Additionally, the sighted learners could easily notice anything from the teachers' faces and those of friends as well as the writing on the board and intervened for the teachers to make clarifications. Furthermore, the teachers seemed to rush through the lessons trying to cover and finish their topics. This proved futile for individualised learning process to take off in the sense that teachers who were them had no knowledge of braille.

A typical lessons learnt from observation

Teachers with no knowledge of braille had problems when it came to giving practical example. They could cite examples mainly in abstract terms such as oceans current in a geography lesson. It was easy for the teacher to show the sighted learners the Mozambican and the Benguela ocean currents since they had atlases with them, and they were able see by their senses of sight. On the other hand, learners with visual impairment had no learning aids of any sought such as embossed maps. The situation did not appeal much to the teacher in any way so as to take some time to explain to the visually impaired learners more especially to the totally blind ones. During an interview with the teacher concerned, he indicated that he had neither seen nor used any of the embossed maps.

Assessment of pupil's classroom work

In the classes observed, teachers always gave prompt feedback to sighted learners, while the those with visual impairment took long to get their class exercises marked. This was so because most teachers at Munali Boys' do not have knowledge of braille hence they depended upon other teachers with the knowledge in braille to transcribe their work before they could have their books marked. The process could take sometimes the whole weeks for them to receive their marked books.

According to the information gathered from visually impaired learners, some teachers from the unit would take three to five days to have pupils class work to be transcribed from braille into ink print in order to have them marked. Because of the cumbersome process it took for the visually impaired students

to receive their marked books compared to their sighted counterparts, they could not make corrections promptly and that affected their performance in the subject.

IV. CONCLUSION

Based on the findings of this study, it can be concluded that current trends and practices in the teaching of geography, students with visual impairment are facing challenges in inclusive classrooms. Teachers with little or no knowledge of braille have difficulties to teach geography to students with visual impairment. As such, teachers never adapted their teaching methods in order to accommodate students with visual impairment. Further, the classrooms and the outside entire environment is not suitable for students with visual impairment. While the walls of the classrooms had pictorial samples depicting geographical lessons for sighted students, there were no embossed diagrams on the walls for students with visual impairment. The teaching methods adopted by the teachers to teach geography was lecture method with some teaching and learning aids that were ideal for sighted students. While students with visual impairment have the capacity to understand concepts in geography as much as their sighted peers, they can only make sense of the lessons if they are presented with appropriate teaching and learning aids, such as embossed maps, model, audio and other tactile aids. It should be noted that, due to lack of vision, students with visual impairments can utilise other sense modalities such as the sense of (hearing, taste, feeling and touch) to learn.

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