Inclusion of Students with Visual Impairment in a Regular University Setting: Experiences, Challenges, and Coping Mechanisms

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Abstract
Currently, there has been a gradual increase in the number of visually impaired students being admitted to higher learning institutions in Tanzania where they are obliged to learn in settings designed for students without disabilities. This paper attempts to provide an inner understanding of how these students actually learn, the challenges they experience in the process of learning, and the strategies they use to cope with these challenges. The paper is based on a study conducted using 12 visually impaired students studying for a degree at a university in Tanzania. The findings of this study demonstrate that students with visual impairment are able to learn like students with no such disability. However, these students have additional needs attributable to their disability, which make their daily tasks as students complicated because of their lack of sight. Apart from individual personal efforts, visually impaired students have to struggle to seek and make use of available support networks to learn and perform to the best of their ability. Therefore, sensitivity of the teaching as well as non- teaching staff is necessary to create an equitable, safe and friendly learning environment where each learner feels valued, accepted and included.

Key words: Higher education, inclusive education, visual impairment

Introduction

There has been increased recognition as well as an ongoing change in the public's attitude to people with various disabilities. The inclusion of people with disabilities at the workplaces and in educational institutions has had a positive effect on the public's understanding of the capabilities and limits of people with disabilities that other human beings experience. According to Teferra (2005), a breakthrough in this recognition can be linked to the Salamanca Statement and Frame for Action and Special Needs Education of 1994, which called for a move towards an inclusive approach. For Frederickson and Cline (2009), for instance, an *inclusive approach* to education *means* that each individual learner is valued and treated with dignity and respect. This entails that, despite their special educational needs, visually impaired learners have the right to belong, share and work together with others in the classroom.

Although the policy aimed at inclusion seems to be recent, its history and justification date back to 1948 when the United Nations declared that education was a basic human right (United Nations, 1994, p. 279). To indicate their commitment, member states in the world, including Tanzania, signed and ratified these international statements. Tanzania believes in equality and the right to education as expounded in the constitution of the United Republic of Tanzania (URT) of 1977 and the 1984 amendment. The Constitution emphasises the equality of human beings, the need to recognise and value them and maintain equality before the law. The constitution provides for the freedom of both sexes to educate themselves up to the desired level. Article XI (2) of the constitution of the United Republic of Tanzania states, for instance, that:

> Every person has the right to self-education, and every citizen shall be free to pursue education in a field of his choice up to the highest level according to his merits and ability(United Republic of Tanzania, 1998:19).

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In this regard, access to educational opportunities is provided to all without discrimination. While it is free and compulsory at the primary education level, at other levels it is through merit, especially at university level.

As far as visual impairment is concerned, the provision of educational opportunities at lower educational levels traces its roots to 1950 when the Anglican Church opened the first school for pupils with visual impairment at Buigiri in Dodoma (Tungaraza, 2009). At university level, the first two students were admitted at the University of Dar es Salaam in 1978/79 (Tungaraza, 2010). Since then, the number gradually increased to 22 in 1988/89 and to 64 twenty years later (that is in 2008/2009). Available statistics from the Special Education Unit (School of Education Files, 2018) show that there are 33 visually impaired students (28 totally blind and 5 albinoes) registered in various degree programmes (mainly education). However, the number could be higher than this because some students, especially those with poor vision are not registered with the Special Education Unit. Although the current admission forms have been modified to indicate the status of disability, some students do not want to reveal their status for fear of being discriminated against and denied the chance to join the University.

Despite this gradual increase, little is known in terms of research on how these students with visual impairment actually learn in a typical university environment designed for students without disabilities. Therefore, a study to investigate their learning experiences was considered important to uncover and document what it really means 'to be a student with visual impairment' in inclusive classrooms in a university setting in the Tanzanian context. The research was expected to build up a comprehensive picture of how visually impaired students actually learn, the challenges they experience in the process of learning, and the strategies they use to cope with these challenges and successfully continue with their studies. It was anticipated that the findings of this study would further act as feedback from learners, thereby raising the awareness of course instructors (lecturers) of how best to improve the support for visually impaired students while they are learning.

In particular, the study was guided by the following research questions:

1. How do students with visual impairment go about their studies?
2. What challenges do they experience in the process of learning?
3. How do they cope with the challenges encountered in the process of learning?

The main argument of this paper is that although experts in inclusive education argue that all learners should learn together, regardless of the difficulties or differences they may have (Teferra, 2005), placing a student with visual impairment in a regular classroom alone is not sufficient and does not necessarily lead to inclusion. Certainly, as indicated by Pinquart (2013) and confirmed by the findings of this study, students with visual impairment learn in a different way from their fellow sighted students. The loss of vision due to any cause results in major changes in the lifestyle and habits of the blind person, and creates an obstruction which consequently leads to dependency.

Theoretical Framework

This study was informed by Morgan's (1995) ideas on the framework for guiding research on students' learning experiences. Through the author's research conducted with higher education and vocational training students, Morgan developed a set of five closely interrelated dimensions

to be used as a framework in any research that is aimed at looking at learners' experience of studying (p. 128). These are:

i. Orientation to learning: which describes how students come to be engaged in education and training. The aims, purposes and aspirations which students have in studying have a major impact on how they tackle their studies
ii. Conception of learning: How students learn and tackle their studies (what students actually do in their studies)
iii. Approaches to learning: How aspects of course design influence and change the way students learn
iv. Outcomes of learning and students' change and development: How students describe what they have actually learnt.
v. Aspects of course design and assessment system: Understanding the organisational context of learning

According to Morgan (1995), this framework provides a basis for understanding the *how*, *what* and *why* of the experience of being a student and surviving as a student. It also enables one to understand the complex issues of learning and at the same time identify obstacles and barriers to change. The basic tenet is that, if we really want to understand how students learn in a range of education and training settings with the purpose of improving their learning and our own practice, we need to take into account learning from the learners' perspective. Students' experience must be 'centre stage' (Morgan, 1995, p.11).

Morgan's framework was adopted by this study as a reference point for researching the learning experience of students with visual impairment so as to create a holistic understanding of what it means to be a visually impaired student and how students with visual impairment actually manage their studies at university level. Based on this framework, students with visual impairment were centre stage and data on their experience of studying were collected from their perspective.

Methodology

A study which seeks to understand the experience of learning from the learners' perspective lends itself to qualitative philosophical assumptions, as it sees reality as being differently experienced and constructed. Operating with this philosophical assumption, the researcher was able to enter the world of visually impaired students in order to gain a deeper understanding of their experience, feelings and perspectives. By adopting the qualitative research methodology, the researcher was also able to collect first-hand data from the natural setting where learning was taking place.

Data collection methods

The researcher chose non-participant observation and semi-structured interviews using 12 visually impaired students (3 women and 9 men) as the main data collection methods. A public university was selected as the case study because of its long experience in admitting students with visual impairment in its programmes. Accordingly, this university has already created within its administrative structure a Special Education Needs Unit which serves as a resource base where an appropriate assortment of tools, learning materials and adaptive equipment are made available to maximise the learning of visually impaired students.

Participants

Initially, the researcher had planned to collect information from all students with visual impairment across the university. But due to time constraints and the academic commitments they had, the researcher managed to interview 12 students. These students were willing and

keen to participate in the study and were between their second and third years of study. It is important at this point to note that with such a small number of interviewees, one cannot generalize the findings. However, this does not reduce the importance of what the participants said. The interviews were designed to be illuminative, provide reflection on current practices and stimulate constructive responses on where there is room for improvement.

Information was collected through interviews, transcribed verbatim, and read over carefully to get a sense of its totality. Thereafter, categories were established which were examined to form themes that provided the basis for analysis and discussion. Qualitative data obtained through documentary review were analysed using the content analysis technique.

Findings: Presentation and Analysis

This section presents the findings of the study and their subsequent analysis. The findings are categorised in three themes as per the research questions.

How Students with Visual Impairment go about their Studies

Before collecting the data on how students with visual impairment actually learn, the researcher was interested in getting the profile of these students**.** Information gathered from the research participants indicated that students with visual impairment are not homogeneous. As individuals, they are a heterogeneous group with unique family backgrounds and characteristics. Some had mild visual impairment, such as those with albinism, while others were totally blind. Some students were sighted at one time while others had never had any vision. The participants in this study had visual impairment as their only disability.

Those who were totally blind used Braille as a medium of reading and writing. They were also identified by the white cane they used to guide them as they moved around the university campus. Those with poor vision were able to walk independently. However, it was still difficult or impossible for them to do activities such as reading, writing or recognising faces without the necessary magnifying glass, which does not cure the problem but only helps them utilise their remaining vision to its full potential. Students with albinism were included in this group because they have reduced visual acuity and are sensitive to light that can cause fatigue when carrying out tasks that require vision. In terms of gender, both sexes were represented as there is no discrimination in the admission policy. This is contrary to what was observed by Possi (1986) and Okkolin et. al (2010) that female students were under-represented due to gender imbalance in enrolment and participation at lower levels.

(a) Attending lectures

Students with visual impairment attend lectures like sighted students. Since they cannot see, they heavily depend on listening and hearing. They also occupy front seats so that they can easily hear the lecturers. From the observation, it was noted that the students were alert and attentive throughout the lectures. They responded accordingly to questions asked by the lecturers just like other students, although they had to be called by name and not pointed to. However, it was only in small classes where the students effectively participated and interacted with the lecturers and fellow students because they were known by name.

With regard to note taking, there were two main ways in which students with visual impairment took notes during lectures. The first one was through tape recording. Almost every student with visual impairment attended lectures with a tape recorder placed on the table in front of the student. The tape recorder is turned on as soon as the lecture begins. All that is said during the lecture is recorded unless the tape runs out. While the tape recorder goes on recording the

lecture, a visually impaired student has to listen very attentively because sometimes the recorded voice is not clear. It was learnt that the tapes are replayed later and listened to carefully to get the meanings. From there, a summary of notes made from the lecture is embossed in Braille using a special typewriter (Perkins Braille).

The second way was through a Braille note taker. This equipment was introduced with modern technology to make note taking by visually impaired students easy and more efficient than tape recording. A student can directly take notes on his/her own while in the classroom. The notes are automatically embossed in Braille. Thereafter, the typewriter can be connected to a computer and printer for uploading and printing texts in Braille.

For students with poor vision, the situation was somewhat different. Although they also relied heavily on listening and hearing rather than seeing what was presented or written on the board, they did not need tape recorders or Braille typewriters, but instead needed printed notes with enlarged font. Notes in small font size make it difficult or impossible for them to read. When they tried to listen and take notes at the same time, it was evident that they still required very large print. It was also difficult for them to write in straight lines. A few students with poor vision had a personal computer and so were able to type up their notes after the lecture.

Sometimes lecturers give out handouts/copies of slides to students either in hard or soft copy. When this is done, students with visual impairment have to scan the hard copy into the computer. A Braille embossing machine is connected to the computer which embosses the normal typed writing in Braille print. This process applies to all hard copy study materials from textbooks or journal articles or even slides of powerpoint presentations. At times, lecturers tell students to read a whole chapter or long embossed handouts. In this situation, someone has to read out loud while the student is listening, digesting and trying to make sense of the notes. A student has to summarise the notes from the handout or chapter. This also has to be embossed in Braille for record keeping purposes and further reference. The handouts in soft copy are more easily transformed into Braille print than those in hard copy since they do not have to be scanned. Once in the computer they are sent to the Braille embosser and printed in Braille.

For students with poor vision, hard copies have to be scanned into the computer as is done for their colleagues who are totally blind. The font of the soft copy is then enlarged and printed. However, information obtained from the students is that the normal practice for those with poor vision has been to read the hard copy (handout) with the assistance of a magnifying glass. This is tiresome, especially for large documents, as it is difficult for them to hold a magnifying glass and move it along the lines until they have read the whole document.

(b) Preparation of assignments and examinations

Students with visual impairment prepare for assignments and examinations like sighted students, whose assignments and examinations are similar in content to those of students with visual impairment but differ in appearance because they are written in Braille or a larger font. In principle, after lecturers have prepared assignments and examinations, they send them in soft copy to the Special Education Needs Unit where they are embossed in Braille or the font is enlarged for the student with visual impairment. After it has been embossed, the examination paper (now in Braille form) is sealed, returned to the lecturer and kept safe until the day of the examination. Each student is provided with a typewriter for writing down the examination. Students with poor vision are provided with the examination paper with enlarged font to meet their needs. Students with visual impairment are given an extra fifteen minutes in every

examination hour., and students in the School of Law are given 30 minutes extra as their examination requires extensive writing.

(c) Studying diagrams

Students with visual impairment are free to select the courses they like no matter how complex they are, especially when it comes to embossing the study materials in Braille, such as diagrams, drawings, figures and charts, which is not easily done.

It was further noted that students with visual impairment in the lecture rooms are sometimes ignored by lecturers. In one of the lectures, the researcher observed a lecturer scribbling a rough sketch of a diagram on the blackboard and wondered if the lecturer was aware that there was a blind student, who could not see what he was sketching. This was followed up with the student. When asked if he knew what the lecturer had drawn on the blackboard, he responded that he could hear the sound of the chalk and that he was doing something on the blackboard, but he had no idea what it was. The researcher further asked the student if he had taken the initiative to consult the lecturer and ask him about what he was drawing on the blackboard. He sadly responded, "No, I did not go because it does not help or make any difference. In fact, I receive help from colleagues especially my reader. I ask them, and they describe it for me."

The researcher went and looked for the reader to find out exactly what and how he assists the student. He shared with the researcher that since he was sitting next to his client, he held his hand in the air and started following the sketch of the diagram on the blackboard. The client's fingers followed the edge of the diagram and it looked like he was sketching something in thin air. He added that although it was not accurate at least his client got the idea. The researcher checked with the lecturer after the session who confessed that he did not know how to assist the student in understanding diagrams.

The researcher learned that when it comes to numbers, the case is different. Explaining what they normally do in embossing assignments for one course in education (Education Measurement and Evaluation) the staff in the Special Education Unit informed the researcher that mathematical symbols are usually changed into words. So, instead of typing the mathematical symbol $\sum$ (which means summation), it is typed as the "summation of". Another example is "×" (which means multiplication), which is thus typed as "multiply by". The whole calculation is usually typed in words in Braille for the student with visual impairment to read easily. Although it enables the student to read and understand the calculations, it results in the use of a lot of paper as one calculation can cover a whole page, and so the more calculations the greater number of pages. It is also tiresome to read all the pages.

These are crude ways in which students with visual impairment are helped to understand diagrams, symbols and mathematical calculations. However, it does not mean that these are the only ways in which the students can read and study. More advanced ways are used in developed countries like the USA and United Kingdom, especially for communicating diagrams and symbols. One of the commonly used methods are tactile aids or graphics.

In mathematical calculations, a Grammar Abacus can be used. The Abacus, used for a long time in Japan, has been adapted to assist blind students in learning the concept of numbers and doing calculations. Manipulation of the abacus beads is particularly useful for counting, adding and subtracting. For more advanced mathematical functions, the student is likely to use the Speech-Plus talking calculator, a small electronic instrument that performs most of the operations of a standard calculator. It talks by loudly voicing the entries and results and it also presents them visually in digital form. According to Heward (1996), there are also spelling aids and talking

clocks available for people with visual impairment. The researcher observed that currently the majority of the students with visual impairment possess mobile phones that have talking clocks which assist them in keeping time, and telling the time for lectures and private study sessions. They have also made them independent rather than asking their colleagues the time or losing track of time. In natural and social science courses that involve diagrams, there are other adaptations, such as the tactile rendered software, 9 which is used with devices that can enhance images on a special type of paper.

Challenges Experienced in the Process of Learning

Visually impaired students experienced a number of challenges. The following section pays attention to only those which directly relate to teaching and learning.

(a) ***How students with visual impairment fit into environment***

When asked to comment on whether or not the orientation week had added value to their learning and general academic and social life at the University, all students agreed that it was important and helpful for them. However, it had some weaknesses because little consideration was given to students with disabilities, especially those with visual impairment, given that there was a lot of paperwork during that period. For example, important information concerning the academic and social life of students was found in the Prospectus and in the Student By-Laws booklet. Nonetheless, these were not accessible to students with visual impairment. On top of that, when students were shown important areas and offices like the Library and administration, they were all regarded as sighted and no concern was given to students who were visually impaired. Sometimes, information was given on the notice board, in fliers and brochures on the assumption that every student was literate and able to read it at his/her convenience. Interviewing the students with visual impairment concerning fitting into the university, some of the responses were as follows:

> I arrived at the University on Saturday morning. My brother escorted me from home and we spent the night in a guesthouse in Dar es Salaam. I was very nervous, but I tried to be calm. I could feel movements of people with some noise around me. My brother tried to ask several people who seemed to be busy with their own business, until luckily we met someone, who I think was an employee of this University, a mature lady, who then helped us get to the admissions office. There, I was lucky again to meet colleagues who were looking for where I was going. Fortunately, one of them was a lady taking the same degree programme. She actually became my guide and friend...” (Student 1 (third year, female), personal communication,

> I was very happy, and it was so exciting to imagine that I was also going to be a university student. However, I can assure you things were not that easy. Before I came here I had made an arrangement with my colleague who I was with in secondary school. So we travelled together. However, when I got here the environment was very challenging and disappointing because of the stairs to the library, lecture theatres, administration building, offices and the halls of residence. I nearly despaired because I did not know whether I would get someone to help me move around. My colleague could not come to my rescue all the time because we were admitted to different programmes, and so we had different timetables even during the orientation time. Several times I missed classes because there was nobody to assist me. It went on like this until we were allocated readers (assistants to read for us). This was almost in the fourth week...” (Student 2 (third year, male), personal communication,

(b) Learning the hard way in a classroom during lectures

In principle, the classroom should be seen as a place where all children, despite their special educational needs, have the right to belong, talk, walk, work and share experiences and ideas.

Unfortunately, this was not always the case of students with visual impairment. While they appreciated the fact that they are allowed to sit in front of the class where they can effectively and conveniently record lectures, they were discontented and felt excluded from the process of teaching and learning because of the teaching techniques used by lecturers. According to the students, some lecturers just write on the blackboard to explain particular concepts without mentioning them, as can be seen in this interview extract:

> Sometimes lecturers just write things on the blackboard without even saying what they are writing. This is frequently done with new vocabulary or when introducing new concepts or topics. It is really difficult to get a complete picture even when you play back the tape. Sometimes I ask myself how come that I am seated in a desk at the front, but the lecturer just precedes to write things on the blackboard as if I were not there?

In this study, six sessions were observed: two sessions involved students with poor visibility while the other four sessions involved totally blind students. The observation was guided by several tips extracted from the literature on what teachers need to do when teaching students with visual impairment (see for example Spungin & Ferrell, 2007).

The findings from the observed sessions indicated that some lecturers were aware that they had students with visual impairment in their class, who had to sit at the front and record the on-going lecture. However, they did not know if they were supposed to do anything else apart from allowing them to come with a tape recorders to record the lecture. In the session where there was a student with poor vision (student with albinism), the lecturer could see him because he also occupied the front seat. However, it seems that not many lecturers were informed that albinos had poor vision, meaning they needed to be special consideration and attention when teaching. Lecturers still wrote the words on the blackboard in small letters which could not easily be seen even by the researcher.

It was also discovered that if a student did not present himself/herself to the lecturer that he/she had a visual impairment, there was no way the lecturer would know of his/her existence. One student with visual impairment pointed out that for her to receive extra assistance she had to go to all her lecturers to notify them of her situation. She had poor vision, which is hard to identify by just looking at her. She could read print with a font size of 27 but no less, meaning that the lecturers had to provide notes in font 27 for her. The following is what the student said about her situation:

> I had to knock at every lecturer's office door to explain my problem. Most of them could not believe what I was saying, as I appear no different from others. Nobody can tell that I have a visual problem. But my vision is very poor. I can hardly read. So I had to make an effort, or I would have been left behind

This is an example of one bold student who did not want to be left behind. But how many students could do that? Most students as observed by Possi (2002) and Tungaraza (2010) do not want to be identified for fear of being labelled or stigmatized.

It was further observed that nowadays the majority of lecturers teach using projectors and power-point presentations. This method is preferable as it enables the lecturer to cover several textual materials in a short time. But for students with visual impairment, this method is disadvantageous for them as sometimes the lecturer skips some slides or does not read them since sighted students can see and read them on their own. Their tape-recorders also miss out the parts which are not read aloud or if the lecturer is not loud enough or does not read that part of the slide. On the whole, what we can say is that not all teachers were aware of the unique learning needs of visually impaired students. As a result, they did not take any precautions when

preparing their lectures, especially on the choice of teaching techniques which would accommodate all students in the class.

(c) Access to materials in the library

The majority of the interviewed students complained about the hardship they face when they look for reference books in the library. The process they have to go through in order to get Braille materials is cumbersome. During the study, there was no special books printed in Braille for students with visual impairment. Therefore, when in need, they had to borrow printed books, take them to the Special Needs Education Unit, have them scanned and embossed in Braille. This is neither a simple process nor cheap taking into account the large number of students and their demand for the same service. Sometimes the Braille version of books is too bulky for the students to move around with. Therefore, they are sometimes advised to select the chapters they need most and have them embossed in Braille. One of the students had this to say about the situation:

> Our freedom of choice is very limited. It all depends on the discretion of the reader. Worse still, at the University we are told to read beyond lecture notes. For a visually impaired student, this is very challenging because you do not know how many readings there are in the first place. Secondly, you cannot even skim through to see if the books selected for you by the reader are relevant or not

The students were also concerned that, unlike at lower educational levels where they was only one textbook for a particular subject, at the university, especially in social science subjects like education, a student is required to consult several sources and make notes. Students are encouraged to be critical and independent. This is not easy for visually impaired students.

(d) Forming and participating in study groups

Forming and participating in study groups was mentioned as another challenge. According to the students, the process of forming study groups was sometimes discriminating, especially when students were free to choose their own mates. It was revealed that students with visual impairment were usually not included most of the time simply because the majority of their classmates underestimated their abilities. According to the students, their colleagues think that they have to totally depend on them in the learning process. However, this was not the case. According to the students with visual impairment, their participation in discussions and group work assignments was equal to that of the sighted students. The problem was that sometimes they did not get the required reading materials in Braille for them to read and prepare before they go to discuss them.

Another problem is that at times they needed the reader to read the text material to them if they did not have their own notes in Braille or take the typed notes (if it is a handout) to the Special Education Unit for scanning and finally to be embossed in Braille print. The process is not smooth and takes time. According to the students, sometimes they also lacked the freedom to select group members of their choice. Therefore, they are just added to the list. The final problem, which is critical, is the handing in of group assignment. Sometimes what is finally handed in for marking is completely unknown by the visuallyimpaired students because it is usually in normal print for the course lecturer to read. When it is brought back, the students are just told the marks but cannot see or read the comments. This shows the extent to which sighted students need to be made aware of how best to learn together with students who have special educational needs. As observed by Mkumbo (2010), students have a positive attitude to learning and socialising with their peers with disabilities but they need to be made aware on how best to relate to them, especially in a learning context.

Coping Strategies

Subsequent analysis of the learning experiences and challenges encountered by visually impaired students in the process of learning shows vividly that their loss of vision affected them negatively. Despite the above-mentioned challenges, these students were able to navigate the system so as to achieve their intended goals. The following section provides a discussion on the findings on how visually impaired students cope with the challenges of learning in a regular university setting.

(i) ***Acceptance and determination***

It was evident that all students with visual impairment were determined and strongly motivated to pursue a university education so as to become independent persons in life. They had accepted their situation that they were visually impaired and hence limited in some respects. But they believed the had the intellectual ability because they were admitted to the university on merit like sighted students. Accordingly, they believed that the only way to become independent was through education. One student had this to say in an interview session:

> My parents always despised me, saying that I was useless and just a person to eat and sleep (kulakulala). While this pained me, it also inspired me. When I finally got the opportunity to go to school I was determined to do well, and I said to myself I will make sure that I get to university so that I get a good job with a good salary that will enable me to become an independent person one day

Almost all the students who participated in this study had aspirations to build an independent life by getting a proper job. They pursued higher education because they either saw it as an economic necessity to have better living conditions or a place to prove their self-worth. This coping strategy features determination to face and deal with the challenges of their limitations, and to display the full range of their competencies despite their disability.

This positive acceptance of their situation accompanied by the strong motivation to succeed enabled them to cope with the challenges of studying at the university, which was not originally designed to accommodate visually impaired students. Even in situations where there was little support available, their motivation and effort to study was the only weapon left in their hands. This is not unique to students with visual impairment at the higher education level in Tanzania alone. A similar observation was noted by Esere et al. (2016) in Nigeria for visually impaired students at the secondary school level. They had accepted their limitations as students without vision. Therefore, they had the urge and aspiration to perform well in their academic work in the same way as students with vision.

It is also important to note that acceptance and motivation alone are not enough. They need to be nurtured, enhanced and sustained. This can be done through positive reinforcement and involvement in the teaching and learning process so that the students feel they are part of it. According to Wlodkowski (1999) and UNESCO (2008), instructors have the challenge to create a social climate in the classroom that creates a sense of inclusion. Unless learners know that they can express themselves without fear of being threatened or humiliated, their perception of their worth will be undermined.

(ii) ***Awareness of available support services***

It was observed that apart from the students' determination to succeed, specialised services to support their unique educational needs also helped them to cope with the observed challenges. It was learned through interviews with the students that the University had designed and put in place a range of student support services to ensure that students with disabilities, particularly

those with visual impairment, are able to survive in the university setting and follow their studies with less tension. In the first place, it was noted that within its structures, the University has institutionalised a special unit to handle matters relating to students with disabilities. The unit has specialised administrative staff and provides an assortment of equipment, tools and materials needed for learning like tape recorders and tapes, Braille machines and paper. The following services are also provided.

1. Delivering specialised services relating to the needs of the students like transcribing lecture notes and examinations and tests in Braille
2. Identifying and recommending suitable candidates to serve as readers
3. Offering a workplace suitable for students with disabilities (equipped with necessary resources and facilities, for example, modern PC technology).

It was clear that the Unit was more or less like a home for the students with disabilities. The staff in the Unit identified themselves as guardians of these students.

The researcher was also interested in knowing how the unit supported students' learning during practical training. It was noted that the majority of students who go for fieldwork are those training to be teachers. Teaching practice is a part of the requirements for a degree in education. The role of the Unit in this regard is divided into two parts. The first part is during the planning stage, when they sit down with visually impaired students to discuss and agree on the choice of teaching practice stations, which are limited to two, since they are the only ones with transcribers. This information is fed back to the office of the Coordinator of Teaching Practice to ensure that students with visual impairment are not posted to schools beyond the two regions The second part is what the transcribers actually do during the whole period of teaching practice. Together with helping them to move around, the main role is to transcribe the lesson plan, scheme of work, teaching notes and/or anyother documents needed to facilitate their practical training. The students with visual impairment prepare their lesson plan, scheme of work, and teaching notes in Braille form. These tools must be seen by the University lecturers when they carry out their supervision and assessment. They have to be typed back from Braille into normal print. The same applies to notes if they are to be given to students.

In addition to the services provided by the Special Education Unit, the University also hires persons to perform the function of 'reading' for visually impaired students who cannot read for themselves. These persons technically known as Readers act as vehicles by which students with visual impairment read printed materials essential to their course. Information gathered from the students and Readers showed that the Readers read to the students all the notes, handouts or any study material provided by the lecturer either during the lesson or for further reference, as well as assisting in searching for study materials in the library or from the internet. They also assisted with important tasks such as picking up books from the library, scanning course materials, and editing written work for errors in punctuation and formatting.

(iii) ***Personal effort to seek social support***

Although the University has institutionalised services to support visually impaired students while they learn, this alone was not enough. Through interviews with visually impaired students, it was further observed that personal efforts to seek support were also necessary. Students had to make an effort to get the support of friends and classmates. For example, it was observed that although the university hires Readers to assist visually impaired students with their learning, the pairing of Readers with these students with visual impairment was not done from day one when visually impaired students arrive at the University. The hiring of Readers was a process. Therefore, visually impaired students had to use their initiative to make friends with colleagues to assist them before Readers are formally appointed. Even after being formally

appointed, not all Readers were university students taking the same courses. At times, they needed friends and colleagues who could walk with them from their halls of residence to the lecture rooms where they helped them find a seat at the front and placed their tape recorder on the lecturer's table in front of the room for easy recording.

It appears that the positive attitude they displayed toward their condition enabled them to be accepted by fellow students who were always willing to offer a helping hand. The findings of this study concur with earlier findings by Tungaraza (2010) and Possi (2006) that the support of friends has been found to play a significant role in the development of the psychological well-being of the visually impaired, especially during the early stages of adjusting to a new environment.

Complications for visually impaired students begin even before they enter the classroom. It is normal practice for almost all universities to have one week of orientation when students are familiarised with the university setting, the type of course to choose and register for and other personal matters to enable them to fit in and prepare well for learning. Going through the findings, it is evident that students with visual impairment face several difficulties as they report for studying. The early experiences are more complicated mainly because of their lack of mobility and people's perception of people with visual impairment. They are new to the environment, which hardly makes adequate preparations for taking care of people who need special help like students with visual impairment. They can neither read instructions nor locate places. Those who were lucky enough to have come with their friends from the former high school were assisted by them as they moved around. However, those who came alone were totally on their own.

Concluding Remarks

Overall, the big picture we get from this study is that when students with visual impairment are placed in a regular setting it is not easy for them and does not necessarily lead to inclusion. While it is true that although all university students share common characteristics since they are all students and were all admitted on merit, the way they experience learning is different given the uniqueness of their educational needs. The fact that they are unable to explore, locate and freely choose recommended readings from the library, unless they get a helping hand, makes them feel dependent even though they would like to be independent. Similarly, the fact that they have to convert normal print into Braille before they are able to read means that they have to make a greater effort and spend more time to learn than their colleagues. Their acceptance, motivation and determination to succeed accompanied by their efforts to access the support services available both at the university and in the immediate social environment enabled visually impaired students to cope with the demands of learning in a regular university setting.

Recommendations

On the basis of the aforementioned conclusion, the following recommendations need to be taken into consideration to make inclusion possible.

Students with visual impairment have unique educational needs which are most effectively met using a team of professionals, teaching and non-teaching staff. Sensitising teaching staff through in-house short-term orientation workshops and seminars is,therefore, necessary to create an equitable environment, where each learner feels accepted and valued, and hence able to realize his/her potential.

Sensitising non-teaching staff and the community in general is also necessary to make students with visual impairment socially accepted and included. The learning environment must be accessible, safe and friendly, with the availability of facilities to enable learners to participate in a range of learning activities.

Finally, it is evident that visually impaired students need a rich learning environment as sometimes they miss out on visual clues. Therefore, there is the need for the teaching units to include as much multi-sensory learning in the classroom as possible, such as touch and smell.

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