Assessing Inclusive Education Pedagogies for Students with Visual Impairment in Zimbabwean Universities: Challenges Encountered in Implementation

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Abstract
Inclusive education continues to attract many students with visual impairment despite challenges experienced in learning institutions that previously did not cater for such specific categories of disabilities. In Zimbabwe, the institutions that enrol students with visual impairment include primary and secondary schools as well as higher education institutions. Research has shown that most teachers in such institutions are not pedagogically well versed with the diverse academic needs and interests of students with visual impairment whom they sometimes find in inclusive classes. Researches done in Zimbabwean schools have shown that effectiveorthopedagogics and orthodidactics are affected by lack of resources and specialisation in visual impairment teaching and learning. However, very little research in this area, if any, has been done in Zimbabwean universities. Therefore, the aim of this study was to find out how inclusion of students with visual impairment was being handled in university learning. This study is informed by the qualitative paradigm, using a case study design. A sample of thirty five participants comprising university administrators, lecturers and students with visual impairment was purposively drawn from universities that had students with visual impairment. Semi-structured interviews and an open ended questionnaire were used to generate data. Data showed that almost all lecturers had not been trained on the mechanics of handling inclusive classes. It also emerged that university lecturers used traditional teaching strategies without taking into consideration the academic needs of students with visual impairment. It was recommended that there be training workshops to equip all concerned lecturers in universities with requisite training in specific contemporary technological pedagogical content knowledge (TPCK) that would help them meet the academic needs of students with visual impairment in inclusive university education.

Key words: diversity, pedagogies, traditional, inclusive classes, university education.

Introduction

Many governments in the world recognise the role of inclusive education as apractice that upholds equality and human rights in society. Today, inclusive education has become a worldwide platform for emancipation of students with visual impairment. The need for inclusive education was promulgated from the idea of safe-guarding the previous rights of the academically disadvantaged students with disability. The emphasis by the Jomtien Framework (1990), the Salamanca Conference (1994), the United Nations Education, Scientific and

Cultural Organisation (1994), the United Nations Convention on the Rights of Children (1989) and the United Nations Standard Rules (1993) on equalisation of opportunities benchmarked the launch of inclusive education.

The American Foundation for the Blind (2012) opines that inclusive education is widely practised in developing countries with few resources to support it. The National Blind Council Society (NBCS) (2008) found out that the scenario in Zimbabwe was that students with visual impairment in inclusive schools were not provided with necessary support services. Most educators in inclusive education institutions in Zimbabwe are not well versed with orthopedagogics and orthodidactics and the mechanics to handle students with visual impairment (Mahanya, 2016). Similarly, Pottas (2005) establishes that educators lack adequate knowledge, skills and training for effective implementation of inclusive education. This implies that students with visual impairment in inclusive education institutions are taught using 'one pedagogy caters for all strategy'.

Badza and Chakuchichi (2004) point out that methodologies used in teaching and learning in an inclusive setting should consist of diagnostic processes to establish and define the problem in order to decide on corrective measures for various students. On the other hand, Fuller (2003) regards orthopedagogics and orthodidactics as actions interrelated in comprehending the curriculum needs of an individual student and do not end in remediation of deficiencies in learning. Thus, orthopedagogies include the process of making and defining specialist needs of individual learners and use of that information to guide teaching and learning. Mafa (2012) notes that the methodologies and pedagogies which most educators use are streamlined to suit the needs of normal students. Though orthopedagogics aim at corrective education and focusing on modifying education of the convectional system to suit students with visual impairment, the methods used in university inclusive education seem to benefit sighted students only.

Pursuant to the foregoing perspective, Mushoriwa (2007) acknowledges that implementation of orthopedagogics, which encompasses studies in normal development and educational process and their application to students with visual impairment, can be very difficult considering the demands of the general curriculum. Fuller (2003) adds that the application of

orthopedagogics and orthodidactics in the inclusive education of students with visual impairment does not receive adequate attention. Thus, in inclusive university settings information and communication technology (ICT)-based orthopedagogics and orthodidactics receive scanty attention because most educators are not well versed with inclusive methodologies (Peters and True, 2008). The implication portrayed is that without access to knowledge and understanding of visual impairment, lecturers are likely to make mistakes of seeing the surface behaviours of students with visual impairment, thereby not helping them to academically develop. Mahanya (2016:112) says "Teachers make normative assumptions that may lead to poor learning by students with visual impairment in inclusiveeducational settings because of their failure to organise and sequence lessons towards a stronger understanding and achievement of concepts by the students".

Badza and Chakuchichi (2004) point out that orthopedagogics and orthodidactics consist of two processes, the diagnostic phase to establish and define the problem and the regime of corrective measures during the assistive phase. Similarly, Florian (2007) asserts that orthopedagogics and orthodidactics assume that there is nothing wrong with the student but the process and when the fault is found and corrected. The image uncovered is that there is the assumption that with orthopedagogics and orthodidactics, the student will be able to make commensurate progress after corrections. In this regard, university lecturers need to understand issues in visual impairment and ICT in order to anticipate how the pedagogy might need to be redefined (Mahanya, 2016). Humphrey and Lewis (2008) confirm that teachers are not aware of the learning content needed in inclusive education of students with visual impairment, resulting in the mismatch of learning outcomes. Mushoriwa (2007) found out that in order to match inclusive education requirements, teachers, therefore, need to fine tune their knowledge of visual impairment, so that they can be able to use effective and relevant ICT based methodologies in inclusive education. However, Ravet (2011) posits that orthopedagogics and orthodidactics are not just for students with special needs while Batten and Daly (2006) understand orthopedagogics and orthodidactics as the central ideas that provide specific approaches that are based on the knowledge and understanding of specific categories of disadvantaged students. The view is that lecturers in inclusive settings need to plan for many different students at a time and not just an individual group of students; hence, this can be a more inclusive approach, and thereby avoiding the one size fits all determinism.

Some educationists argue that students with visual impairments` pedagogies are not distinct and result in deterministic thinking and exclusionary practices (Ravet, 2011.) This means that the practices by lecturers in inclusive classes can result in rather narrow and fixed teaching methodologies and pedagogies that exclude students with visual impaired. Therefore, the knowledge and understanding of visual impairment is crucial in enabling lecturers to understand relevant orthopedagogics and orthodidactics in inclusive education of students with visual impairment. Thus, the understanding of visual impairment can lead to proper ways of teaching students with visual impairment who are in university inclusive institutions. Ravet (2011) found out that without knowledge and understanding of visual impairment and ICT, teachers often use subtle ways in which their practice may be directly limiting the accessto knowledge of students with visual impairment. Batten and Daly (2006) argue that what necessitates the implementation of methodologies and pedagogies are the mismatch between the general education (objectives, curriculum and outcomes) and the needs of students with visual disabilities. The prevailing situation in most inclusive university institutions in Zimbabwe shows discrepancies between students with visual impairments'academic needs and lecturers` pedagogical methods (Mahanya, 2016). This discrepancy is likely to have a bearing on the overall academic performance of students with visual impairment in inclusive university educational settings.

The National Association of Society for the Care of the Handicapped (NASCOH) (2010) suggests teaching methods such as direct instruction, cooperative and peer teaching, multi-sensory and trans-disciplinary approaches, individualised educational programmes, behaviour modification and computer based instruction (ICT) as some of the best ways that can be used to teach students with visual impairment in inclusive classes. Observably, the traditional methods, such as lecturing and demonstrations, dominate the teaching pedagogies in most mainstream classes. Horlin (2004), cited in Stubbs (2008), also reports that the methods used by teachers do not enhance motivation and enthusiasm of students with visual impairment to learn. Musengi et al. (2010) found out that the traditional methods used in mainstream classes bring a lot of negative impact on students with disabilities. This implies that students with visual impairment would not benefit from those inclusive teaching strategies. This study, therefore, sought to find out the extent to which academic needs of students with visual impairment are met in inclusive university education.

Data (1984), cited in Mavundukure (2005), argues that effective specialist teachers incorporate an instructional sequence called direct instruction. The instruction is characterised by beginning the lesson with a short statement of goals, reviewing previous learning, presenting new material in small steps allowing students time to practice after each step, giving clear and detailed explanations, providing active and ample practise, asking questions, checking for understanding and obtaining responses from all the students, providing guided practice and explicit instruction (Houtveen & Van de Grift, 2006). The message conveyed is that direct steps are appropriate to students with visual impairment, especially when material taught is new, difficult or in hierarchical order or when the student experiences learning difficulties. The ICT based direct instruction model has been proven to be more effective, especially to individual students with disabilities (Chireshe, 2013).

Chimedza (2007) points out that there has been an ongoing debate concerning the effectiveness of pedagogies used in an inclusive class while Mahanya and Chabaya (2016) found out that there are low positive and high negative relationships between inclusive classes and pedagogies used to produce expected results. In tandem with these preceding findings, Mafa (2012) concludes that homogeneous grouping is not enough to help students with visual impairment in inclusive classes toacademically benefit, where the remainder of the studentsare able to manage their own learning process. The implication portrayed is that lecturers are likely to be powerless in terms of making students with visual impairment acquire the relevant academic skills for independent survival. Mahanya (2016) found out that teachers lack knowledge on sustainable methodologies to use in inclusive classes, hence, learning should virtually depend on students' ability and activities. Conversely, Anderson (2004) asserts that students with visual impairment learn according to what they do and not according to what their lecturer and sighted students do. In a similar note, NBCS (2008) notes that teachers and sighted students do not make students with visual impairment pay attention, nor can they construct meaning to their learning. Against this background, the researcher investigated the extent to which university lecturers are well versed with university inclusive class teaching pedagogies and their academic impact on university students with visual impairment. This is so because effective teaching pedagogies can lead to proper academic achievement by students with visual impairment at university inclusive settings.

Statement of the problem

The background to this study reflects a missing link between teaching methods, students' comprehension of learning and the teacher skilled-ness in teaching students with visual impairment. This prompted the researcher to explore the impact of lack ofICT-based pedagogies in the teaching and learning of students with visual impairment in inclusive university education. Similarly, Musengi et al. (2010) note that special needs education programmes are frustrated by teachers` lack of proper teaching methodologies. Since implementation of inclusive education in Zimbabwe includes institutions of higher learning, it was prudent to find out the extent to which university lecturers and administrators are well versed with inclusive education pedagogies and the impact of their teaching on students who are visually impaired.

Research questions

The study was guided by the following research questions:

- Are university lecturers and administrators well versed in inclusive pedagogies of students with visual impairment?
- What are the attitudes of university lecturers towards the use of possessed pedagogical knowledge on teaching and learning of students with visual impairment in an inclusive class?
- What are the implications of ICT pedagogical knowledge to the teaching and learning ofstudents with visual impairment in inclusive university class?

Theoretical framework

The research is grounded in the Social Constructivism Theory of learning by Rodriguez (1998). The theory focuses on active involvement of the students when they are involved in the process of learning (Orodho, 2017).This means that the main activity is the student`s problem solving techniques and the use of inquiry into concepts and content using a variety of available resources to find solutions to the problem. The proclamation is that the lecturer is constructively seen as a facilitator who attempts to structure content into manageable segments which the student can cognitively organise at a personal level to make meaning. Khatete (2007) avers that constructivism brings about the desired outcome of conceptual change by creating a conflict between the students` naïve ideas and the accepted scientific ideas. In the same vein, Orodho (2017) notes that the role of the lecturer is to establish students` ideas in a given

conceptual area and then introduce analogues of accepted scientific concepts so that the students can compare their own conceptions with accepted concepts. Students with visual disabilities need to be exposed to practical activities where they may carry out experiments on their own and draw conclusions. Thus, ICT-based orthopedagogics and orthodidactics are regarded as potentially powerful tools in the development of multitude academic behaviours and personality traits. The constructivists` assumption is that a student has the right to be included in regular educational services. This implies that students with visual impairment who are includedin regular university classes need relevant pedagogies to buttress and scaffold their individual learning styles. The reason for this is thatstudents with visual impairment need also to be treated academically as equals in their information and knowledge access, skills acquisition, fluency building and generalisation.

Methodology

The study employed qualitative methodologies. Qualitative research is viewed as a collection of approaches to inquiry, "all of which rely on verbal, visual, auditory and olfactory data" (Ramphele, 2000: 41). The qualitative approach uses familiar techniques for handling verbal materials that make situations 'come alive'; it keeps the investigator close to the data and markedly facilitates understanding of the phenomenon being studied (Krathwohl, 1993). A case study design premised in qualitative research approach was used, where a case of two institutions of higher learning was considered. The population for this study was administrators, lecturers and students with visual impairment from the two universities. In addition, administrators of these institutions formed part of the research population where they were meant to give information on how they catered for students with visual impairment in their planning and management of the institutions.

Purposive sampling was employed to come up with the actual sample of participants. According to Linchtman (2006), a sample is a limited subset of the entire population. In a similar note, Muchengetwa and Chakuchichi (2010) assert that the lesser the number of participants, the easier it becomes to manage. Therefore, for this study, the sample comprised all fifteen (15) students with visual impairment who were enrolled at the two universities, fifteen (15) lecturers who were teaching courses taken by the students with visual impairment, three (3) chairpersons of departments and two (2) deputy vice chancellors of the two

universities. Semi- structured interviews were used to collect data from chairpersons, vice chancellors and the students with visual impairment, while a questionnaire with open questions was used to collect data from the lecturers. Data generated were thematically presented according to the patterns and themes that arose from the study and research questions respectively. The discussion addressed the research questions presented.

Results

The participants` responses were coded to facilitate easy categorisation and presentation of data. In the responses, administrators` responses were coded as (A), lecturers` as (L) while students with visual impairments` were coded as (S). These codes were used in vignettes and narrative texts.

University lecturers` and administrators' knowledge of inclusive pedagogies of students with visual impairment.

The university staff which included the vice chancellors and the lecturing staff, who were teaching courses taken by students with visual impairment, were not sure of the academic needs of students with visual impairment in inclusive university class. The results showed that the participants were not well versed with knowledge and special pedagogies used in special needs education, especially the teaching and learning of students with visual impairment who could not understand most of the abstract concepts that were taught using traditional methods. This was indicated in responses such as the following:

L: *Of course, I am a specialist, but I need to be staff developed on current knowledge and skills in special needs education to cater for inclusive classes with students with visual impairment.*

S: *I think most of our lecturers need to go back to the training centre to be equipped with the knowledge and styles that benefit us as students with visual impairment who are included at this university. We do not benefit much when they demonstrate certain concepts using pictographic representations.*

The above responses show that lecturers were not well versed with the academic needs and interests of students with visual impairment enrolled in inclusive university classes. The sentiments show that lecturers resorted to the use of ordinary traditional lecturing methods. Traditional methods of teaching and learning do not adequately cater for the cognitive needs

and dispositions of students with visual impairments. The responses above show that the use of pictures and diagrams seems to have a negative impact on knowledge acquisition by students with visual impairment. The vignettes show thatvisually impaired students' failure to academically achieve emanates from poor teaching techniques employed by some lecturers. The implication is that lecturers play an essential role in the quality of skills and knowledge provided during the lecturing process but the position portrayed implies that students with visual disabilities do not academically benefit if they are taught using the traditional methods.

Theattitudes of lecturers towards using possessed pedagogical knowledge on inclusive teaching and learning of students with visual impairment.

The participants raised the issue of negative attitudes as a basis for poor choice of pedagogies that can be used by lecturers to teach an inclusive class with students with visual impairment. Most of the participants confirmed that poor choice of pedagogy originates from negative attitudes. The following responses shed light:

S: *Our lecturers teach us in passing as their lectures are time framed and I hardly benefit Fromsuch deliberations*

L: *We are just fulfilling the demands of inclusive education. How can I plan individualised pedagogies for a university class? After all, there is no single method that can address the academic needs of students with visual impairment.*

The acknowledgement of just fulfilling inclusive university education shows that lecturers are not well versed with the academic needs and interests of students with visual impairment. The above sentiments show that university lecturers find it difficult to plan for individual differences of their students and, in turn, students with visual impairment tend to develop learned self-helplessness and self-fulfilling prophecies in terms of their academic development.

Most of the participants pointed outthe need for professional development of university staff inorthodidactics and orthopedagogics in special needs education in order to meet the educational needs of such students. The participants had this to say:

L: *Pedagogies used by most of us do not adequately challenge stigma and discrimination surrounding visual impairment. Which methods do I need to employ for an inclusive class with students with visual impairment?*

S: *It seems these lecturers have negative attitudes and seem not to be aware of other teaching approaches. They forget that we are also here. They come here just to lecture and leave.*

L: *At this level of education, I just come and do my lecture. The lecture method is convenient to most of university students.*

The above responses show that students with visual impairment enrolled in university education are in academic trouble. Most of the lecturers said that they demonstrated on chalkboards. In contrast, moststudents with visual impairment said they did not grasp content and skills demonstrated on chalkboards, thereby benefiting very little in terms of learning.Though, some of the specialist lecturers said that they thoroughly prepared for their lessons before content presentation to cater for all the students, visually impaired students still felt left out.Therefore, it could be argued that some students with visual impairment can hardly benefit, academically, if the mode used to deliver content is not individualised, hence the need for individualised educational instruction for students with visual impairment in inclusive classes. Most of the lecturers indicated the need for staff development in current pedagogies. The staff development programs would assist lecturers to realise the need to make efforts to make the university learning conducive for students with visual impairment. Thus, on-going training on pedagogies for lecturers can have a direct impact on academic achievement of students with visual impairment in inclusive university education. Case studies from Kenya, Botswana, United Kingdom and Pakistan have provided evidence that on-going professional development throughout a career contributes significantly to student with disabilities` academic achievement (UNICEF, 2008).

The implications of using ICT pedagogical knowledge whenteaching students with visual impairment in an inclusive university class.

The lecturers` own pedagogical beliefs and values play an important part in shaping technology-mediated learning opportunities for learners with visual impairment. The participantsnoted lack of information and communication technology (ICT) provision by administrators of inclusive universities as one of the factors affecting the effectiveness of pedagogies used by lecturers ininclusive university education of students with visual impairment. They had the following to say:

L: *In this modern era, the choice of teaching method is selected because of availability of ICT resources. It is difficult to think of an appropriate method where such resources are not there.*

S: *The lecturers who teach us complain of lack of ICT resources and do not teach us as individuals with visual impairment.*

B: *There is lack of specific ICT gadgets to be used by both lecturers and students at this university.*

The research participants provided a wide range of data on how the choice of teaching method can be negatively affected by lack of relevant ICT. The general aspects of concern appeared to be that oflack of ICT devices and the learning aids to beused in inclusive classes. Most of the lecturers were clear that they did not provide audio-tangible teaching aids to students with visual impairment during their lectures.

Most of the participants also said that they sparingly used computer - based instruction when presenting their concepts to a university inclusive class where students with visual impairment are enrolled. The participants noted lack of computer accessories that make it easier to design and implement individualisededucational instruction that enhanceaccess to academic learning activitiesbystudents with visual impairment. Although some lecturers said that they were competent enough to teach inclusive classes with students with visual impairment, based on the fact that they were trained, some of them said and proved that they were not familiar with current strategies to handle students with visual impairment. They had this to say in their responses:

L: *Institutions lack the necessary ICT to enhance the choice of my teaching method to be used in an inclusive class with students with visual impairment.*

S: *We are in trouble. These lecturers sometimes demonstrate on chalkboards and I benefit completely nothing in terms of those demonstrations.*

L: *ICT is an important aspect in the teaching and selection of a method to employ when teaching students with visual impairment in inclusive classes, but we are still beyond in terms of e-learning at this institution. If provide with such gadgets, I can do it.*

The sentiments above show that lack of ICT resources limits lecturers' choices of teaching and learning methods and this is likely to affect students the learning of students with visual impairment, especially where the demonstrations are done using diagrams and printed

examples. Lack of ICT knowledge and individualised educational programmes affect knowledge transmission and dissemination of content to students with visual impairment. Most of the participants noted that, they lacked the mechanics of ICT needed in the teaching of classes with students with visual impairment. Lack of ICT compromises academic achievement of students with visual impairment in inclusive settings. The participants had this to say;

S: *My friend it`s difficult to learn at a university. Last semester I failed two modules that I am carrying.Look, at the end of the semester, we are compared with sighted students in our class.*

L: *Most students with visual impairment failed research methods and statistics module as compared to sighted students. I don`t know why?*

S: *We produces poor assignment marks and examination grades as compared to sighted students. There are a lot of challenges here. The way we are taught and lack of assistive technology are the causes of concern.*

The sentiments above show that, universities seem to be doing very little to equip lecturers with the requisite inclusive pedagogies and there is no doubt that students with visual impairment who are included become victims of circumstance and those who soldier on with the university education encounter a lot of challenges. Some of the students said that sometimes they have to repeat or carry certain modules and they become labeled as underachievers.

Discussion

The findings of the study showed that university lecturers and administrators have very scanty knowledge and skills to cater for the visually impaired students in their institutions. On a similar note, Ravet (2011) found out that, without knowledge, skills and understanding of visual impairment, lecturers may often use subtle ways in which their practices may be directly limiting in addressing various students' needs in teaching and learning. This means that knowledge and understanding of visual impairment is crucial in enabling lecturers to understand relevant orthopedagogics and orthodidactics in inclusive education pertaining students with visual impairment. Pedagogies in special needs education consist of general knowledge, beliefs, and skills related to lecturing and beliefs of learningand knowledge of principles of instruction such as individualised and direct instruction. Pedagogies in special needs education are on content perspective, which is based on the breadth and depth of the subject matter (Florian, 2007). It is paramount for an inclusive universityeducation specialist

lecturer to have knowledge of the strategies which can be employed to teach students with visual impairment. Thus, having a flexible, thoughtful conceptual understanding of inclusive education pedagogies is critical to effective teaching of university inclusive classes. The implication is that lack of knowledge of pedagogies in special needs education management, ICT and quality teaching compromises academic development of students with visual impairment in an inclusive university class. Furthermore, students with visual impairment in inclusive university classes may find it difficult to acquire all the academic skills, behaviours, knowledge, values and norms which are considered worthwhile in university education. In this regard, the task of the university lecturer is, therefore, to transform the content in ways that make it easily accessible by individual students with visual impairment without watering it down but to maintain its academic rigour and integrity. The sentiments echoed by the participants provide strong evidence to demonstrate that, students with visual impairment have particular lecturing and curriculum needs. They require ICT based and modified educational provisions to enable them to gain access to knowledge opportunities that arise in university education.

The findings of this studyshow that the inclusive university education pedagogies to be employed when teaching an inclusive class with students with visual impairment are not common to all. Most university lecturers are however, not acquainted with relevant pedagogies to employ when teaching an inclusive university class with students with visual impairment. This is in congruency with Norwich`s (2008) findings that, most mainstream inclusive teachers use the ‘one size fits all’ pedagogies when teaching inclusive classes with students with disabilities. It has been found out that the pedagogies used by inclusive university education lecturers do not address the academic needs and interest of students with visual disabilities in universities hence, most of them oftentimes carry or repeat modules.

This study’s findings show overwhelming evidence that those students with visual impairment who are enrolled in universities experience isolation, stress, frustration and confusion during their learning processes and resultantly fail to fully meet their social, emotional and academic needs. Furthermore, it was found out that the traditional methods used in inclusive university classes with students with visual impairment conflate their learning needs. This is in line with

Chireshe (2013), who discovered that teachers who do not have knowledge on disability issues do not directly support the learning of students with disabilities.

Data from this research show that, although university lecturers want all students to be active participants towards set objectives, they do not meet the individual learning styles as they do not pace their lectures to meet the academic needs of students with visual impairment enrolled in inclusive classes. It was found out that lecturers put emphasis on keeping given time on assignments and general academic work. This shows that most lecturers are not adequately trained on how to apply the necessary ICT interaction pedagogical methods such as direct instruction, individualised educational instruction and scaffold instructional procedures to students with visual impairment who are in inclusive university classes. This study found out that CT learning aids used during the teaching and learning processhave the potential to reduce the level of abstraction and assist in mastery of concepts. Thus, the noted type and quality of interaction between the students with visual impairment and lecturers directly impact positively on academic development of such students in inclusive university education. Thus, the use of ICT changes the role of the lecturer and increases students with visual impairment`s control of their learning (Mafa, 2012).This means that ICT provides access to more and better educational content; hence, it enables learner support networking.

It arose from this study that, students with visual impairment cannot be compared to the sighted students given the variations and differences in their learning styles. Students with visual impairment in inclusive university classes cannot cope with the ordinary pedagogies used in ordinary education system. This transcend from lack of educational support, ICT, large classes, insufficient facilities, infrastructure and assistive devices as was found by Mahanya and Chabaya (2016). This study also found out that, the teaching and learning materials in twoinclusive universities for use by students with visual impairment are often not available. This perhaps explains the fear bylecturers in managing diversity in inclusive university classes, resulting in feelings of hopelessness by both students and lecturers. Furthermore, generated data show that lecturers lack confidence in meeting individual academic needs and interests of students with visual impairment as they felt unprepared and unequipped to use ICT relevant pedagogies in large inclusive university classes with students with visual impairment.

Conclusion

This study concluded that, lecturers were still using traditional pedagogies and did not use Individualised Educational Instruction (I.E.I) and technological pedagogical content knowledge (TPCK) when teaching an inclusive university class with students with visual impairment.The researcher concluded that most administrators and lecturers had no experience in visual disability issues and as such, they lacked knowledge of a variety of aspects regarding the effects of visual disabilities on social, emotional and academic development of students with such a condition. This shows that, the current inclusive university educationalarrangements need to be regulated by policies that are in tandem with TPCK and 21st century dictates of inclusive university lecturing, if students with visual impairment are to academically benefit from such practices. It was also concluded that, ICT teaching and learning materialsfor use by students with visual impairment were not available and oftentimes students failed to academically achieve in their assignments and examinations. The researcher also concluded that there was need to staff develop university lecturers and administrators in the use of contemporary technological pedagogical content knowledge (TPCK) so as to help students with visual impairment to academically achieve as equals in university education.

Recommendations

What is required is not training in general but training in specific contemporary technological pedagogical content knowledge (TPCK) in inclusive university education for specific categories of students with disabilities, especially students with visual impairment. Therefore, it is recommended that, there be established a teaching andtraining centreat every university, that could equip lecturers with requisite orthopedagogics and orthodidacticsskills that might help them meet diverse academic needs of university students with disabilities in general and those withvisual impairment in particular.Such training should be extended to all higher education lecturers since one is likely to have students with special educational needs in his/ her class at some point in one's career.

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