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EMBRACING SPECIAL NEEDS OF VISUALLY IMPAIRED STUDENTS' EDUCATION IN INSTITUTIONS OF HIGHER LEARNING IN ZIMBABWE: AN INCLUSIVE EDUCATION AGENDA IN ACTION

SHEPHERD GAMA[1] AND SHEPHERD GUMBO[2]

Abstract

It is apparent that students with visual impairments are not accommodated in most tertiary institutions. This study aims to analyse the content of seven journal papers which delve into studies on inclusive education for visually impaired students. The articles were chosen from several journals based on the period from 2018 to 2024. Then, the studies are analysed according to the following seven themes: classroom situations and examinations, lectures' methodology, participation in classroom, academic performance and assessment, subject difficulty, psychological challenges and social challenges. Most of the selected studies focused on inclusive education for students with visual impairments and their support for academic achievements. Additionally, positive results of inclusive education are yielded in seven papers. These outcomes suggest that students with visual impairments can advance in attaining professional qualifications by adopting the following strategies: training lecturers to address the needs of students with visual impairments, changing attitudes of lecturers towards students with visual impairments, maximum support for visually impaired students, appropriate teaching and learning infrastructure for visually impaired students, material provisions and building confidence in visually impaired students. However, further research is required to confirm how resources in tertiary institutions can be provided to address the needs of visually impaired students and enhance their advancement in tertiary education.

Keywords: assistive technologies, inclusive classes, inclusive education, instructors, sighted. visual impairment

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INTRODUCTION

In the National Strategy Development 1 of 2020 (NDS1) blueprint, the President of Zimbabwe, Emmerson Dambudzo Mnangagwa launched Vision 2030 to chart a new transformative and inclusive development agenda. It is the pursuit of this vision that will deliver broad-based transformation, new wealth creation and expanding horizons of economic opportunities for all Zimbabweans, with no one or place left behind (NSD1, 2020). In pursuit of the NDS1 agenda, the Ministry of Higher and Tertiary, Science, Innovation and Technology Development adopted inclusive education to address the needs of visually impaired people in empowering them through education and training.

Visual impairment is one of the key factors contributing to marginalisation and absolute poverty for some people in Zimbabwe, to the extent of begging in the streets and other public places. Tertiary institutions help to empower all people, including the visually impaired, through education and training (Forlin, 2013). According to Forlin (2013), inclusive education is a process in which regular schools and all year environments are transformed and adapted so that all children and students are supported to meet their expectations in academic and social needs. This includes the removal of all barriers in diverse environments. It also entails promoting communication, interaction, curricula adjustments, teaching, socialisation and assessment at all levels. This concept recommends schools and colleges to provide education systems that cater for the needs of learners with diversified impairments without exclusion.

After Zimbabwe gained independence in 1980, the government established many tertiary institutions, including vocational training centres, polytechnics, teachers' colleges, agricultural colleges and universities, to empower people through education and training. In the government's mandate of providing education for all, there is a visual impairment gap where the provision of tertiary education by state institutions of higher education does not cater adequately and expeditiously for the special needs of visually impaired people (Nziramasanga, 1999).

There are special institutions established by the private sector for providing tertiary education for visually impaired people. These institutions are expensive for ordinary marginalised people, the low-income earners of society. Tertiary education prepares people for work and enterprise. The

exclusion of people with visual impairments from education and training in tertiary institutions widens the gap between the impaired and the non-impaired people in society. It is against this backdrop that the article delves into this study to unpack the factors obstructing career advancement for visually impaired people in tertiary institutions and brings insight into empowering visually impaired people with skills and knowledge at tertiary institutions.

The study is a contemporary analysis of the literature reviews conducted by Miyauchi (2020) and Benyamin *et al.* (2023). The studies examined the factors contributing to retrogression in professional qualification attainment in tertiary institutions in Zimbabwe by visually impaired people. In the former review, however, the main limiting factors depressing visually impaired people in advancing in tertiary education were; shortage of resources, negative attitudes by lecturers, psychological challenges, social challenges and complexity of subject content.

These challenges were included in the articles produced between 2011 and 2017. Hence, Rao *et al.* (2014) recommend that researchers need to carry out another systematic review to update their findings and investigate other empirical studies that were not included in their analysis. This research attempts to overcome the limitations of the first study and complement the findings of the second one. It considers full papers dating from 2018 to 2024, including empirical results and focuses on embracing inclusive education for empowering people living with visual impairments through tertiary education.

CONCEPTUAL AND ANALYTICAL FRAMEWORK

The Connectivism Theory asserts that learning occurs when knowledge is motivated through the process of a learner connecting to, and feeding information into, a learning community (Kop and Hill, 2008). It further examines learning within technology, where counselling services can accommodate students with visual impairments through the use of technology to bridge the distance gap. Alves *et al.* (2009) underscore that information technology permits individuals with visual impairment to overpower a substantial part of the problems they encounter in daily life and give them independence and autonomy on information management and access to communication, just like their peers with normal vision. The Connectivism Theory also offers a platform for students with visual

impairments to circumnavigate their studies wherever they are with support from the university or college.

The United Nations (UN) Convention on the Rights of Persons with Disabilities (UNCRPD, 2016) deemed disability as a growing phenomenon that needs to be addressed at all levels of society, including universities. According to the UN, disability results when there are barriers limiting full participation in society, rendering others unequal. This is a move from the clinical-pathological model, where visually impaired students were viewed as the minority, unable to perform a task and needing assistance. It is from this stance that disability was then viewed as a socially constructed phenomenon due to limitations and barriers created by society (Possi, 2018).

The socio-cultural model, unlike the clinical-pathological model, emphasizes social justice, decent living standards, fair access, equitable opportunities for services and benefits and a determination to meet the needs of all, with a focus on the needs of the most vulnerable people, including those with visual impairments (*ibid.*). This approach is inspired by the principles of universality, inalienability, equality and non-discrimination and stresses human rights in the design and implementation of policies and programmes.

Moreover, as the Descriptive or Mapping Reviews approach provides a conceptual framework to understand the relationship between impairment, disability and society, it injects disability interests into all policy arenas (King and He, 2005, *et al*, 2015)). As an emerging theoretical framework, the Descriptive or Mapping Reviews approach is used to approach literature and inform the methodological process for this study, while providing answers to the research question:

- What are students' major challenges of studying in tertiary institutions while visually impaired?

THEORETICAL FRAMEWORK

This inquiry is informed by the Social-Cognitive Theory of Learning by Albert Bandura. The theory centres on personality development as it is fashioned by reciprocal determinism and self-efficacy (Hameed, 2002). This theory places great prominence on the social-cognitive events that take place in the individual`s environment. Witt and Booysen (1995rwich, 2007)

endorse that each human being, regardless of a disability, is bestowed with versatile potential. Orthopedagogics and orthodidactics are regarded as potentially powerful tools in the development of multiple behaviours and personality traits. The International Bureau of Education (IBE) (2007) conceives that the philosophy of inclusive education is embedded in the socio-cognitive principle that humans have equal value. This surpasses to ultimate human dignity. The assumption is that everyone has the right to be included in regular services, in this regard, a regular class with relevant andragogy to strengthen academic achievement. In tandem, Hameed (2002) proclaims that inclusive education appeals for equalisation of chances in all aspects of life. The intention for this is that students with visual impairments want also to be treated professionally as equals in their learning.

INCLUSION CRITERIA

According to Liyanaguna *et al.* (2013), different methods can be used to identify relevant work for a review study such as searching in databases. The five steps of content analysis suggested by Chekfoung *et al.* (2015) were applied for systematically retrieving the relevant papers. These steps are select the content you will analyse based on your research question; define the units and categories of analysis; develop a set of rules of coding; code the text according to the rules; and analyse the results and draw conclusions. However, the inclusion and classification themes were adapted in accordance with the aim and nature of this study. One primary keyword used was "inclusive education". This was to simplify the research and make it repeatable Visually impaired individuals and those with mental challenges were utilised to acquire peer-reviewed articles as part of inclusive education. This search was carried out in April 2024. Some of the articles were not fully downloaded by the browser linked to the university library because there was a cost associated with these articles. This led to the exclusion from this review since the aim was not to analyse the abstract only but the entire content. Forty (40) peer-reviewed papers were retrieved after removing duplicated papers.

The research carefully reviewed the abstracts and conclusions and skimmed the content to select the most suitable papers according to the identified criteria. A total of 20 papers were selected to be reviewed. However, during the review, 13 papers were also excluded because they did not contain findings and conclusions for the empirical work. They only included challenges faced by visually impaired students in tertiary institutions. As a

result, seven papers were selected to be included in this review. All papers were analysed in accordance with the seven themes.

To update its findings and investigate other empirical studies that were not included in their analysis, this research attempts to overcome the limitations of the first study and complement the findings of the second one. It considered full papers dating from 2018 to 2024, including empirical results and focused on embracing inclusive education for empowering people with visual impairment through technical and vocational education.

METHODOLOGY

The research approach for this study is qualitative. This approach is in line with the beliefs of the interpretivists. It relies heavily on naturalistic methods (Cohen and Crabtree, 2006) and focuses on exploring and understanding meanings that individuals or groups attach to a social or human phenomenon without any interference or manipulation (Yin *et al.* , 2009).

The key assumption of qualitative research is that reality is fashioned by individuals interacting with their social worlds and the key concern is to understand the phenomenon of interest from the participant's perspectives, not the researcher's (Creswell, 2014). It also safeguards adequate dialogue between the researcher and those with whom they relate with in order to collaboratively construct a meaningful reality (Cohen and Crabtree, 2006).

A multiple case study design was used and according to Yin*et al.* (2009), multiple case study design permits triangulation of findings. It gives room for the use of multi-sources of data collection, an important element for enhancing the quality of research data. In addition, the multiple case study design enables comparison of data gathered at different sites, an element which is hard to achieve when using a single case design (*ibid.*). The population for this study comprised seven journals based on the period from 2018 to 2024. These journals formed part of the research population as they were entailed to confer information on how they provide for visually impaired students in their planning and management of the institutions.

Purposive sampling was engaged to come up with the actual number 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 to manage.

Purposive sampling is a non-probability sampling technique providing a typical group of individuals with a particular life experience and the study selected information-rich cases for in-depth study (Patton, 2001; Leedy and Ormrod, 2005). Therefore, for this study, the sample consisted of seven journals based on the period 2018 t0 2024 which delved on special needs of visually impaired students in tertiary institutions.

RESULTS

This study sought to inquire about the embracing of inclusive education for students with visual impairments in the provision of tertiary education in in Zimbabwe. More so, it identified the gaps in inclusive education for visually impaired people. Papers were selected in accordance with four criteria, and they were analysed based on seven themes, namely classroom situations and examinations, lecturers' methodology, participation in classroom, academic performance and assessment, subject difficulty, psychological challenges and social challenges. This section presents the main findings of this review according to the selected themes. The objectives of the prior research were categorised into four groups: perceptions of lecturers, factors that impact attitudes of lecturers, challenges in accessing academic subjects and elements that increase accessibility to academic subjects.

CLASSROOM SITUATIONS AND EXAMINATIONS

Mahanya and Podzo (2022) substantiate that institutions of higher learning need the following technologies: text to speech devices/voice input, digital whiteboards, print enlargers and document converters, siren pens, visual graphic outliners, visual tracking and phonetic spell checkers. Kisanga and Kisanga (2020) and Mahanya and Podzo (2022) affirm that Assistive Technologies help develop enhanced learning and ability for self-expression and communication. Many physically impaired students want to communicate but cannot express themselves effectively. Institutions of higher learning in Zimbabwe that do not have relevant Assistive Technologies thus cannot provide education and training for visually impaired students.

In their study, Morta *et al.* (2023) found out that university students with physical impairments identify barriers in their university careers, such as

lack of teacher training, insufficiently adapted curricula and teaching materials, and inaccessible infrastructure. These factors hinder visually impaired people from pursuing studies at tertiary institutions. Many institutions of higher learning in Zimbabwe are not equipped with the necessary resources that suit the needs of the visually impaired. Ravichandran *et al.* (2022) purport that instructors must be cautiously skilled to provide for the on-line learning challenges in demanding situations for visually impaired students. Assistive Technology professionals need to be covered when educational programmes make choices about online learning. Provision of Assistive Technology enables visually impaired students to learn effectively in tertiary institutions.

LECTURER'S METHODOLOGY

One of the factors that are important for effective inclusive education, as confirmed by empirical studies by previous writers, is Abdullah's (2023) conclusion that teachers' methodologies in general schools are suitable for students with visual impairments. Most lecturers lack training or are inadequately trained in special education and this contributes greatly to dissatisfaction of students, especially those with visual impairment (*ibid.*3). Similar observations were made by Mulat and Yihum (2022) who discovered that most teachers in general schools did not have adequate skills and knowledge to treat students with visual impairments. Teachers cannot address the diverse needs of students with visual impairments. Ravichandran *et al.* (2022) concur that instructors need to be equipped with Braille and somputer skills so that they can assist students with impairments inclusding those with visual challenges. Institutions should set up Inclusive Resource Units so that students with impairments are provided with appropriate services to facilitate their inclusion (Ravichandran *et al*, 2022).

PARTICIPATION IN CLASSROOM

Forlin (2013) and Mulat and Yihum (2020) unpack from their studies that the school environment is not suitable for students with visual impairment. A student could not move from one place to another without a supporter. The way infrastructure is arranged at most schools does not address the needs of the students with visual impairments. These students find it difficult to participate in classrooms due to lack of relevant Assistive Technologies and appropriate infrastructure. The issue of inadequate funding to schools greatlyhinders implementation of inclusive education. Tertiary institutions

have unsuitable infrastructure, inadequate learning resources, a shortage of trained lecturers in special needs education and lack of library resources for the visual impaired students (Miyauchi, 2020).

ACADEMIC PERFORMANCE AND ASSESSMENT

Abdulla *et al.* (2023) bestow that the upshot of visual impairment on academic performance is apparent in lower literacy rates and decreased attainment among students with visual impairment. This conveys that students in tertiary institutions may fail to perform well due to visual impairment. They find it difficult to read and write if they are not supplied with relevant Assistive Learning Technologies. Abdulla *et al.* (*ibid.*) further assert that without proper accommodation and support, these students may struggle to keep pace with their peers, leading to a gap in academic achievement. Lack of adequate suitable infrastructure and support in tertiary institutions deters the visually impaired from excelling in their professional courses. Assessment of visually impaired students is difficult if there are no adequate and suitable Assistive technology devices.

SUBJECT DIFFICULTY

Most difficult diploma and degree programmes like Civil Engineering, Medicine, Electrical and Electronic Engineering, Chemistry, Physics and Mathematics, often require visual imitation. Visually impaired students find it difficult to pursue difficult degree programmes and advancing in those degree programmes is not possible for them (Bunyamin *et al*, 2019). Golga and Kana (2020) state that in inclusive classes, special consideration must be given to the visually impaired in the classroom and during examinations so that they can tackle the technically demanding subjects to enhance their academic performance.

PSYCHOLOGICAL CHALLENGES

Miyauchi (2020) discovers that out that visually impaired students may feel useless and bad about their blindness. They may lose confidence in all what they do in colleges and universities. They may feel bad that God created them blind. Benyamin *et al.* (2019) explored from their research that students with visual impairment do not get support from sighted students. Interaction between students with visual impairment and sighted ones was not promising.

SOCIAL CHALLENGES

Another finding by Forlin (2019) is that most teachers do not support visually impaired learners in the classroom. A majority of lecturers treat visually impaired students as sighted students. Chikukwa *et al.* (2015) suggest that negative attitudes displayed by lecturers and administrators towards the visually impaired were a cause for concern. Some blind students expressed their limited access to information and the partially sighted expressed concerns that include non-availability of large print copies of notices, books in Braille and large print and lack of knowledge on using the computer and internet (*ibid.*).

DISCUSSION

The present meta-analysis review explored some of the available studies that focused on challenges encountered by colleges and universities that adopted inclusive education. The major concerns found out in the previous studies can be linked to the situation in tertiary institutions. Colleges and universities are not equipped with the necessary classroom infrastructure for addressing the needs of students with visual impairment. Empowering visually impaired students through tertiary education is therefore impractical.

The findings indicate that lecturers lack skills and knowledge for teaching visually impaired students. In general, most lecturers tertiary institutions were not trained in handling students with visual impairment. This suggests that lecturers cannot train visually impaired students effectively during their training period. This results in students with visual impairment failing to advance in certain degree and diploma programmes.

Following the pinpointed inclusion criteria, the initial search of this study indicates that most of the visually impaired students lacked support in colleges and universities. In these institutions, students with visual impairment are excluded by sighted students. The latter avoid interacting with visually impaired students during and after lectures. The exclusion makes the visually impaired students feel lonely and unwanted in tertiary institutions resulting in their failure to progress further with their tertiary education. There are some programmes labelled as difficult, such as programmes in the science and engineering departments. Students with visual impairments find it difficult to pursue practical-orientated programmes such as Electrical Engineering, Mechanical Engineering,

Medicine and Pharmacy. These programmes are perceived as difficult as they require visual imitation which visually impaired students lack.

The other findings point out that classroom situations and examination systems in colleges and universities did not cater adequately for the needs of visually impaired students. Little attempt is made to provide Assistive Technologies and facilities for the visually impaired students for meeting their learning needs during learning and examinations. Visually impaired students find it difficult to study for vocational and technical programmes in tertiary institutions.

Institutions of higher learning need to be provided with adequate relevant Assistive Technologies like Braille printers, talking calculators, text speech, closed circuit television, electronic magnifiers, screener readers and colour identifiers for enhancing learning and teaching of visually impaired students. Shortage of such resources results in ineffective teaching and learning for visually impaired students. Learning needs of visually impaired students need to be fully addressed for them to access education for career development and successful completion of programmes in institutions of higher learning.

Literature from previous researchers affirms that tertiary institutions lack financial support from the government for implementation of inclusive education, especially for visually impaired students. Lack of financial support from the government makes it difficult for tertiary institutions to provide inclusive education. Most of the resources needed for training visually impaired are expensive, hence without enough financial resources, teaching resources for the visually impaired students cannot be provided in tertiary institutions.

Finally, previous researchers indicate that tertiary institutions were not equipped with qualified personnel for effective implementation of inclusive education, especially the visually impaired students. The visual impairment gap still exists in all general state-run tertiary institutions that offer diploma and degree programmes.

CONCLUSIONS AND RECOMMENDATIONS

The inclusion of visually impaired students in training and education in institutions of higher learning in Zimbabwe is not effectively and efficiently

conducted as lecturers are not adequately trained to handle students with special needs education such as the visually impaired students. This lack of knowledge on the part of lecturers could have led to attitudinal problems among lecturers and students, where students felt defeated and unable, whilst lecturers felt helpless.

The provision of financial and material support to tertiary institutions helps to alleviate all challenges obstructing inclusive education for the visually impaired. Provision of such support by the government enables tertiary institutions to provide the necessary assistive technologies and facilities that address special needs of visually impaired students in . More so, the government needs to intensify special needs training for lecturers or workshop-based training for equipping lecturers with skills and knowledge that enable them to cater for special needs of visually impaired students. Awareness programmes can be conducted in tertiary institutions to demystify the exclusion of visually impaired students by both sighted lecturers and students. Colleges and university administrators in Zimbabwe should ensure that students with visual impairment get adequate time per semester for assistance and remediation. This will instil confidence in visually impaired students and enable them to successfully pursue vocational and technical programmes of their choice. Vice Chancellors and Principals should work with non-governmental organisations and other stakeholders to acquire relevant equipment such as braille books and assistive devices for students with visual impairment whenever they fail to raise enough money for procuring the much-needed Assistive Technologies for supporting teaching and learning of visually impaired students.

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