AN INVESTIGATION INTO BARRIERS TO THE OFFERING OF GEOGRAPHY TO LEARNERS WITH VISUAL IMPAIRMENT IN NAMIBIAN RESOURCE SCHOOLS

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ABSTRACT

There are two resource schools in Namibia that provide education exclusively to learners with visual impairment (LWVI). However, these schools do not teach Geography to LWVI, even though there is a Geography syllabus that was adapted to cater to LWVI. To understand the barriers to offering Geography to LWVI in Namibian resource schools, a case study was conducted. The study explored the level of awareness among educators regarding the adapted Geography syllabus for LWVI and whether they were willing to teach the subject to these learners. The study also examined the perceived barriers to teaching Geography to LWVI, as well as how resource schools could be supported in teaching this subject to LWVI. To collect data, semi-structured interviews were conducted with key stakeholders in the Khomas and Oshana regions. The study found that there was a gap between the developers and implementers of the curriculum and policies. It also identified benefits of teaching Geography to LWVI, including the normalization and inclusion of these learners, job creation opportunities, and the opportunity for learners to gain knowledge about the world. However, the study also found that there were several barriers to teaching Geography to LWVI. These included teachers' attitudes and perceptions that LWVI cannot study Geography, the nature of Geography as a subject, and the lack of relevant technologies that could support LWVI in their study of Geography. The key finding of the study was that 70% of the educators connected to resource schools agreed that Geography should be taught to LWVI. They suggested that resource schools catering to LWVI should be provided with improved collaboration between curriculum developers and implementers, finances for Special Educational Needs training of existing Geography teachers, fully-fledged libraries (Educational Centres for the LWVI), and trained personnel to prepare Braille-related materials. Based on the findings of the study, recommendations were made to the teachers teaching LWVI, the resource schools that cater to LWVI, the senior education officers, and the Namibian Ministry of Education, Arts, and Culture.

Keywords: Geography, Visual Impairment, Inclusive Education, Resource Schools, Normalization.

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LIST OF ABBREVIATIONS AND ACRONYMS

AS - Advanced-subsidiary

HI - Hearing impairment

LWVI – Learner(s)' with visual impairment

MoEAC - Ministry of Education, Arts and Culture

NIED -National Institute for Educational Development

PD - Physical disabilities

SEN - Special educational needs

SEO - Senior Education Officers

TD - Theory of Dysontogenesis

UNAM - University of Namibia

VI - Visual impairment

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DEDICATION

I dedicate this thesis to my grandfather, Pastor Hiskia Karihangana Ndjoze-Uanivi, my mother, Menette Kamuanguue, my father, Fritz Munduuarue Kandando, my husband, Kapangurua Hekemo, my siblings, Mbaruku Kamuanguue and Franz Kandando, my daughter Rejoice Kamuanguue, my two sons McLarry Hekemo and Angelo Hekemo. I can also not forget my late grandmother, Petrina Kandando.

I am grateful for their endless support, prayers, understanding, encouragement and inspiration that facilitated me to pursue this study.

DECLARATION

I, Tendee Ritjaeree Kandando, hereby declare that this study is my own work and is a true reflection of my research and that this work or any part thereof has not been submitted for a degree to any other institution.

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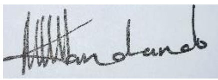
Tendee Ritjaeree Kandando		October 2024
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CHAPTER 1: ORIENTATION OF THE STUDY

This chapter discusses the background of the study, starting with the situation in Namibian schools. Next, the statement of the problem and research questions are outlined. The significance of the study is pointed out, and its limitations are noted and explained. Lastly, the keywords utilised in the study are defined.

1.1 Background of the study

The situation in Namibia regarding the types of schools and their functions is not as black and white as it is made to sound on paper or in various documents. Namibia has adopted the Inclusive Education pedagogy, and has in its *Sector Policy of Inclusive Education of 2013* elaborated what is understood as Inclusive Education in Namibia. However, not all schools are inclusive schools, as some schools function as mainstream schools and, even though special schools are now called resource schools, most of these schools still function as special schools because they are still catering to learners with special educational needs (SEN). For example, the two schools that cater exclusively to learners with visual impairment (LWVI) based in Khomas and Oshana region are now referred to as resource schools; yet they are catering to LWVI in the same way they did when they were regarded as special schools.

Apart from the two resource schools that cater to LWVI in Namibia, there are resource schools that cater to learners with different SEN, such as the school for the deaf for learners with hearing impairments (HI) and a resource school specifically for learners with Multisensory SEN. There are inclusive schools in the Oshana region that cater to learners without disabilities, as well as for those with visual impairment (VI) and those with HI. There is also one such school in the Khomas region which caters for LWVI.

Most other schools in Namibia do not have the infrastructure to be fully inclusive. Some do integrate learners with physical disabilities (PD); however, these schools do not have the capacity to include learners who may require SEN, such as those who are deaf, blind or have intellectual impairments.

Namibia has had a change in its curriculum since 2017. Before 2017, schools in Namibia were employing the old curriculum (2005-2016) but they have since implemented a new curriculum. In the old curriculum, Grades 0 to 4 (Grade 0 is the pre-primary Grade) were referred to as the Lower Primary Phase and Grades 5 to 7 as the Senior Primary Phase. Grades 8 to 10 were regarded as the Junior Secondary Phase and Grades 11 to 12 as the Senior Secondary Phase. In contrast, in the new curriculum, the Lower Primary Phase now only comprises Grades 0 to 3. Grades 4 to 7 form the Senior Primary Phase. Grades 8 to 9 constitute the Junior Secondary Phase and Grades 10 to 11 form the Senior Secondary Phase. Grade 12 is now known as the Advanced-subsidiary (AS) level which serves as a bridging course for learners who wish to study further at tertiary institutions.

At the time when schools in Namibia were still utilising the old curriculum, there were consultations regarding SEN with a variety of professionals. Specifically, in 2004 a document titled *Report of a Situation Analysis on the Provision of Special Needs Education in Namibia* was produced by Zimba, Haihambo and February. This report found that the curriculum was not flexible, or rather, not inclusive enough for learners with SEN, including those with VI. It, therefore, made recommendations regarding curriculum reform and adaptations to cater to learners with disabilities. It stated that "to accommodate educational provisions for persons with disabilities in the mainstream schools, states should allow for curriculum flexibility, addition and adaptation" (Zimba et al., 2004. p. 56). In March 2010, another consultancy regarding SEN in Namibia was carried out. Ashton, February and Haihambo (2010, p. 5) found that "in order to address the needs of learners in special schools, some changes should be made to the curricula of special schools". After these consultancies in June 2010, the Junior Secondary Phase (Grades 8 to 10) Geography syllabus was reviewed and adapted to suit LWVI.

In the old curriculum for the Junior Secondary Phase (Grades 8 to 10), the Geography syllabus was adapted to cater to LWVI. The adaptations that were made in this syllabus are discussed briefly under the sub-heading, Teaching and Learning Geography learning support for LWVI, in Chapter Two of this study. The adapted Geography syllabus was supposed to be implemented in 2011. However, this syllabus was never implemented. A document by the Ministry of Education titled *Assessing Inclusive Education in Namibia* (2018) stated that numerous educators believed that students with disabilities were incapable of keeping pace with the regular academic syllabus. Therefore, many specialized schools eliminated specific subjects or removed certain parts of the curriculum that they deemed inappropriate for children with disabilities. This is concerning as teachers have no authority to remove a subject or any section of the curriculum. This is done only at the curriculum development level. Some teachers stated that "they 'modified' the curriculum by removing from their timetable certain sections of subjects or, at times even, a whole subject rather than making adaptations or using assistive technology and devices" (Ministry of Education, Arts and Culture, 2018, p. 34). When teachers catering to learners with various SEN do not know how to convey specific topics or subjects, they simply choose to omit them. Some teachers actually remove the entire subject from the curriculum of the school. This is done at school level without consultation with relevant bodies.

Historically, people with visual impairment were confronted by major challenges in making decisions about their lives, especially in the academic area. According to Ndegwa, Cheplong and Korir (2015, p. 14) "visually impaired children face many challenges, they are in most cases neglected by parents, not given priority to study". The Namibia Statistics Agency (2016, p. 33) adds that "People with disabilities are one of the most marginalized groups in any society" and "the highest proportion of disabled persons, with no formal education were blind and visually impaired". People with visual impairment find themselves in situations where decisions regarding their education are made for them. They, furthermore, constitute the largest portion of people with disabilities who do not have any formal education.

In the National Curriculum of Basic Education in Namibia, Geography is stipulated as a compulsory subject for the Junior Secondary Phase in Namibian schools (Ministry of Education, 2016). It is believed that Geography is a visually demanding subject; however, this does not imply that LWVI should be completely cut off from learning the subject. According to Murr and Blanchard (2011) Geography is a pedagogy that heavily relies on visuals, similar to architecture and art history. It mainly focuses on human society and the environment, with an emphasis on understanding place, space, and scale. However, learners with visual impairment should not be excluded from this science, as they too can participate and contribute to this pedagogy. Furthermore, Murr and Blanchard (2011) state that legislation can lead to equal opportunity, environmental accessibility, and education opportunities, which are important considerations for Geography curricula. To achieve these goals, Geography educators must assess the strategies and methods that can be employed. In particular, classroom technology has made significant strides in reducing educational barriers for individuals with visual impairment who are interested in studying and participating in Geography.

As already mentioned in the previous section, there was a Geography syllabus specifically adapted to suit LWVI that was supposed to be implemented in 2011.

Schools teaching LWVI, now referred to as resource schools, do not offer Geography to the learners. It is against this background that the purpose of the study was to investigate the barriers to teaching Geography to LWVI.

1.2 Statement of the problem

In the educational system of Namibia, the National Curriculum of Basic Education designates Geography as a mandatory subject in the Junior Secondary Phase (Ministry of Education, 2016). As stated in the Background section, there is a Geography syllabus in the Basic Curriculum for Namibia that has been adapted to meet the needs of learners with visual impairments (LWVI). However, it is important to note that despite the existence of this adapted syllabus, Geography is currently not being offered to LWVI at resource schools. This lack of accessibility to Geography education for LWVI is a concerning issue that needs to be addressed in order to ensure equal opportunities for all learners in Namibian schools.

1.3 Research questions

1. To what extent are educators aware of the Geography syllabus that is adapted for LWVI, and are they keen to teach Geography to LWVI?

2. What are the barriers to offering Geography to LWVI, according to educators linked to resource schools?

3. How could resource schools be empowered and supported in order to teach Geography to LWVI?

1.4 Significance of the study

Several studies on Inclusive Education in the Namibian context (Haihambo, 2010; Josua, 2013; Shivute, 2018; Nambala, 2022) have already been undertaken.

Nevertheless, the barriers to offering Geography to LWVI in Namibian resource schools have received very little, if any, consideration.

Therefore, it is anticipated that once the factors that are hampering the provision of Geography to LWVI are established, possible ways to lessen them may be found to enable schools to offer the subject and contribute towards Inclusive Education. This will diminish the possibility of curbing the opportunity for LWVI to pursue geographically related fields of study at tertiary level.

1.5 Limitations of the study

In this qualitative study, the sample size was small. It was, furthermore, limited to the relevant staff at the two schools, the School for the Visually Impaired in the Khomas region and the Eluwa Resource School in the Oshana region, that cater specifically to LWVI.

It also included the two Senior Education Officers (SEOs) of Inclusive Education/Special Education and the two Senior Education Officers of Social Science of both the Khomas and the Oshana regions. This could be considered a limitation as it may not be an accurate representation of the larger population related to schools catering to those with visual impairment in Namibia.

1.6 Definition of terms

This section defines the terms employed in this study. These concepts and terms are described within the context of the study and are arranged in alphabetical order.

Inclusive Education

The Ministry of Education, in its Sector Policy on Inclusive Education, defines Inclusive Education as "a process of addressing and responding to the diversity of needs of all children, youth and adults through increasing participation, cultures and communities, and reducing and eliminating exclusion within and from the education system" (Ministry of Education, 2013, p. vi). The Ministry of Education describes Inclusive Education as "concerned with removing barriers to learning. It is about the right of every learner to a meaningful education in mainstream schools. It is based on the understanding that all learners have the right to be educated with friends, family, and peers, in their own neighbourhood or local community" (Ministry of Education, Arts and Culture, 2014, p. 3).

Inclusive Schools

The Ministry of Education states that inclusive schools are educational institutions that accept and make arrangements for all students in a single classroom, irrespective of the level of assistance they require. Such schools ensure that all students are given equal opportunities to learn, engage and participate in all aspects of school life (Ministry of Education Arts and Culture, 2018). The Ministry of Education, furthermore, regards inclusive schools as schools with goals to acknowledge and cater to the varying needs of their students, taking into account their individual learning styles and paces, in order to ensure that all students receive quality education. In addition, Namibian schools are expected to be inclusive and embrace the idea that all students should learn together, regardless of any differences. The belief is that every student can learn and achieve their potential and that a range of programs, support, and services should be available to meet the diverse needs of learners (Ministry of Education, 2014).

Learning barriers

Learners with impaired vision face significant challenges related to their visual perception when they enter the learning environment. In order to overcome these barriers, it is crucial for teachers to provide support for the learners' other senses and to structure the learning environment in a way that enables them to use their other senses to learn effectively (Zulch-Knouwds, 2010). In the current study, learning barriers refer to the obstacles that prevent or hinder LWVI from studying Geography.

Learning support for LWVI

According to the Ministry of Education, Arts and Culture (2014, p. 4-5),

> Learning Support involves planned methods and materials that enable learners with learning difficulties and other special needs, e.g. counselling, to reach essential basic competencies in the different subjects and skills. Learning support is a way to ensure that all learners can make progress and achieve according to their potential. Learning support also caters to the needs of intellectually gifted learners. These needs can be met by offering enrichment activities as part of everyday lessons. Furthermore, "In this inclusive approach, emphasis is placed on providing each learner with support according to their individual learning needs.

In the current study, learning support for LWVI refers to the support that can be provided to LWVI, thus, the adaptation of materials to suit the learning needs of LWVI.

Mainstream schools

The Sector Policy on Inclusive Education defines mainstream schools as "schools which, in a historical context, did not make provision for learners with special needs, or made very limited provision, without being fully inclusive. The goal is for all "mainstream schools" to be Inclusive Schools" (Ministry of Education, 2013, p. vii).

Normalization

According to Mugambi (2011) normalization is the process of providing equal opportunities and conditions to people with disabilities as those without disabilities. It incorporates various aspects of daily life such as housing, education, employment, physical activities, leisure and decision-making abilities. This approach emphasizes on taking calculated risks while preserving one's dignity instead of prioritizing safety all the time.

Resource schools

The Ministry of Education (2018) defines resource schools as educational institutions that cater to children with significant support requirements. These schools are primarily designed for children with disabilities, and some of them offer general education programs. For children with learning disabilities, resource schools provide a customized curriculum that is tailored to their individual learning needs. The Ministry of Education, Arts and Culture (2018, p. 11) subsequently, states that "the role of these schools has now broadened to include supporting inclusive and mainstream schools". Furthermore, the Ministry of Education defines a resource school as a type of school that adheres to the Education Sector Policy on Inclusive Education. The policy aims to establish a resource school in each region and transform existing special schools into resource schools. In regions where there are no special schools, new resource schools should be established to provide support to multiple impairments. A resource school should ideally serve several cluster schools in a region, and a Multi-Disciplinary Resource Centre should be created at each resource school to provide comprehensive support (Ministry of Education, 2014).

Special Education or Special Needs Education

The Sector Policy on Inclusive Education defines Special Education or Special Needs Education (SNE) as a type of education that is designed to help learners who have disabilities or other learning difficulties. Its objective is to remove the hurdles that may prevent them from learning and from fully participating in society. In the past, this type of education was mainly provided in segregated schools, with a focus on remedial and compensatory measures (Ministry of Education, 2013).

Special Schools

According to the Sector Policy on Inclusive Education, special schools are educational institutions that provide learning opportunities to students with disabilities in a different environment than their peers and regular schools. The plan is to convert existing Special Schools into Resource Schools (Ministry of Education, 2013).

Visual impairment

In this study, visual impairment refers to both blindness (those who cannot see at all) and low vision (those who can see but from a closer angle or when content is of a certain or bigger font size). The educational definition of visual impairment considers the ability or degree of a person to utilise his or her visual ability educationally.

As far as education is concerned, a student with low vision is regarded as having some vision (Shivute, 2018). While blindness is a term used when a person cannot see anything in their better eye or can only perceive light, and struggles to recognize different objects (Baboo, 2011). The term visual impairment refers to the loss of vision that can impair a person's ability to function, and it can range from partial to complete loss of vision (Baboo, 2011).

1.7 Chapter summary

This chapter presented the background of the study, starting with the situation of schools in Namibia. The statement of the problem was outlined, followed by the research questions that underpin this study. The significance of the study was elaborated and its limitations were noted and explained. Lastly, keywords and terms employed in the study were defined. The next chapter discusses the theoretical framework of the study and a discussion of the literature reviewed for this study.

CHAPTER 2: LITERATURE REVIEW AND THE THEORETICAL FRAMEWORK

2.1 Introduction

This section discusses the theoretical framework that guided the study, as well as the reviewed literature relevant to the study. It includes the concept of resource schools in Namibia, the importance and benefits of teaching Geography to learners in schools, as well as the employment status of LWVIs in Geographical fields. It, furthermore, looks at the relevance of employment in general, challenges and/or difficulties of teaching LWVI and learning support for learning and teaching Geography to LWVIs.

2.2 Theoretical framework

This case study is based on two theories, namely the theory of dysontogenesis (1924-1934) postulated by Vygotsky and that of normalisation postulated by Wolf Wolfensberger (1980).

2.2.1 The theory of dysontogenesis

Vygotsky's theory of dysontogenesis holds that the main problem of disability is not within the individual who experiences the disability; it is the social implications of having a disability. Consequently, the environment intensifies the disabilities of the individual. This theory calls for positive differentiation as it speaks to a positive view of people with disabilities and thus empowers them.

According to this theory, an optimistic outlook of persons with disabilities is a vital component of constructive differentiation. With an optimistic approach and action, LWVI can be taught Geography, irrespective of the challenges that may be encountered; consequently, learning will lead to progress, such as growth in knowledge of the subject (Simalalo, 2017).

This theory divides disability into two segments, namely primary and secondary disability (Simalalo, 2017). In this study, the primary disability constitutes the visual disability of the learners at the two resource schools catering to LWVI and the secondary disability will be the one imposed on the learners by the schools' decision not to offer Geography to them because of their primary disability. These learners were thus excluded from learning and gaining knowledge of Geography and will, therefore, not be able to become involved in any geographical fields of study should they proceed to the university level.

Vygotsky`s theory of dysontogenesis, according to Rodina (2006) has "a positive resource-oriented line which denotes a constructive collective perception of children with disabilities, giving preference to reinforcement and enablement of individual abilities rather than the traditional stress on flaws or abnormalities." Consequently, instead of being too worried about how difficult it would be for the LWVI to study Geography because of their disability, resource schools catering to LWVI should rather pay attention to the advantages and benefits of teaching Geography to these learners. Below is a Table adapted from Rodina (2006) explaining the position of the theory of dysontogenesis and including learners with disabilities, in this case, those with VI.

Table 2.1: *The general model of implementing the theory of dysontogenesis in inclusive school*

General principles of Inclusive Education (What the Inclusive Education paradigm shift in education dictates)	**The theory of dysontogenesis (What the theory of dysontogenesis states)**
• There are multidimensional structures, levels and expressions of conditions or disabilities. • There is a uniqueness of development of children with disabilities as well. • The best combination of general development as measures to overcome these multidimensional expressions of disabilities is through educational therapy (teaching the VI how to read Braille, for example).	• TD's view on primary and secondary disability and the 'social deviation' as a particular development. • Divergence of biological and social factors in uncommon children's developmental processes. (The visual impairment is the primary disability that the LWVI have; however, the schools decide that, because the learners have visual impairment, they cannot learn or it will be difficult for them to study a certain subject, in this case Geography. This is regarded as a secondary disability in this theory)

Adapted from Rodina (2006, p. 21-22)

Table 2.1 above simplifies the connection between the general principles of Inclusive Education and the notion of the theory of dysontogenesis. The emphasis here is that what intensifies disabilities and differences is mostly socially constructed and not primarily the disability that a person with disabilities may have. In this case, it will be the removal of a compulsory school subject, such as Geography, from the curriculum of LWVI simply because the learners are blind or have low vision, albinism and/or severely low vision.

2.2.2 The theory of normalisation

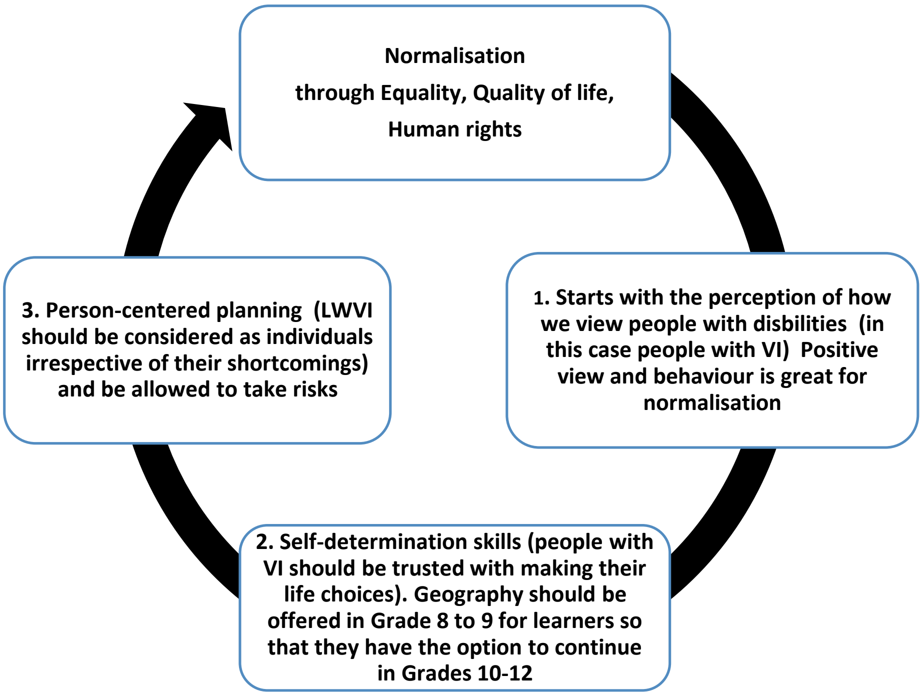
The theory of normalisation involves the acceptance of people with disabilities and offering them the same conditions as those offered to other citizens who do not have disabilities. It pertains to the typical aspects of daily living, like accommodation, education, work, physical activity, leisure and the ability to make independent choices.

This encompasses the concept of taking calculated risks while maintaining one's dignity, rather than merely focusing on ensuring safety at all times (Mugambi, 2011). Renzaglia, Karvonen, Drasgow and Stoxen (2003, p. 1) added that;

> the normalisation principle provides the framework for inclusion by stating that individuals with disabilities should participate equally in the normal routines of community life, including having a home to live in, access to school or a job, self-selected and self-directed leisure time, and the opportunity to establish social networks which include individuals without disabilities.

Furthermore, according to Kumar (2013, p. 670) “normalisation means making available to all the persons with disabilities and other handicap patterns of life, conditions of everyday living which are as close as possible to or indeed the same as the regular circumstances and ways of life of society”. The theory of normalisation speaks to normalcy and that each individual should be given the right to a normal life. Each individual should be allowed to take risks; therefore, people should not be protected simply because they have specific disabilities. All learners, including those with VI, should be entitled to a normal life, and school subjects should not be removed from their curriculum in the name of protection, as they have the right to the dignity to take risks, like all other learners who do not have disabilities or supposed limitations.

Below, Figure 2.1, adapted from Renzaglia et al. (2003) elaborates on practices to promote normalisation and inclusion in schools to cater successfully to learners with special educational needs in this case LWVI.



Adapted from Renzaglia et al. (2003, p. 10)

Figure 2.1: *Practices to promote normalisation and inclusion of LWVI*

Figure 2.1 above summarises the practices that promote the notion of the theory of normalisation and ways in which the inclusion of LWVI can be achieved. Firstly, offering normalcy to LWVI, according to the theory of normalisation, is through the positive perception of people with visual impairment. This is followed by trusting persons with visual impairment to take charge and make decisions about their own lives. In other words, it is to allow LWVI to decide for themselves to choose to study Geography or not at Grade 10 when they choose their fields of study; therefore, this subject should be compulsory for Grades 8 to 9, as stipulated in the Basic Curriculum of Education of Namibia. Thirdly, by appreciating differences and thus devising individualized educational plans (IEPs) in schools, technical and practical subjects like Geography can be taught successfully to LWVI. The implementation of these practices will, in turn, contribute to the normalisation of LWVI and promote human rights, quality of life and inclusiveness.

This section dealt with the theoretical framework of this study, comprising both the theory of dysontogenesis and that of normalisation, also how these theories are applicable to the study was incorporated. The next section deliberates on the emerging resource schools in Namibia. It looks at the dichotomy between what they are supposed to be, according to documents, versus reality.

2.3 The concept of resource schools in Namibia

This section explores when and why the concept of resource schools in Namibia emerged and what is meant by the term, resource schools, in the Namibian context. In other words, it elaborates what their functions are and, furthermore, whether they are currently functional or meeting the practical requirements of what a resource school entails.

The Ministry of Education Arts and Culture (2018, p. 11) defines resource schools as follows:

> These are segregated schools that accommodate children requiring high levels of support. Most of these schools are disability-specific and some follow the general education curriculum. In the case of learning disabilities, resource schools follow a tailor-made curriculum specific to the learning needs. The role of these schools has now broadened to include supporting inclusive and mainstream schools.

The Ministry of Education, Arts and Culture (2014) furthermore, stipulated that special schools already in existence should be transformed into resource schools. In regions where there were no such schools, new resource schools should be established based on the requirements of each region. These resource schools could offer assistance for two or more types of impairments. Ideally, a resource school should be able to provide support to multiple cluster schools in a particular region (Ministry of Education, 2014).

In 2013, the Namibian Ministry of Education introduced the Sector Policy on Inclusive Education, which renamed special schools as resource schools. Prior to the implementation of this policy, special schools were considered to be institutions that provided education to students with disabilities in separate settings, apart from their peers and regular school environments (Ministry of Education, 2013). According to the Sector Policy on Inclusive Education (2013) all schools in Namibia were to become inclusive, and the role of the former special schools was redefined to provide educational support, as well as render learning support classrooms at the school level, proportional to the need.

Each region should have at least one resource school that is built specifically to cater to students with severe special educational needs as well as those requiring intensive educational support. To ensure that these students have access to inclusive education, the schools should establish Regional Inclusive Education Units. These schools and units must be equipped with good teaching methods and effective learning approaches. Additionally, they should provide care and support to all students, along with well-structured instructional resources.

Since inclusive education is the current paradigm adopted since 1994 in the teaching and learning pedagogy in Namibia, it will make no sense to have special schools that just cater to learners with special learning difficulties. All schools are supposed to be inclusive and restructured in order to cater to all learners' needs, irrespective of their abilities and/or disabilities.

The Ministry of Education (2013) in its Sector Policy on Inclusive Education, talks about resource schools being monitored by established Regional Inclusive Education

Units. Of main importance would be particularly the development process and running of resource schools or how they operate. Resource schools are an important component in Inclusive Education as they consist of experts who can best facilitate Inclusive Education. It is against this background that the concept of ‘special schools’ is not applicable in Namibia any more as the current term, ‘resource school’, has been accepted.

From my experience when I was collecting data for this study at the School for Visual Impairment, ‘resource schools’ appeared to be just a term that replaced ‘special schools’ and the expected outcomes associated with ‘resource schools’, such as being resource centres that render assistance to mainstream, inclusive schools, had as yet not been put into practice.

This section looked at the emergence of resource schools in Namibia. It looked at the perception of what a resource school should be, according to the Namibian Sector Policy on Inclusive Education of 2013, versus the current reality. The next section explains the importance and benefits of teaching Geography to learners in schools.

2.4 The importance and benefits of teaching Geography to learners in schools

In this section, the importance of teaching Geography to learners is discussed. The section specifically examines the benefits of teaching Geography to all learners, including those with VI.

Geography is a Social Science subject that instils knowledge and raises awareness of many aspects of life. According to the Ministry of Education (2006, p. 2)

> Geography provides scientific knowledge about physical, environmental and human processes, which form the basis for cross-curricular education. Geography promotes the following aims in the curriculum guide: intellectual development, personal development and self-fulfilment, social and cultural development and development of environmental and population awareness.

The Geography curriculum contains three main disciplines, namely Physical Geography, Human Geography and Economic Geography. These three disciplines play a crucial role in shaping and influencing people's way of life. This implies that all learners, including LWVI, need to be taught Geography in schools. Utami and Salsabilla (2021) state that Geography is one of the essential and major areas of study offered in both elementary and secondary schools. This is because Geography teaches content that applies to real life. Any topic of knowledge that a person studies, even in other subjects, always starts with observations on the face of the earth; thus, Geography is said to be the mother of science. Geography, as an area of science and as a subject, has a clarification of a character resulting from the interaction of living things, most especially human beings, with the natural environment. Geography, furthermore, comprises topics about the earth's surface and spatial science; consequently, it plays an important role in providing information to scholars in learning different factors of life on Earth. Furthermore, Kipkogei (2016, p. 5) states that "the relevance of geography subject should be brought to fore so that more students are knowledgeable on the role that geography subject plays in dealing with societal problems". Maude (2010, p. 15) advocates that Geography explains their own environment to scholars, especially "how and why it is changing". This gives scholars "an understanding of some of the influences on their locality and their lives", and, thus, aids them to make educated decisions on a variety of individual and public problems. The subject content of Geography caters to learners' interest in places, and it cultivates their sensation about the world and different peoples regarding their cultures, communities, landscapes and the like. Geography enriches a geographical imagination that supports learners in other areas and promotes a sense of global citizenship and environmental responsibility (Maude, 2010). Bell (2005, p. 13) adds that;

> Geography is about places. Geography is not just having knowledge about places themselves; however, it is about understanding the 'interdependence and connectivity of places'. Geography is more about 'empowering tomorrow's adults to develop real global understanding and global citizenship' so that they have the academic appreciation and knowledge to contribute independently and mutually in influencing the world around them. This knowledge and understanding of other places, cultures and societies underpins sensitivity and tolerance and contributes to good citizenship.

The discussions above demonstrates that Geography is an important subject and that all learners can acquire great skills and knowledge through studying Geography. It is, therefore, important that this subject should be taught to all learners.

This section looked at the importance of teaching Geography to learners, as well as the benefits of teaching Geography to all learners, including LWVI. The following section looks at the relevance of employment, in general, and the employment status of people with visual impairments in geographical fields.

2.5 Employing the visually impaired in geographical fields

This section deliberates the employment status of persons with visual impairment in geographical fields of work. It, furthermore, looks at the relevance of employment in general, especially for people with visual impairment.

Every individual who attends school aims to complete their studies and then find employment of some sort that will help fulfil their financial, emotional and psychological needs. People with visual impairment share the same norms of life as everyone else. Donaldson (2017) posits that it is often said that work is a measurement of success for adults and a certification of their survival. However, individuals with visual impairments face a higher rate of unemployment and underemployment as compared to those who are not visually impaired. Nowadays, having a productive job is a crucial aspect of life. It adds value to one's existence, provides economic freedom, and boosts self-assurance. It instils a sense of purpose to make a positive impact on society and promotes overall satisfaction with life (Rampersad, 2018). Rampersad (2018, p.1) further adds that;

> Throughout history, and especially in the past years, people with visual impairments have the highest unemployment or underemployment rates of any group in their culture or society. Undeniably, in the world, only about 25% of those who are working age have any form of paid employment. This statistic is even more profound in developing countries, where unemployment reaches closer to 90%. Being blind, without access to resources, exposed to society's relentless low expectations, and routinely being excluded from participation in the economy, results in social and economic isolation.

Excluding learners from taking a specific subject in school will, in turn, lead to adults who will be excluded from employment in that specific field. Learners' future career paths are informed by their subject choices during the course of their school years. According to Kipkogei (2016) Geography is a crucial subject that encompasses a wide range of career options. Therefore, education and training should focus on the importance of Geography in providing learners with fundamental skills to confront the various challenges encountered in society. After completing high school, students are expected to enroll in colleges or universities to pursue courses that will shape their future career paths. Furthermore, Kipkogei (2016, p. 26) states that "Geography is such a broad field of study, a great diversity of job opportunities awaits those who pursue college training in the discipline". Additionally, Josua (2013) stated that LWVI are made to select subjects from diverse fields, some of which may be unconventional, and this could have an impact on their choice of future career paths at the university level. This may result in the applicant not meeting the prerequisites for a specific course. Therefore, it becomes the responsibility of the management to ensure that LWVI take subjects that align with their desired professional careers and enhance their chances of being admitted to the respective courses. Consequently, subject choices at the school level have a huge impact on learners' career choices. Learners excluded today from studying a specific subject will be those adults excluded from employment in those fields in the future.

Apart from the fact that finding employment, especially in developing countries such as Namibia, is a difficult task, people with visual impairment find it even more difficult to secure employment and, thus, enjoy economic emancipation and participation in society because of their disability. Rampersad (2018) explains that job accomplishment never comes easily, particularly for people with visual impairments since people with visual impairment, in contrast to people with normal vision, have a different and unique way of obtaining and processing knowledge about the world around them. People with visual impairments face many obstacles, such as infrastructural hurdles, inadequate job choices and stigmatisation, among others. Individuals who have a visual impairment may face limitations in their ability to learn through visual aids in various settings such as schools, workplaces or daily life. In order to succeed, they need to attain a certain level of development and interact with people beyond their family members. Besides the typical developmental skills, children with visual impairment must also learn to rely on their other senses such as touch, hearing, taste, smell, and body position. Developing listening skills, memory, spatial awareness, and body awareness are also crucial for them (Rampersad, 2018).

Sometimes the struggle to obtain employment is because of the way people with visual impairment view themselves; however, at other times, it is because of the employment providers. People with visual impairment experience complications in securing employment because of employers' uncertainties and/or apprehension to employ people who are categorised as visually impaired. Employers do not only fear the possibility of the delicate risk because of insurance reasons. They also may have doubts concerning the job performance of people with VI because they are concerned as to whether the presence of people with VI could have a damaging impact on the company. This wrong conclusion is countered by those who demonstrate that, given real work experience, people with blindness or visual impairment can obtain and retain employment and perform well on the job (Rampersad, 2018). Bell (2005, p.13) adds that;

> Geography is about places. It is not just knowing about places themselves, but understanding the interdependence and connectivity of places. It is about empowering tomorrow's adults to develop real global understanding and global citizenship so they have the intellectual understanding to participate individually and collectively in shaping the world around them. This knowledge and understanding of other places, cultures and societies underpins sensitivity and tolerance and contributes to good citizenship. Good geographers develop a range of skills which make them highly employable and which are relevant to any future workforce. They are able to understand the language of maps, which is linked to a competency in ICT and the application of statistics provides a wealth of geographical information, which is frequently used by both business and government.

According to Paterson and Warf (2017) there was a blind geographer named Reginald Golledge who put into perspective the ways to achieve spatial competence. This blind geographer had a first-hand grasp of the practical challenges that disabled people must face on a day-to-day basis and, over the years, he has facilitated in developing navigational utilities for those with visual impairment, including tactile maps, which are modelling an area through three-D tactile relief rather than flattened visual presentation of information. It is because Reginald Golledge studied Geography and became a Geographer, even though he was blind, that he innovated the creation of tactile relief maps, among others. Thus, it is important that LWVI should not be excluded from studying Geography as it will limit their chances of obtaining employment in geographical fields of employment, like the blind geographer, Reginald Golledge.

This section discussed the employment status of people with visual impairment in geographical fields of work and the relevance of employment in general, especially for people with visual impairment. The next section presents the challenges of teaching LWVI.

2.6 Challenges when teaching LWVI

This section discusses possible challenges and/or disadvantages that may be encountered when teaching LWVI, in general, and technical or science subjects, such as Geography. According to the Ministry of Education, Arts and Culture (2018, p. 4) "research has shown globally that children with disabilities experience many challenges in accessing and remaining in education".

Baboo (2011) argues that, while legislation and policy regarding inclusion of children with disabilities in mainstream schools make certain provisions, there is still so much doubt about how inclusion can be accomplished. Therefore, most mainstream school teachers are seemingly very pessimistic about the inclusion of children with disabilities and believe it is outside their scope of training. Baboo (2011, p. 4) posits that "children who are blind undoubtedly have unique and complex educational needs. Not only do they require educational material and instruction that taps into their auditory and tactile modalities, but the lack of sight also poses developmental challenges that could affect learning". A study conducted in Nairobi, Kenya found that:

> 82.5% of the participants indicated that the demands from the administration constituted a major challenge encountered by teachers in teaching learners with low vision. This could be because the school administration expects the visually impaired learners to perform just as those who are sighted. Furthermore, 77.5% of the participants indicated that the schools lacked special facilities for the learners. While 70% indicated that there was a lack of specialized materials for teaching LWVI. In addition, 52.5% of the participants cited high expectations from other parties such as parents, school administration, and the students themselves as a challenge and finally 35% indicated that the time allocated for teaching learners with low vision in an integrated situation was inadequate (Mugambi, 2011, p.42-43).

Mwakyeja (2013, p. 14) holds that,

> It was observed that current general teachers do not have sufficient knowledge and skills of teaching in inclusive classrooms and handling students with special educational needs. General teachers, teaching in general and inclusive schools in Tanzania, have not had teacher training in special needs education. This is because there are few colleges and universities which offer courses for teaching students with visual impairments on top of that, teacher training colleges do not have sufficient packages on Inclusive Education.

Just like in Tanzania, in Namibia teachers who are trained at local institutions of higher learning, such as the University of Namibia (UNAM) and International University of Management (IUM), and who major in Geography do not receive specialised training in teaching Geography to LWVI. Furthermore, according to the Ministry of Education in Namibia (2018), it seems some teachers in resource schools have conducted their own research as they may not have received training on how to effectively teach learners with disabilities. These teachers commonly hold the perspective that having a positive attitude towards learners with disabilities is the most crucial factor for a teacher to achieve success (Ministry of Education Arts and Culture, 2018).

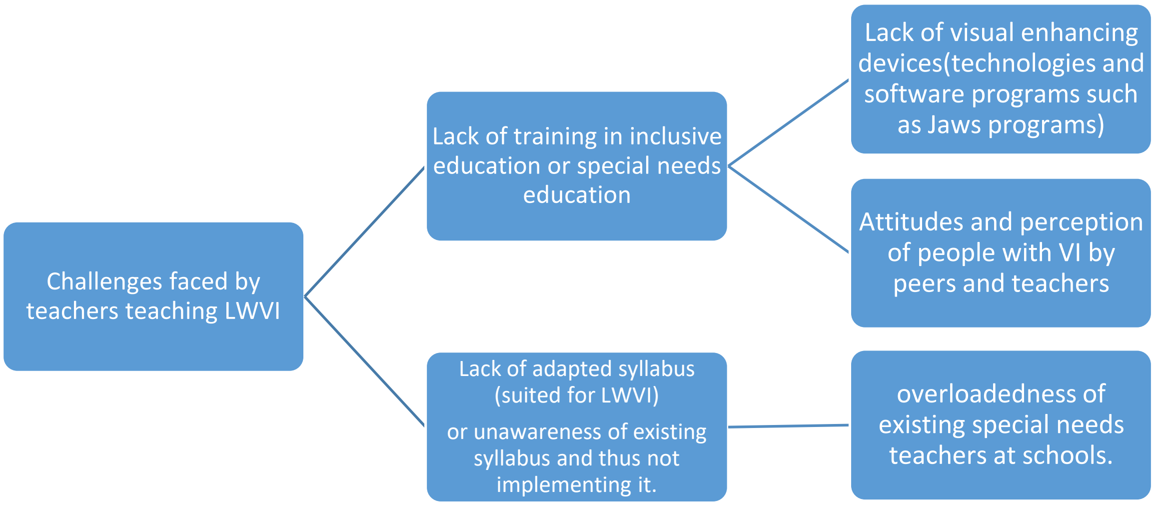
It also occurs that teaching spatial thinking and skills to visually impaired learners proves to be a challenge, especially if they do not know how to read Braille. Brock and Hachet (2017, p. 2) state that "academic progress in subjects, such as Geography, Mathematics, Social Sciences and History, requires the understanding of spatial concepts and the use of spatial skills. Raised-line paper maps with Braille text, which are commonly used for teaching spatial thinking to people with visual impairment, come with downsides. For instance, they can only present a limited amount of information, they are static and they require users to read Braille". It is believed that Geography is a visually demanding subject; consequently, it proves to be a challenge to teach it to LWVI. According to Ndegwa et al. (2015, p.14);

> Geography is a complex course that involves the use of various techniques both qualitative and quantitative especially in carrying out inquiries. It also includes skills like drawing, analysing, computing, and interpretation among others. The concepts in physical geography are based on landform formation and changes, soils and minerals, lakes and rivers, climate and the atmosphere, plant and animal distribution, and ocean and coastal processes, which are blended with practical techniques that include Geographical Information Systems (GIS) and cartographical techniques, which require visualization, hence needs a lot of observation skills.

Another challenge to teaching Geography to visually impaired learners is the mere fact that teachers are already overloaded with work, having to go the extra mile to cater to the special needs education materials for the LWVI. "Most special teachers available are few in regular school and already overburdened with the regular curriculum hence concentrating on learners with visual loss becomes a problem. In the classroom situation these make learners with visual loss lag behind in academics" (Ndegwa et al., 2015, p.18). On top of being over-burdened, it appears that most teachers teaching LWVI experience major challenges because graduate teachers lack special needs education in order to cater to blind learners or those with visual impairment. Utami and Salsabilla (2021) state that the teacher who is educating the learners may have a degree in Geography, but it appears that they have not received any additional training or courses to enhance their ability to teach children with special needs. This creates a challenge for Geography teachers to provide effective learning to students, especially since they are expected to be proficient in teaching LWVI. It is clear that teaching LWVI requires teachers who not only have subject knowledge but also possess ample knowledge of special needs education. Additionally, teachers who wish to cater to the needs of LWVI must demonstrate patience and passion. It is also important for peers of the learners to be supportive and caring towards those with VI.

> The analysis of the responses from the members of school management on what they view as needs of LWVIs yielded the following results, resources such as textbooks and assistive devices, patient teachers and teachers who can read Braille as well as understanding and supportive peers. They also need a resource teacher, extra special attention, accommodative infrastructures and socialisation (Josua, 2013, p. 97).

Figure 2.2 below summarises the challenges of teaching students with visual impairment in an integrated or inclusive school. It was adapted from Mugambi (2011, p. 11). Most of the challenges depicted in Figure 2.2 below have been discussed above.



Adapted from Mugambi (2011, p. 11)

Figure 2.2: *Teaching LWVI in an inclusive school*

This section looked at the possible challenges that may be encountered when teaching LWVI, in general, as well as teaching LWVI in technical or science subjects, such as Geography. Even though there are advanced technologies that can be utilised to make learning and teaching LWVI easier, there are always going to be challenges that will have to be conquered in order to include LWVI fully in learning Geography. The section that follows deliberates on the learning and teaching of Geography and learning support to LWVI.

2.7 Learning and teaching Geography: Learning support to LWVI

2.7.1 Ways of teaching Geography to LWVI

This section discusses ways in which Geography can be taught to LWVI in schools. Geography is a visually demanding subject; however, with advanced technology in education, most barriers have been overcome. Murr and Blanchard (2011, p. 201) state that, although Geography is regarded as being difficult to teach to a learner with visual impairment, most of the educational barriers have been minimised through "advances in classroom technology".

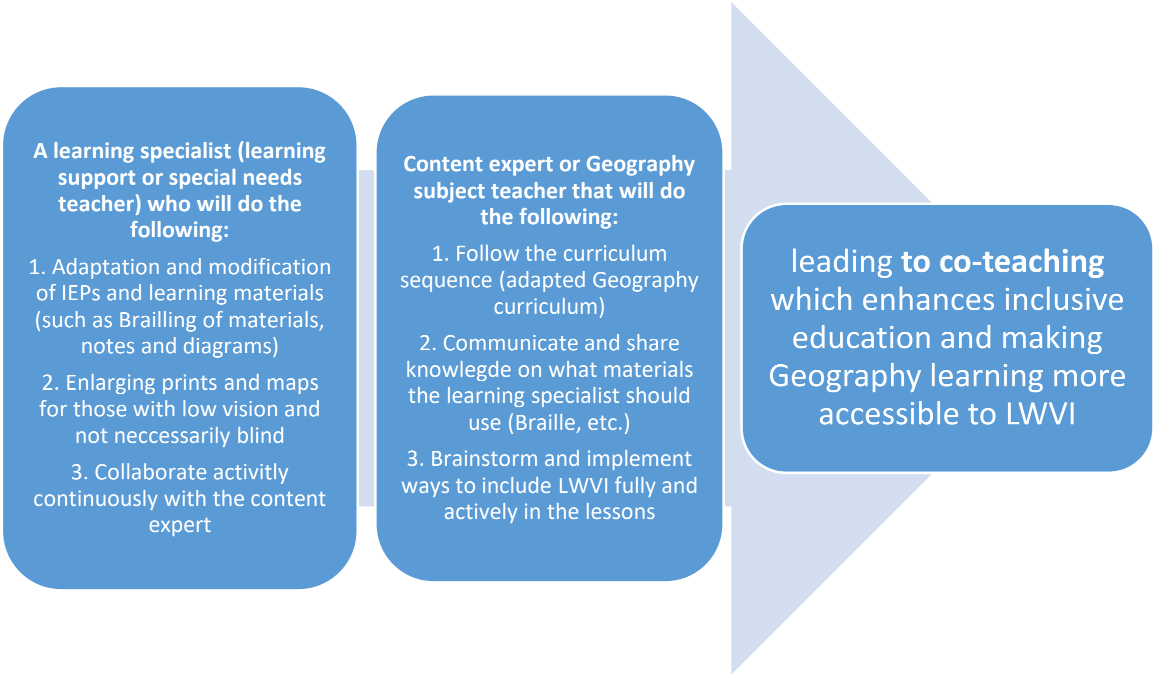
> Innovations in classroom technologies include the following: "wall and table-mounted relief maps and models of large areas (for example, the world, continents, countries); tactile maps and models (particularly of regions, cities, highway systems and institutions); auditory maps (such as voice-over displays, often experienced in museums); descriptions using spatial language (such as imaginary worlds found in some literature, including novels and poems); tactile-audio information systems (often of small, localised areas); sonic environments (such as ocean floor maps); and haptic and vibrio tactile maps developed as a form of computer interface environment.

Katsoulis, Argyropoulos and Leotsakou (2006, p. 1-2) which describe,

> a context which consists of two teachers in the same classroom; the general teacher and the special education teacher who is normally qualified in issues pertinent to special education. The theoretical perspectives of the latter model are underpinned by the notion of co-teaching or team-teaching, a teaching model that occurs when two or more professionals collaborate to plan, decide and deliver instruction to a certain number of students in the same physical place. This is also called the "parallel support" model and has become dominant among the current educational reformations regarding the education of students with visual impairment in Greece.

Technology (Brailling of teaching aids) can be coupled in teaching with co-teaching or collaborative team teaching models. This can be utilised at schools catering to LWVI when a teacher specialises in Special Needs/Learner Support and is well conferred in Braille can team up with a Geography teacher and work collaboratively to teach the subject effectively to LWVI.

Figure 2.3 below illustrates the co-teaching model in education that has been explained above and was adopted from a document titled, *Shaking up Special Education: Instructional Moves to Increase Achievement* (Flakes, 2021).



Adapted from Flakes (2021)

Figure 2.3: *Co-teaching model*

All-in-all, there is a need for the adaptation and modification of teaching and learning materials and the classroom environment in order to cater to the special educational needs of learners with various disabilities. Snowdon (2008) posits that numerous students with visual impairment have been warned not to take Geography at the exam level or that they found understanding Geography difficult at the eighth and or ninth Grades. Snowdon argues, furthermore, that this should not be the case because children with visual impairment can learn just as much from understanding the environment and different countries as those who do not have visual impairment. It is thus imperative that they are fully included and motivated to study Geography. According to Brock and Hachet (2017) teaching spatial thinking, which is geographical expertise, to LWVI will acquaint them with mind-map navigational abilities which they can utilise in their daily lives, especially with regard to space in determining direction for mobility purposes.

It is important for teachers to stimulate LWVI mentally when teaching them Geography in order for them to tap into their imaginations and actually visualise what they are being taught. “When teaching LWVI, all the senses must be incorporated. The haptic sense, the factual sense, and the olfactory sense must be integrated into the lost sense of sight” (Ndegwa et al., 2015, p. 17). Ndegwa et al. (2015) add that it can be challenging for a learner with visual impairment to perceive physical attributes of objects without access to models or embossed diagrams that they can touch and manipulate. To facilitate their kinesthetic sensation, raised maps and models are among the most effective tools for teaching Geography to learners with visual impairments.

Utami and Salsabilla (2021, p. 3) agree that a “learning strategy by teachers that enables students to gain a complete experience of objects and situations can occur if the teacher encourages students to engage all of their sensing experiences in an integrated way of understanding a concept”. Furthermore, Utami and Salsabilla (2021, p. 3) advocate that teaching Geography successfully to visually impaired or blind learners requires that the materials and subject needs should be adapted to the learners' abilities, ages, methods and mental development in order to be easily assimilated. Utami and Salsabilla (2021) furthermore, state that:

> There need to be adjustments for a person with visual impairment or a visually impaired child who has its peculiarities and ways to achieve the same stage in its development, including in the field of education. In treating and serving children with low vision is to use teaching principles namely lighting, colour contrast, font size, time, teaching methods that have been specifically designed for learning.

Hussin (2013) adds that technological assistive devices have an encouraging effect on the way of life of students with visual impairments. It encourages them and develops positive relationships with their educational achievements. To minimise the challenges of teaching Geography to LWVI, qualified teachers who majored in Geography should also attend Special Needs education in order to empower them to be able to cater effectively to learners who require special education. If not, they should at least team up with special needs specialists to combat challenges by employing the co-teaching model illustrated on the previous page.

The Ministry of Education reviewed, and made modifications, to the old curriculum in the Junior Secondary Phase (JSP) Geography syllabus in 2010. These changed or adapted syllubus was meant for implementation in 2011; however, this adapted syllabus was not implemented. Thus, various adaptations were made to the curriculum for Geography to be taught to LWVI. The following are some of the adaptations to the syllabus for teachers who are teaching LWVI to know what to do. In the Introduction Section, this was added;

> It is the wish of the Ministry of Education that schools and teachers in particular ensure that children with visual impairments access the syllabus by making sure that learning and teaching materials are available in all formats, including Braille and enlarged text, and that the necessary assistive devices are available to support LWVI in accessing the syllabus (Ministry of Education Arts Culture, 2011, p. 1).

Map work is one of those topics that are mainly taught in Geography, and learners are expected to write a practical paper (Paper 2) as part of the annual, academic examination in the adapted Geography syllabus. The following is a snap-capture of the adaptations that were made:

9. SUMMARY OF THE LEARNING CONTENT

THEME/TOPIC	GRADE 8	GRADE 9	GRADE 10
Map work **The themes highlighted have proven difficult to explain. If the necessary assistive devices such as tactile maps are not available, they could be explained as far as possible, but blind learners should be exempted from assessment in these skills. Alternative forms of assessment should be applied.**	Graphs Types of maps Location (degrees, minutes) 8 division of directions Map scale Distance Contour lines	Graphs Map symbols Location (degrees, minutes, seconds). 16 division of directions Distance Contour maps Photographs	Graphs Interpretation of human and physical features on map Location (degrees, minutes, seconds) Distance and scale Photographs Contours Cross-section Interpolation of isolines

Snap-capture taken from the adapted old curriculum Geography JSC syllabus

Figure 2.4: *Some adaptations to map work the old Geography curriculum*

As suggested in the snap-capture (Figure 2.4) above in the green highlighted words, "The themes highlighted have proven difficult to explain. If the necessary assistive devices such as tactile maps are not available, they could be explained as far as possible, but blind learners should be exempted from assessment in these skills. Alternative forms of assessment should be applied" (Ministry of Education Arts Culture, 2011, p. 8). Thus the adaptations to the syllabus make suggestions as to what resources should or could be utilised, such as tactile maps, in order to make Geography map work content accessible to LWVI, especially those who are completely blind.

This section deliberated on the ways that Geography can be taught to LWVI. In as much as Geography is believed to be a visually demanding subject, there are advanced technologies that can be incorporated into making it teachable to LWVI and overcome barriers or challenges presented by the subject content. Empowering existing Geography teachers through attaining Special Needs education or Inclusive Education training, as well as collaborative teaching, is the way towards achieving Inclusive

Education. Teachers with expertise in special needs co-teach with teachers who have subject knowledge but not expertise in the special needs education that is required by the learners.

2.7.2 Learning support for LWVI

The *Sector Policy on Inclusive Education of 2013* defines learning support as "support given to a learner to allow the learning development, speaking to the needs of all children, youth and adults via aggregated involvement, principles and societies, and decreasing and eradicating exclusion contained by and within the education system" (Ministry of Education, 2013). The Learning Support Teachers Manual released by NIED in 2014 states that learning support involves providing additional planned assistance, including teaching methods and materials, to help learners with learning difficulties and other disadvantaged learners acquire the necessary fundamental competencies across various subjects and skills. It aims to ensure that all learners can advance and achieve as per their potential (Ministry of Education Arts and Culture, 2014).

If the schools catering to LWVI were to teach Geography to these learners, it is important for the teachers to focus on effective ways to deliver the subject content instead of focusing on the blindness of the children. "It is important for people dealing with visually-impaired learners to focus more on challenges visually-impaired people face in life and ways of overcoming them than focusing on the disability" (Simalalo, 2017, p. 14). Learning support for LWVI refers to the support that LWVI may require in order to learn successfully and benefit from learning in the same way as their peers do. This means that learning and teaching materials need to be prepared in a way that leaners with visual impairment will be able to understand. Thus, as discussed in the previous section, materials must be modified through Brailling and making models for LWVI to touch or feel with their hands.

First, the curriculum should be modified in order for Geography to be taught to learners with VI as “the principle of inclusion demands the curriculum to be flexible to meet the diverse needs of students in inclusive classrooms (social model)” (Mwakyeja, 2013, p. 9). The Ministry of Education reviewed and made modifications to the old curriculum Junior Secondary Phase (JSP) Geography syllabus in 2010. Thus, various adaptations were made to the curriculum in order for Geography to be taught to LWVI, as elaborated in the previous section. Secondly, learning materials need to be adapted so that the LWVI can accept and access learning Geography. For example, maps need to be Brailled or presented in 3D for LWVI to be able to study Geography. According to findings by Shivute (2018) resource teachers assisted regular or subject school teachers in translating assessment tasks into Braille. Regular subject teachers specified that the resource teacher assisted them with transferring the information into Braille format that could be read and understood by LWVI. However, it is not only the learning materials that need adaptation but also the classrooms and school environment (the physical structures) that need to be adapted to cater to LWVI.

Teachers also need support to teach Geography to LWVI. Shivute (2018) defines teacher support as the assistance provided to teachers teaching LWVIs. Because even though teachers may be trained to teach Geography, they may not have the expertise to teach Geography content to LWVI. Additionally, the Ministry of Education in Namibia (2018) stated that “A number of teachers in resource schools stated that because they had not been educated on the ways in which to teach learners with disabilities, they had to do their own investigation to gather what was needed. The collective observation of these teachers was that an optimistic outlook towards learners with disabilities was the most significant thing that a teacher required to be able to teach learners with disabilities successfully" (Ministry of Education Arts and Culture, 2018).

> The principle of suitably adapted education in inclusive schools requires teachers to change their teaching and adopt strategies that will consider the needs of every student in the class individually because these students have different abilities and different learning styles. This calls for all regular teachers in inclusive classrooms to adapt and modify their teaching to meet these individual needs of specific students. This modification and changing the teaching practices and learning environments to suit individual needs of all students in inclusive classrooms is termed as adaptation (Mwakyeja, 2013, p. 5).

Inclusive education is the key to rendering the proper learning support required by LWVI.

This section deliberated on learning support that may be required by LWVI to learn successfully and benefit from Geography. There is so much more required, such as the ways in which learners with SEN are viewed and the adaptations to both curriculum and teaching and learning materials, as well as teacher support required to render the learning support that learners with VI may require to study Geography successfully.

2.8 Chapter summary

This section presented the theoretical framework that guided the study. It also reviewed relevant literature. It addressed topics, such as the concept of resource schools in Namibia, the importance and benefits of teaching Geography to learners in schools, the relevance of employment in general and the employment status of persons with visual impairment in Geographical fields.

It also looked at the challenges of teaching LWVI, as well as learning and teaching Geography and learning support to LWVIs. The following chapter discusses the research methodology of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This section presents an analysis of the research design that was employed in the study. It, furthermore, explains the population of the study and the sample, as well as the sampling method that was employed.

The research instruments are described and the procedures that the researcher followed before and during the data collection are explained. The steps followed in the data analysis are elaborated and, finally, the research ethics are presented.

3.2 Research design

The research design provides a plan for the way in which the research will be conducted (Josua, 2013). Kipkogei (2016, p. 33) holds that research designs are strategies and processes for research that time the pronouncements from "broad assumptions to detailed methods of data collection and analysis".

This was a qualitative study and, according to Creswell (2014) qualitative research is a method that aims to comprehend and explore the significance that individuals or groups attribute to a social or human issue. During the research process, the researcher develops questions and methods, and data is typically collected in the participant's environment. The data is then analyzed inductively, starting from specific details and moving towards more general themes, in order to construct an understanding of the meaning conveyed by the data. The resulting findings are flexible in structure. This type of research values an inductive approach, focuses on individual interpretations, and acknowledges the complexity of the situation being studied.

Donaldson (2017, p. 52) states that "qualitative study may have different types of designs such as ethnography, grounded theory, phenomenology, case study, and narrative". The current study employed the qualitative case study design to collect information from the participants in order to understand the phenomenon at hand, namely factors hampering the offering of Geography to LWVI.

When using a qualitative approach, researchers often adopt a case study research design, which involves thoroughly studying a particular phenomenon and drawing conclusions based on the findings. The case study is centred around a contemporary phenomenon and is studied within its real-life context (Josua, 2013). Donaldson (2017, p. 52) states that the case study emphasises emerging an "in-depth understanding and analysis" of an instance or numerous instances. According to Josua (2013, p. 62) the fundamental benefits of the qualitative approach rest in its interpretative character of learning the connotation that events have for individuals who experience them.

3.3 Population

In research, the term 'research population' refers to the entire collection of individuals or groups that a researcher wants to apply their findings to. The aim is to generalize the research results to this broader set of elements or groups (Shivute, 2018). Four resource schools in Namibia cater to learners with visual impairment. Two of these schools are in the Oshana region and the other two are in the Khomas region. Two of these schools are combined schools and one of them cater for Grades 0 to 11 (School in the Khomas region) and the other from Grades 0-9 (School in Oshana region), in other words, from the Pre-primary to the Secondary Phase. The other two schools cater to learners with visual impairment for the Senior Secondary Phase (School in Oshana region) and Advanced-subsidiary (AS) (School in Khomas region) level only.

The targeted population of this study consisted of staff members connected to the subject area, namely Social Sciences, of the two resource schools in Namibia, and who were teaching LWVI from the Pre-primary to Grade 11 Senior Secondary Phase and to Grade 9 which is the Junior Secondary Phase only. One of these schools is in the

Khomas region while the other is in the Oshana region. The research population, furthermore, included Senior Education Officers (SEOs) responsible for Inclusive Education and those responsible for Social Sciences in both the Khomas and the Oshana regions.

3.4 Sample and sampling procedure

According to Josua (2013, p. 62) a research sample refers to people carefully chosen "from the population for a study". Baboo (2011) furthermore, advocates that the best way to guarantee that "rich information on the topic" is discovered "would be to purposefully select the context and participants" from whom one can absorb the pronounced details and information about the matter being deliberated. Furthermore, the "selection of participants in qualitative research depends on the purpose of the research and is found to rely heavily on the researcher's discretion" (Shaheen, Pradhan & Ranajee, 2018, p. 25).

The study employed a purposeful sampling method. According to Shaheen et al. (2018) the effectiveness of purposeful sampling lies in the ability to carefully choose cases that are rich in information for detailed analysis. These cases typically involve key issues that are relevant to the research, which is why purposeful sampling is employed. This approach helps researchers choose the most appropriate sources of data to address their research objectives.

The management, comprising the principals and Heads of Department of the two Namibian resource schools that cater to LWVI from Grades 0 to 11, was deemed to have rich information concerning those barriers hampering the provision of Geography to learners with visual impairment. They were, thus, purposefully selected. In addition, the available Social Sciences teachers, specifically those teaching Social Studies from Grades 4 to 7 at the two Namibian schools catering to LWVI were deemed to have information regarding barriers to teaching Geography to LWVI. The Senior Education Officers in the Ministry of Education's Regional Office in the Khomas and Oshana regions, responsible for Inclusive Education, and those responsible for Social Sciences, specifically Geography, were also interviewed. Thus, the sample consisted of:

- Two principals of the schools;
- The two Heads of Department (HODs) from each school. In particular, the heads of the departments for the Secondary Phase were selected to participate as participants in the study as they should have knowledge about Geography as a school subject. This is because Geography is a secondary school subject and it is supposed to be compulsory in Grades 8 to 9 in all Namibian schools;
- Two Social sciences teachers at the two schools (specifically those teaching Social studies) one from the school in the Oshana region and one from the school in the Khomas region;
- Two Senior Education Officers for Inclusive Education (one from the Oshana region and one from the Khomas region);
- Two Senior Education Officers in Social Sciences, specifically those responsible for Geography (one from the Oshana region and one from the Khomas region) also formed part of the sample.

Thus, a total of 10 participants formed the sample of the study.

3.5 Research instruments

According to De Trigueros (2017, p. 1) "There are many types of qualitative research tools; however, the one you choose must go according to our research objectives." Among the most utilised instruments in research are the observation, survey and interview. Furthermore, De Trigueros (2017, p. 3) explains that "interviewing involves asking questions and getting answers from participants in a study." There are different kinds of interviewing techniques, such as individual, face-to-face and face-to-face-group interviewing. Interviews can be conducted by telephone or by other electronic devices, such as computers, and can be structured, semi-structured or unstructured.

In the current study, data were collected using semi-structured interviews. Both face-to-face and telephonic interviews were conducted with the participants, comprising the two principals of the target schools and the two Heads of Department (HODs) from each school. In particular, the Heads of Department for the Secondary Phase, the two Senior Education Officers for Inclusive Education, and two Senior Education Officers responsible for Social Sciences, specifically Geography, were believed to have the capacity to provide relevant answers to the research questions.

According to Kassu (2020) the semi-structured interview is usually conducted in a one-on-one setting which allows the researcher to seek new insights, ask questions and assess phenomena from different perspectives. The interviews in this study were guided by an interview schedule designed by the researcher.

3.6 Data collection procedures

According to Bist (2015) before conducting research, it is necessary to provide a concise overview of the research process along with a thorough explanation of the research methodology. The research process involves a series of scientific and structured steps that must be executed with precision.

The Ministry of Education, Arts and Culture, as well as the targeted participants, granted permission for the study. The researcher then sought permission from the two principals of the schools that exclusively catered to LWVI. Subsequently, appointments were made with all the participants to conduct face-to-face interviews in the Khomas region and telephonic interviews with the participants in the Oshana region.

The interviews were conducted in a flexible manner, based on the availability of the participants. The SEOs in the Khomas region were the first to be interviewed, followed by the social studies teacher in the same region. Telephonic interviews were then conducted with the participants in the Oshana region, including the SEO of Inclusive Education, the social studies teacher from Eluwa, and the HOD of the Secondary Phase. The HOD of the Secondary Phase from the Khomas region was subsequently interviewed, followed by the principal of the school in the same region. Lastly, the SEO for Geography/Social Sciences from the Oshana region and the principal of Eluwa Resource School were interviewed. The interviews lasted approximately 30 minutes each.

Although the researcher had a prepared interview schedule outlining the questions to be addressed, the researcher was open to extra information that the participants were willing to provide partaining to the study. The interviews were recorded with an audio-recorder, and written notes were taken to aid in the analysis of the data. The recorded interviews were then transcribed, analysed, and meaningful findings were derived from the data.

3.7 Data analysis

Content analysis was employed to analyse the qualitative data collected in this study. According to Roller (2019, p. 2) content analysis is “the systematic reduction of content, analyzed with special attention to the context in which it was created, to identify themes and extract meaningful interpretations of the data”. Firstly, the audio-recorded data from the semi-structured interviews were transcribed by utilising

Otter.ai, a software application that transcribes speech to text accurately by employing artificial intelligence and machine learning (https://otter.ai/).

To analyze the data collected from interviews, a systematic approach was taken. First, the notes were organized and a thorough reading of the complete data set was carried out to gain a better understanding of the content. Next, the data were coded and grouped into themes. The coding process began with open coding, which allowed the researcher to examine all the data before any analysis was performed. Then, axial coding was used to refine the thematic categorization. Finally, selective coding was employed to systematically categorize the data and group them under different themes that aligned with the research questions of the study. As a result, the data were effectively organized under different themes to help in the analysis process.

3.8 Research ethics

According to Parveen and Showkat (2017, p. 3) ethics are the moral ideologies that direct somebody's conduct. Research ethics refers to executing what is "morally and legally right in research". Research ethics are the "norms for conduct" that discriminate between right and wrong and between satisfactory and intolerable behaviour. In addition, "Research is a multi-stage process. Ethics are central to the research process. Researchers need to take care of various ethical issues at different levels of this process" (Parveen & Showkat, 2017, p. 3). Simalalo (2017, p. 6) adds that "participants in research need to be protected from any kind of harm or loss of dignity".

An Ethical Clearance Certificate was obtained from the DEC and a Research Permission letter was obtained from the Postgraduate Support Services department of UNAM. For the sake of transparency and trustworthiness, formal written consent was required from all the participants. The researcher explained the importance of the study to all the participants, and they were informed that they had the right to withdraw from the study at any time without penalty. Furthermore, the anonymity of their identity was ensured.

Although the two school principals signed their names on the permission letters that they provided, their identity and anonymity were ensured as the data were coded to ensure that the identification of interviewees is not possible, namely by referring only to them as, for example, Participant PRINC1, PRINC2, HOD1 etc.

Permission from participants was also sought for the audio-recording of the interviews. Participants were required to sign consent forms that stipulated the details as discussed above. Furthermore, the data collected was treated confidentially and was stored on a USB that is securely locked away and will then will be destroyed in -in five years after the study is complete. Lastly, honesty and academic proficiency were upheld throughout the study.

3.9 Chapter summary

This chapter deliberated on the research methodology. It explained the research design that was employed in the study. The population of the study and the sample and sampling method, that were employed were also outlined. The research instruments were described and the procedures that the researcher followed before and during data collection were explained.

The different steps followed in the data analysis after collection were elaborated and the research ethics were also outlined. The next chapter presents the findings of the current study under different themes.

CHAPTER 4: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The findings of this study are presented in this chapter as per the research questions of the study which formed the themes for data analysis. The themes include the Theme One: statistical data and relevance of these data, Theme Two presents the demographic data and personal views of the participants regarding barriers to the teaching of Geography to LWVI and lastly Theme Three presents the findings under the respective subheadings. The data for the study were collected using semi-structured interviews. The interviews were conducted by the researcher, either telephonically with participants in the Oshana region or face-to-face with participants in the Khomas region.

In the presentation of the findings under Theme Three, a table was utilised, followed by descriptions in the form of a summary to present, for example, the awareness of participants about the adapted syllubus. For the rest of the findings, different tables and figures were used to present summaries derived from the themes of the collected data.

4.2 Theme One: Statistics and the Relevance.

In this theme the researcher presents the statistical information of the two selected resource schools that cater specifically to LWVI which are; the School for the Visually Impaired in the Khomas region and the Eluwa Combined School in the Oshana region. And the relevance of the statistics of the two resource schools catering for LWVI.

4.2.1 Statistics of the two resource schools catering to LWVI

Table 4.1: *The statistics of the School for the Visually Impaired in the Khomas region*

Class/ Grade groups	Total number of learners in the grade	Number of learners who are totally blind	Number of learners who are severely low vision	Number of learners that have low vision	Number of learners that have Albinism	Total number of learners that are sighted
Grade 8	12	1	0	3	3	5
Grade 9	14	0	1	5	7	1
Grade 10	15	0	1	4	6	4
Grade 11	13	1	1	3	6	2
Total	**54**	**2**	**3**	**15**	**22**	**12**

Table 4.1 above show what the statistics was at the time when this study was conducted, at the school for the visually impaired in the Khomas region had 162 pupils in total and only 54 were in the Secondary Phase and 20 teachers, including the principal. Since this study is related to Geography, a Secondary Phase subject, only relevant statistical information was outlined for Grades 8 to 11.

It is important to take note that not all learners at the school were completely blind. Some had severely low vision and some just had low vision. Furthermore, some learners were sighted, some had albinism, which slightly or sometimes adversely affected their sight, and some were completely blind. In the Grade 8 group, only one of the 12 learners was completely blind, three had albinism and three had low vision. There were no learners with severely low vision and five were sighted. In the Grade 9 group of 14 learners, there were no completely blind learners, seven learners had albinism and five had low vision. One learner had severely low vision and one was sighted.

Of the 15 learners in Grade 10, there were no completely blind learners. Six learners had albinism, four had low vision and one had severely low vision. Four were sighted learners. Of the 13 learners in Grade 11, only one was completely blind, six had albinism, three had low vision, one had severely low vision and two learners were sighted. Of the 54 learners in the Secondary Phase only two learners in the Secondary Phase were completely blind and might require specialised (braille) materials to study Geography while others might only require enlarged prints.

Table 4.2: *The statistics for the Eluwa combined school of the Oshana region*

Class/Grade Group	Total number of learners in the grade	Number of learners who are totally blind	Number of learners who are severely low vision	Number of learners that have low vision	Number of learners that have Albinism	Total number of learners that are sighted
Grade 8	11	3	0	5	3	0
Grade 9	11	1	0	9	1	0
Total	**22**	**4**	**0**	**14**	**4**	**0**

Table 4.2 shows the statitstics at the time this study was conducted, Eluwa resource school catering to the LWVI in the Oshana region had 125 pupils in total and only 22 were in the Junior Secondary phase and 19 teachers, including the principal. Since the study was related to Geography, a secondary school subject, only relevant statistical information was outlined for Grades 8 to 9.

Unlike the school in the Khomas region, Eluwa catered only for Grade 0 to 9 learners, and then to those learners in the Basic Pre-vocational section. It is important to take note that not all learners at this school were completely blind. Some had low vision and some had albinism which sometimes affected their sight adversely. Some were completely blind.

It is, furthermore, important to note that Eluwa did not have sighted learners, like the resource school in the Khomas region. Of the 11 learners in Grade 8, only three were completely blind, three had albinism and five had low vision. Of the 11 learners in Grade 9, one was completely blind, one had albinism, and nine had low vision. Of the

22 learners in the Secondary Phase, only four were completely blind and might require specialised (braille) materials to study Geography while others might require enlarged prints.

4.2.2 Relevance of the statistics of the two resource schools catering for LWVI

The statistics presented in Table 4.1 and Table 4.2 are important in the sense that they provide this study with a clear picture on inclusivity and integration of learners in the two Namibian resource schools that cater specifically to LWVI. Taken from the statistics is that the school for the visually impaired in the Khomas region is more inclusive compared to the school in the Oshana region, because the school in the Khomas region even have sighted learners while the school in Oshana strictly has LWVI only. Another relavance of these statistics is that it shows that even if Geography is such a visually demanding subject most of these learners actually have vision or they can see and as such they can learn Geography easily than anticipated, the specialized materials will only be needed for fewer learners and thus the cost will be minimized, out of 54 learners in the Secondary Phase at the school in the Khoams region only two learners are totally blind and while the remaining 52 may have various visual impairments, they have vision/ can see. And out of 22 learners at the school in the Oshana region only four are totally blind one can thus be confident that teaching Geography at these schools to LWVI is definitely possible, which will be the right thing to do as this subject is a compulsory subject according to the Namibian Ministry of Education, Arts and Culture and in the same vein inclusive education will be enhanced.

4.3 Theme Two: Demographic data

Theme Two presents the Demographic data of the all the participants that took part in this study.

4.3.1 Demographic data of research participants

All research participants of this study were requested to provide personal information to establish their gender (male or female), where they were based (Oshana or Khomas region) their teaching qualifications pertaining to Social Sciences and/or Inclusive Education, their position (Senior Education Officers, Principals, Heads of Departments or teachers). They also had to provide the number of years they had been in service in their respective positions or in the teaching profession. The researcher deemed it necessary to gather information on the number of participants connected to resource schools catering to LWVI. The aim was to determine if they had relevant training in SEN (Special Educational Needs) pertaining to VI (visual impairment), inclusive education, and their general view of LWVI. The participants' codes were also indicated to show their perceptions and outlook on people with disabilities, particularly LWVI, when they are quoted. The Table below presents the findings regarding the participants in this study.

Table 4.3: *Demographic data of participants*

Participants (Code)	Gender	Region	Teaching Experience (years)	Number of years in current position	Qualification in Special Needs Education/ Inclusive education	Qualification in Geography (Social science)	Experience-working with LWVI (years)
Principal(PRINC1)	M	Khomas	21	12	No	No	Yes (12years)
Principal(PRINC2)	F	Oshana	22	4	No	No	Yes (11years)
Head of department(HOD1)	F	Khomas	15	6	No	No	Yes (15years)
Head of department (HOD2)	F	Oshana	35	18	No	No	Yes (35years)
Social studies teacher (SST1)	F	Khomas	27	27	No	No	Yes (22years)
Social studies teacher (SST2)	M	Oshana	20	20	No	No	Yes (20years)
Senior Education officer for Inclusive Education (SEO-IE1)	F	Khomas	26	2	Yes Diploma in Special Education& Honours Inclusive Education	No	No
Senior Education officer for Inclusive Education(SEO-IE2)	F	Oshana	24	14	Yes (advanced Certificate in Inclusive Education)	No	No
Senior Education officer for Social science (SEO-SS1)	F	Khomas	22	7	No	Yes: Bachelor of Education (Geography& History)	No
Senior Education officer for Social science (SEO-SS2)	F	Oshana	15	5	No	Yes: Bachelor of Education (Geography& History	No

Table 4.3 presents demographic data regarding the ten participants in the study. They were asked in which way they were connected to the two resource schools. The results show the following: four of the ten participants from both regions were Senior Education Officers (SEOs), two for Inclusive Education and two for Social Sciences (Geography). Two of the ten participants were Principals, two Heads of Department (HODs) for the Secondary Phase and two were Social Studies teachers. Eight of them were female and two were male.

The participants were asked to state the regions in which they were based or working. Five were from the Khomas and five were from the Oshana region. Only two had qualifications in education, majoring in Social Science (Geography and History). The remaining eight had qualifications in teaching/education but not necessarily in Social Sciences (Geography), as indicated in the Table above.

In addition, only two out of the eight participants had qualifications pertaining to Inclusive Education or Special Education. Furthermore, as indicated above, five participants had been in their respective positions for more than 10 years. Four of them had 14 years and more than 14 years of experience. One of them had 20 years and one 27 years of experience. Two participants had less than 5 years of experience, while one had 6 and the other 7 years of experience. One participant had exactly 5 years while one had 6 years of teaching experience or had been in their current working positions. Lastly, only six of the ten participants had experience in teaching LWVI.

4.4 Theme Three: Findings

In this theme , the research findings of this study are analysed and presented under the following subheadings: firstly the awareness of the adapted 2011 Geography syllabus, followed by the teaching of Geography to LWVI, and then drawback to teaching

Geography to LWVI, thereafter the benefits of teaching Geography to LWVI, followed by the barriers to offering Geography to LWVI, and lastly the assistance required by resource schools to offer Geography to LWVI. These subheadings are guided by the questions in the research interview schedule which was employed to collect the data. The participants in the study are categorised as SEO-SS1 and SEO-SS2 for the Senior Education officers for Social Sciences (Geography), SEO-IE1 and SEO-IE2 for the Senior Education Officers for Inclusive Education, PRINC1 and PRINC2 for the Principals, HOD1 and HOD2 for the Heads of Departments and SST1 and SST2 for the Social Studies teachers at the schools.

4.4.1 Awareness of the adapted 2011 Geography syllabus

This section presents the responses of participants to the question regarding whether they were aware of, and had reviewed, the Geography syllabus that was adapted to cater specifically to learners' with visual impairment and was meant for implementation in 2011. Those who had reviewed it were asked to provide their opinions about the syllabus. The researcher had to give those participants, who were not aware and/or had not reviewed the syllabus, a brief overview of the syllabus and indicate to them a couple of the adaptations and suggestions that were made. The following are the responses of the participants.

Table 4.4: *Summary of participants' awareness of the Geography syllabus*

Participants not aware of the adapted Geography syllabus:	HOD1, SST1, PRINC1, HOD2, SST2, PRINC2, SEO-IE1 and SEO-IE2
Participants aware of the adapted Geography syllabus:	SEO-SS1 and SEO-SS2

Of the ten participants, only the two SEOs of Social Sciences SEO-SS1 and SEO-SS2 were aware of the syllabus that was adapted for LWVI. Only one of them SEO-SS1 had actually reviewed it but was of the opinion that the adaptation were not inclusive enough. SEO-SS2 was just aware of the syllabus but had never reviewed it. Through the interview process, the participants were briefed on the adapted syllabus by the researcher.

4.4.2 The teaching of Geography to LWVI

This section discusses the findings of the study that were gathered when participants were asked whether they believed that LWVI should be taught Geography.

Participants HOD1, PRINC1, HOD2, SST2, SEO-SS1, SEOIE1 and SEO-SS2 agreed that LWVI should be taught Geography. While some of them agreed, they based their opinions merely on it being the learners' right and/or because it was dictated by the Inclusive Education paradigm shift that guides education policies and systems in Namibia. Some participants strongly agreed because they believed that it was possible and that Geography was a beneficial subject. Here are some examples of these responses:

> Participant PRINC1: *I strongly believe that it is possible. It can be done, provided resources can be made available for them. And not only the theoretical side, do not. I agree per se that kids must just recall. I really don't agree. But that also should be practical activities. In that, we can find ways, you understand, to put these things in such a way that it almost looks like you are teaching a mainstream learner. That will be good for me.*
>
> Participant SEO-SS2: *Yes, because it is their right, due to the new paradigm shift in education, which is Inclusive Education. Geography is a subject that is supposed to be known by every-one, as it is an important subject.*

On the other hand, three participants did not agree that teaching Geography to LWVI was beneficial or that it was even possible.

Participant SST1 was not convinced that a Geography syllabus adapted to cater to LWVI was reason enough to teach Geography to LWVI. Unlike Participant SST1 who was ambivalent in her answer as to whether Geography should be offered to LWVI. Participants PRINC2 and SEO-IE2 strongly disagreed to Geography being offered to LWVI. They both stated that the Geography content was too visually demanding, making the practical aspect almost impossible to teach to LWVI. One of the participants argued that there was no point in LWVI studying Geography because there were no job opportunities in the geography field for visually impaired people. Here are some examples of these responses:

> Participant SST1: *Not really sure, to say yes or no, but let me say yes, provided there is technology to assist in teaching the blind children Geography.*
>
> Participant SEO-IE2: *No, because the subject is too visually demanding. Learners should be able to see maps and know where the rivers are, etc.*
>
> Participant PRINC2: *No, because the content for Geography is more visual. When you are giving a visually impaired learner content of maps and graphics, I don't think we are going to do justice to them because they cannot see even though someone will explain it to them. Who is to say that they will get the picture exactly like the learner who can see? And, there is no work in the Geography field for the Blind. In other words, the subject is of no use to the visually impaired.*

4.4.3 Drawback to teaching Geography to LWVI

This section presents the participants' views concerning the potential drawbacks that they anticipated in teaching Geography to LWVI. The following are some of the participants' views:

Participant HOD1: *Lack of materials, to assist. First is the materials to assist with the job and the policies that should be in place. The teachers, because we need to have trained teachers who must do the job. Otherwise, you are taking somebody fresh from the university that don't even know any single Braille letter. What are they going to do in that Geography class? And then, maybe the Braille textbook, which is a challenge to all of us, until now, even Biology textbooks. I have to Braille them myself. Mind you, this is done without copyrights from the authors, which is illegal, by the way.*

Participant PRINC1: *Let me start with the teacher. If the teacher is really into teaching blind learners and is enthusiastic and if the teacher is really into the subject and into, you know. Are we willing to go the extra mile for the kids, and to make it really possible for them to make whatever he is teaching in the classroom, very relevant for the kids? That is not what we see here,because the other thing is also that our people are not really trained.*

Participant SEO-IE2: *Because they cannot see, they can only learn theoretically and not practically. They can only manage to imagine but not really learn. They won't learn the reality that they are supposed to learn.*

The Figure 4.1 below outlines drawbacks of teaching Geography to LWVI derived from the interview excerpts presented above.

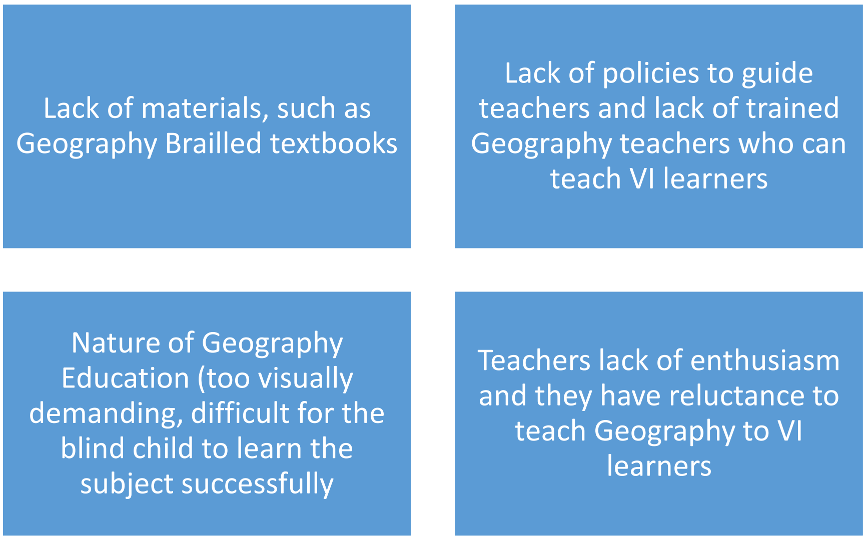


Figure 4.1: *Drawbacks of teaching Geography to LWVI*

Most of the participants believed that the major disadvantages would be caused by the lack of:

- materials, particularly Brailled Geography textbooks;
- policies in place to guide teachers;
- teachers who were trained in Braille and Geography;
- teachers who could teach Geography to children with visual impairment.

Most of the participants believed that major drawbacks would be caused by the lack of materials and technologies, policies in place to guide teachers, teachers who are trained in Braille and Geography or teachers who are able to teach blind children Geography, as well as a lack of Brailled Geography textbooks. Some participants stated that the primary disability was the fact that the learners were visually impaired, thus blind, and could not see. Consequently, it would be difficult for them to grasp the content of the subject, as Geography was visually demanding.

Another drawback that was stated was that Geography was a non-sighted friendly subject and that there was no suitable future career in a geographical field for visually impaired people. Therefore, it would be a waste of time to teach Geography to those LWVI.

4.4.4 The benefits of teaching Geography to LWVI

This section discusses the findings regarding the benefits that participants anticipated when teaching Geography to LWVI. For example:

Participant HOD1: *They could learn how to navigate in their whole life without anybody doing it for them. They will be able to do calculations. They can work at weather stations, that's an opportunity for them.*

Participant SST1: *General knowledge of the earth, natural disasters; how they happen and what it is. And, to assist their own children or siblings in the future with homework, etc.*

The Figure 4.2 below presents the summary of the benefits of Geography for LWVI derived from the interview excerpts presented above.

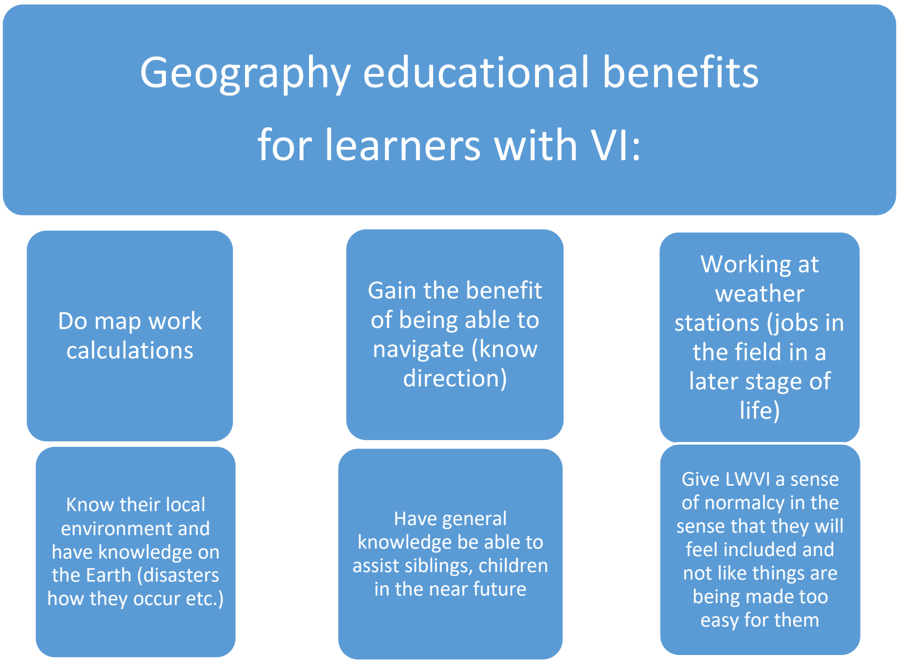


Figure 4.2: *Summary of the benefits of Geography for LWVI*

Three participants stated that LWVI could learn ways in which to navigate their whole lives without anybody doing it for them and know their environment because, in Geography, learners are taught direction and about the environment around them in general. They would be able to do calculations as in Geography they learn to do map work calculations of distance, scales and how to read maps, among others. They could work at weather stations because in Geography learners were taught how to read and understand weather instruments and elements. Six participants stated that the learners would have general knowledge about the earth and natural disasters.

Another benefit was that should LWVI be taught Geography and have general knowledge of the subject, they would be able to assist their own children or siblings in the future with homework in Geography.

Some participants believed that Geography was an interesting subject and LWVI could, like sighted learners, learn much and benefit from being taught Geography. Some of the participants argued that Geography was not just about map work and practical fieldwork; consequently, learners who are visually impaired could benefit a great deal by even learning only the theoretical part of Geography.

Some participants believed that, because Geography was so visually demanding, it would benefit the LWVI as it would take them out of their comfort zone. It would assist them in feeling included and part of society and not left out. Some participants believed that part of the benefits of teaching Geography to LWVI was that they would become acquainted with their local environment and geographical areas.

4.4.5 The barriers to offering Geography to LWVI

This section discusses the findings regarding the barriers that participants anticipated when teaching Geography to LWVI. The following are the results that were gathered.

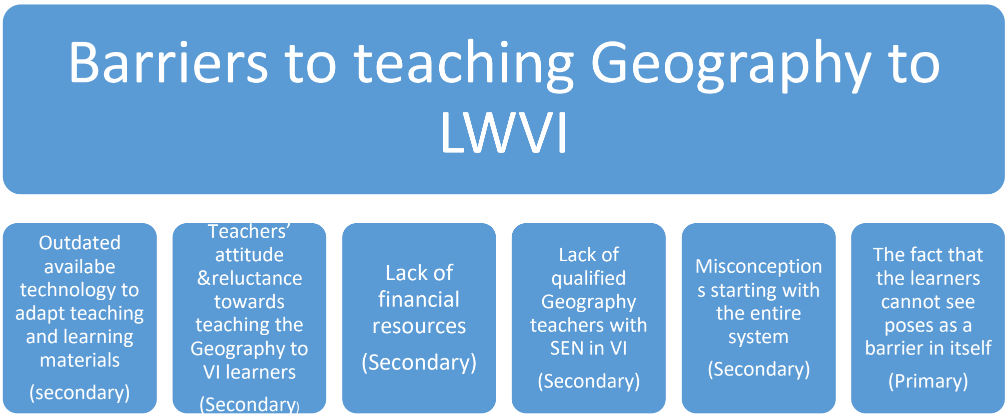


Figure 4.3: *Barriers to offering Geography to learners with VI*

Most participants stated a lack of financial resources to purchase technology that could translate Geography materials into a more suitable form in order to teach the subject to LWVI. However, one participant stated that, apart from the lack of technology, schools were left with outdated technologies. Swollen papers were utilised in the past to uplift diagrams for learners to feel and/or touch but now those papers were no longer available, even though the school still had the machine to produce the diagrams. For example:

> Participant SST1*: Lack of technology to be able to teach practical tasks to blind children because these technologies, and software in the computers to be able to teach the blind children are very expensive to get.*
>
> Participant PRINC1: *Lack of assistive devices for both teachers and learners, such as Braille textbooks. Even now that there is a new curriculum, there are still no Braille textbooks for the subjects the school is already teaching. Also a lack of technology in Braille in soft copy on the computer.*
>
> Participant PRINC2: *Lack of resources and technology to print out diagrams, maps and pictures in such a way that blind learners can study Geography well. Even swollen papers are no longer being manufactured because of outdated technology that we are currently having at the school.*

The majority of the participants agreed that there was a lack of expertise. Although there were qualified Geography teachers at the schools, most of them did not have a qualification in Inclusive Education. These teachers needed training to equip them to cater to the blind child. Some participants expanded on this by stating that expertise started with the entire system. The personnel in the decision-making bodies in the Ministry of Basic Education, Arts and Culture were not very well versed in Inclusive Education, in particular, the needs of LWVI.

> Participant HOD1: *Maybe money, money, problem, finances, and then the lack of expertise to be honest, starting from the Ministry itself, going to universities and then coming back to schools. There are no experts that can do Geography. There are teachers that have majored in Geography. They can teach Geography but they are not acquainted in teaching or offering it to blind learners.*

Participant SST2 felt that the main barrier was the teachers' attitudes. Their negative attitudes and reluctance to teach Geography to LWVI, as well as other misconceptions, lay with the entire education system.

> Participant SST2: *The barriers, at the moment, is first of all, is the, is the misconception. Perhaps starting with the system, whereby some teachers or the education system does not believe that visually impaired learners or people can study Geography and/or Social Sciences. That can be barrier number one, because when it starts with the educator feeling that Geography or Social Sciences cannot be done by visual impaired, then already it is a stumbling block because if the educator does not believe that visually impaired can learn the subject because it is the educator who was supposed to be positive about teaching the subject to the learners.*

Two participants, HOD2 and SEO-IE2, emphasised that the impairment itself was the main barrier to teaching Geography to LWVI because Geography was too visually demanding. Furthermore, there was a lack of technology to prepare quality teaching and learning materials in Geography suitable for LWVI.

> Participant SEO-IE2: *The barrier is that they cannot see, making it already difficult and it's already a barrier on its own…. And, the other thing, maybe the other barriers are the equipment or not, that are not there. There might be some equipment, but they are too expensive. So we know that it's an indication, is very expensive. So, it's the lack of proper equipment.*
>
> Participant HOD2: *The barrier is that Geography is too visually demanding. They need to see or visualise all those lines, especially when learning about time degrees, minutes and seconds. So, the main and only barrier is that they cannot see.*

Another identified barrier was that the misconception starting with the system that hold that a blind person could not study Geography, as well as the fact that educators were not positive about teaching the blind Geography.

> Participant SST2: *Misconception starting with the system (views that a blind person cannot study Geography), educators that are not positive about teaching the blind Geography.*

Some participants mentioned that Geography was a physical and too practical a subject as learners were required to use weather instruments and take measurements, among others. It would be difficult to translate the different types of maps that were used into Braille. They also mentioned the lack of funds to invest in translating these maps into Braille.

A few participants stated that the government did not allocate enough funds to the education of the blind and that the government or Ministry believes that education for the blind would be too expensive; therefore, they did not allocate enough funds for the visually impaired population in school to be fully included.

4.4.6 Assistance required by resource schools to offer Geography to LWVI

This section investigates suggestions of participants regarding the assistance that should be provided to enable resource schools to teach Geography to LWVI. The following are the results that were gathered:

Table 4.5: *Assistance required by resource schools to teach Geography to LWVI*

Suggested assistance to Resource schools	
At MoEAC/Government level	**At school level**
• Better and improved communication and collaboration between NIED (MoEAC) and the schools, especially those who are catering to LWVI and/or: • Connected to the first point is that people in offices designing or developing curricula should also have knowledge of the special needs education of different learners and, therefore, develop practical curriculums. • MoEAC should include in its budget, or allocate funds, to train, existing Geography teachers to, teach LWVI. Thus, they could do a post-graduate course in Special Needs Education (something more practical and intense than the Inclusive Education 1 and 2 modules currently being offered at UNAM). • Appointment of learner support teachers or personnel who will be responsible for adapting materials to make them suitable for the LWVI to study Geography. • Exchange programmes with other countries that are already teaching Geography to their LWVIs in order to become acquainted with different ways teaching these learners (South Africa for example).	• A fully-fledged Library. Thus, improved education centres for LWVI, as well as investment in the computer rooms; suitable and regular software updates at schools. • In the absence of personnel appointed to adapt materials, teachers should at least receive an extra income to do the adaptation work (because it is indeed extra work). • Better technological equipment, such as Braille machines, including those that can create uplifted maps and diagrams, that could be used at schools. • There should be proper psycho-social support provided to LWVI because if they would be introduced to a visually demanding subject, such as Geography, they would need to be prepared emotionally and mentally so that they would not panic and feel that the subject was too difficult. Furthermore, their peers who are sighted should be supportive to assist, especially during field/practical investigations.

At the MoEAC or the governmental level

Eight of the participants were astonished by the fact that there was an already existing Geography syllabus adapted to cater to LWVI. They concluded that part of the reason why this syllabus was never implemented was that there was no proper connection and communication between the curriculum developers (NIED) and curriculum implementers (the teachers at resource schools). The study thus found that some participants believed that part of the assistance that could be rendered should be improved communication and connection between NIED and these schools in order to enable them to teach Geography as a subject.

> Participant HOD1: A *Better relationship between NIED and schools so that NIED can oversee implementation of syllabuses.*

Finances, especially an extensive budget for programmes to be funded by the government for training already existing qualified Geography teachers to teach blind children, were imperative.

> Participant HOD1: *Finances for training Geography teachers to teach blind children and, generally, the government must do better in funding for training of teachers that are teaching blind children.*

Another suggestion was that staff members, who could do Brailling, should be appointed by the Ministry in order that the subject teachers could focus solely on teaching. This would ensure that teachers were not overworked as well.

> HOD1 stated: *Personnel that would do the Brailling should be appointed by the Ministry so that the subject teachers focus solely on teaching the subject.*

Two participants suggested that The Ministry of Education and NIED should make provision and generate a practical syllabus with experts who were conversant in

Special Needs education. In addition, some participants suggested exchange programmes with other countries already teaching Geography to their LWVI.

> Participant SST2: *Senior Education Officers and teachers can visit neighbouring countries like South Africa, to learn how they are teaching Geography to the blind, in other words, have exchange programmes between Namibia and South Africa.*

> Participant PRINC1: *There should be exchange programmes with other countries that are already teaching Geography to their LWVIs so we can learn how to do it as well.*

Most participants mentioned that proper education for the blind was too expensive. One of the participants strongly believed that, since the government had agreed and signed documents on Inclusive Education, they should invest in education for the blind in order to achieve the goals of Inclusive Education in full.

> Participant SST2: *Sufficient funding. There must be a government financial budget allocated to LWVIs' education to be catered for properly and that way Inclusive Education can be executed very well.*

One participant, furthermore, suggested that curriculum designers and/or developers should also be knowledgeable of the special needs education required by different learners and, therefore, develop practical curricula.

> Participant PRINC1: *The Ministry of Education and NIED should make provision and generate a practical syllabus and the panel must consist of experts that know Special Needs Education and must know how LWVI.*

At the school level

Some participants suggested, that since teaching LWVI requires a great deal of time spent on Brailling materials and preparing lessons, they should receive extra remuneration. The following is an example of participants' comments:

> Participant SST1: *There should at least be an extra income for teachers teaching the blind children as they are spending so much time Brailling the materials for the blind children currently. Sometimes we are at work until 8 pm trying to Braille materials and that is such a huge sacrifice because we are people with our own families too.*

Another suggestion was to improve centres for blind education, such as libraries, and supply better technological equipment that teachers could utilise to make life much easier at work. Investment in computer rooms (proper software) at schools and libraries equipped with various resources in Braille should also be prioritised.

> Participant HOD1: *Better technological equipment that teachers can use to make life easier at work and improved centres for blind children education.*
>
> Participant PRINC1: *There should be an investment in the computer room's proper and updated software such as the jaws program at schools and libraries at school with various resources in Braille a fully-fledged library.*
>
> Participant SST2: *Assistive devices expands papers, which uplifts diagrams and maps and thus learners can use their hands and fingers to feel or touch. And software programs for diagrams because Geography has a lot of graphs etc.*

One participant suggested that one way in which resource schools catering to LWVI could be enabled to teach Geography to the learners is by conducting research and allowing the learners themselves to choose whether they wanted to study Geography, instead of just not teaching them, assuming that they would not cope.

> Participant SEO-IE1: *Research should be done and choices should be given to LWVI to choose if they want to study Geography or not, and they shouldn't be decided for, and it shouldn't be assumed that they cannot learn the subject because they are blind.*

Another suggestion was that there should be proper psycho-social support provided to LWVI. LWVI need to be both mentally and emotionally prepared when introduced to a visually demanding subject such as Geography. They needed to learn to be patient with themselves and be open to studying Geography. Their sighted peers needed to be positive and willing to support LWVI, especially in practical and fieldwork activities. For example:

> Participant SEO-SS2: *Consideration of their special educational needs when it comes to examinations and proper psycho-social support provision to visually impaired learners*.

4.5 Chapter summary

The findings of this study were presented as per the research questions of the study. The themes of data analysis included the demographic data and personal views of the participants regarding barriers to the provision of Geography to LWVI. The next chapter will discuss the findings, conclusions and recommendations of the study.

CHAPTER 5: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study investigated barriers to the offering of Geography to LWVI in Namibian resource schools. It addressed the extent to which educators were aware of the Geography syllabus that was adapted for LWVI and whether the stakeholders, including teachers who worked with LWVI, were keen to teach Geography to them. It, furthermore, investigated the barriers to offering Geography to LWVI according to the views of educators who were linked to resource schools, as well as how resource schools could be supported to teach Geography to LWVI.

This chapter will compare the research findings with the literature that was reviewed. Based on the discussion of this, comparisons will be made and conclusions drawn. Finally, recommendations will be made.

5.2 Discussion of the results of the study

This section will compare and contrast the results of the study with the literature reviewed. Firstly, it will address the gap between curriculum developers and implementers, derived from the fact that 80% of the participants were not aware of the Geography syllabus, supposed to be implemented in 2011, that was adapted to cater to LWVI. This aspect will be followed by the importance and benefits of teaching Geography to LWVI.

Thirdly, the barriers to offering Geography to LWVI will be discussed, followed by the teaching and learning of Geography and learning support for LWVI. Finally, assistance that should be rendered to resource schools catering to LWVI to teach Geography will be addressed.

5.2.1 The gap between curriculum and policy developers and implementers

When one considers the responses of the participants, it would appear that 80% of the educators connected to resource schools were not aware of the Geography syllabus that was adapted by the National Institute for Educational Development (NIED), meant for implementation in 2011. It shows a lack of collaboration or connection and communication between the two parties (developers and implementers).

When teachers are not involved in the development of the curriculum, it may lead to them not knowing anything about it and, thus, they will not implement it. When teachers were not part of the development of the curriculum, they may ignore it or perhaps not know how to implement it successfully. In a study conducted by Hirani, Naveed and Jeeva (2018) they hold that educators do not take ownership of the curriculum as they are often not involved in its development, and that poses a challenge in curriculum implementation. This finding is also supported by Nghihalwa (2018, p. 22) who states that "If teachers are excluded in curriculum development, there is a possibility that they might not implement the official, planned curriculum". Additionally, Nghihalwa (2018) states that teachers acknowledged that they were expected to play a role in the curriculum development process, but the main contributors were personnel from NIED, some of whom were teachers. Teachers who were responsible for implementing the curriculum on a daily basis in the classroom were not consulted. As a result, the curriculum was forced upon the teachers, leaving them as mere implementers.

5.2.2 The importance and benefits of teaching Geography to LWVIs

The results of the study indicate numerous benefits to LWVI should they be taught Geography. In this section these findings are categorised under three main benefits, namely gaining knowledge about the world around them, being exposed to interesting aspects of Geography as a subject, job creation or opportunities and, finally, normalisation and inclusion.

Gaining world knowledge and exposure to interesting aspects of Geography

One of the benefits of teaching Geography to LWVI, as was indicated by this study, is that learners will be able to study map work. This exposes them to different types of maps where they learn to do calculations on map scales and distances, learn how to read different maps by interpreting the map keys and find directions, among others. They thus learn how to navigate in different places. Brock and Hachet (2017), support this finding, by arguing that “raised-line paper maps with Braille text have mainly been used for teaching spatial thinking and even though maps possess significant limitations, technological progress has enabled the design of accessible interactive maps, e.g. audio-tactile maps, which overcome these limitations for LWVI”. Brock and Hachet (2017, p. 2) continue that “map work provides the LWVI with spatial skills for their daily lives, such as knowing where one is in space and where one wants to go, or how to use input from the different senses for navigation”. Another study in line with this finding is that of Paterson and Warf (2016, p. 1) they argue that “nonvisual spatial navigation underpinned their sense of independence and daily routines, such as shopping and walking around the streets for everyday tasks”.

In Geography, learners study the earth, starting with the internal structure of the earth and how activities in the mantle have had an impact on plate tectonics, natural disasters such as earthquakes and how and where they occur, as well as many more interesting facts. This finding is in line with a study conducted by Utami and Salsabilla (2021, p. 3) who posits that the acquisition of knowledge in any field of study ultimately stems from an understanding of the earth, which is why Geography is often referred to as the "mother of science". As a scientific subject, Geography seeks to explain the characteristics of places on the earth's surface as they relate to human habitation, including the use of natural resources and the environment to sustain life. One of the primary goals of Geography is to examine the relationship between living organisms and their surroundings, which helps to increase people's awareness of various aspects of life on our planet. This finding is supported by Maude (2010) who states that, in Geography, learners are taught about their environment, as well as in what ways, and the reasons why, it is changing. This gives them an understanding of the impact on their neighbourhoods and their lives. It, in turn, assists them to make knowledgeable decisions about a range of private and public issues.

Another finding of the study is that some participants regarded Geography as an interesting subject and that LWVI, like the sighted learners, could learn a great deal and benefit from being taught Geography. Some of the participants stated that Geography was not just about map work and practical fieldwork. In other words, LWVI could benefit much by learning just the theoretical part of Geography. This finding is supported by the Ministry of Education (2006) saying that, Geography imparts scientific knowledge about physical, ecological, and human processes, which serves as the basis for interdisciplinary education. Geography is aligned with the curriculum guide's objectives, which include fostering intellectual growth, personal development and fulfilment, social and cultural growth, and environmental and population awareness.

Job creation or opportunities

The findings of the study indicate that learners could work at weather stations and be general geographers. These could be employment opportunities for them to work in geographical fields. This finding is supported by Kipkogei (2016) who advocates that Geography offers an unlimited range of occupation choices and is, therefore, an essential school subject. Teaching and preparation should, therefore, consider the important role Geography plays in empowering learners with basic foundational skills to overcome the different challenges encountered in society. Once learners complete secondary school, it is anticipated that they would go to institutions of higher learning to study courses that will decide their professional paths. Therefore, it is imperative that the role of Geography as a subject in preparing learners for career paths is acknowledged. Additionally, people with visual impairment can be employed in Geographical occupations. According to Paterson and Warf (2017) Reginald Golledge was a geographer who was blind but had a deep understanding of the practical challenges that disabled individuals face in their daily lives. He contributed to the development of navigational aids for visually impaired people, such as tactile maps. These maps offer a 3D tactile relief representation of an area instead of a flat visual presentation, assisting the visually impaired in navigating their surroundings. Despite his blindness, Golledge was able to create such maps because of his knowledge and expertise in geography.

Normalisation and inclusion

The findings revealed that, because Geography is a visually demanding subject, it can be beneficial to LWVI. It will take them out of their comfort zone, as they will be exposed to the practical aspects of Geography, such as map work. Furthermore, it may contribute to them feeling normal and part of society; they would also not feel as if things are being made easy for them because they are seen as not being able to handle challenges. This finding is supported by the theory of normalisation that speaks to normalcy and the opportunity to take risks by LWVI, just like it would be the case for every other person who does not have disabilities. Normalisation means “making accessible to all the people with disabilities the same patterns of life conditions of everyday living which are as close as possible to or indeed the same as the regular circumstances and ways of life of society" (Kumar, 2013, p. 670). Furthermore, Renzaglia, et.al (2003, p. 1) argue that "the normalisation principle provides the framework for inclusion by stating that individuals with disabilities should participate equally in the normal routines of community life, including having a home to live in, access to school or a job, self-selected and self-directed leisure time and the opportunity to establish social networks which involve individuals with disabilities."

This section looked at the benefits for LWVI should they be taught Geography. It is indeed evident that Geography is a vital and very beneficial subject to all learners, including those with visual impairments. The next section will discuss the barriers to teaching Geography to LWVI.

5.2.3 The barriers to teaching Geography to LWVI

Teachers' attitudes and perceptions regarding LWVI learning Geography and lack of expertise in SEN in Geography teachers to teach LWVI

The findings reveal that part of the barriers to teaching Geography to LWVI would be the misconceptions and teachers' attitudes, starting with the system. These are the views that a blind person cannot study Geography, especially when the educators are not positive about teaching Geography to the LWVI. Furthermore, qualified Geography teachers in the field lack Special Needs or Inclusive Education training and skills to teach LWVI.

This is supported by the Ministry of Education Arts and Culture (2014) stating that,

> Several teachers felt that learners with disabilities were not able to follow the same academic curriculum as those without disabilities. As a result, many resource schools had removed certain subjects, or certain content from some subjects, which they deemed unsuitable for children with disabilities. This is

concerning as teachers have no authority to remove a subject or any section of the curriculum this is done only at the curriculum level. Other teachers stated that they 'modify' the curriculum by removing from their timetable certain sections of subjects, or at times even a whole subject, rather than making adaptations or using assistive technology and devices.

Geography has a lot of maps. A virtually blind learner won't be able to do all this, so we know we have to remove some of the topics. We looked at the topics that are very difficult. They won't be able to cope with it, so we remove it.

The preceding quote conveys that principals and teachers have neither the training nor the skills to adapt the curriculum to meet the needs of all children in the school. They do not have access to resources and materials, nor the practical knowledge required to assist the learners (Ministry of Education, Arts and Culture, 2018, p. 34).

This finding is also supported by Baboo (2011) who adds that, despite the legal and policy frameworks promoting the integration of students with disabilities into mainstream schools, there is still uncertainty about how to effectively achieve inclusion. This is largely due to the reported scepticism of mainstream school teachers who believe that including learners with disabilities is beyond their scope of expertise. Sukhraj-Ely (2008) argues that, for the proper implementation of inclusive education to occur in all schools, "the attitudes, beliefs and mindset" of all the stakeholders connected to the schools must change for the better. Mwakyeja (2013) posits that according to observations, mainstream teachers in Tanzania and Namibia lacked the knowledge and expertise required to teach in inclusive classrooms and cater to the needs of students with special educational requirements. This was mainly due to the limited availability of higher education institutions that offered courses related to teaching students with special needs. Additionally, the teacher education programs in colleges did not adequately cover inclusive education. Similarly, Geography teachers in Namibia lack the necessary qualifications in SEN/SNE to teach Geography to students with low vision or visual impairment (LWVI).

Additionally, Josua (2013), found that LWVI in schools required expert support because the teachers were not sufficiently skilled to meet their needs. This implies that there was a need for more teachers to be trained to help LWVI.

The nature of Geography as a subject

The findings also revealed that part of the barriers to teaching Geography to LWVI was that the subject might be too visually demanding. The lack of materials (Brailled Geography textbooks, raised maps, models and the like) might be another barrier as well. Technology is also not employed efficiently to adapt learning materials to support LWVI and make Geography more accessible or easier to study for LWVI. Ndegwa et al. (2015, p. 14), state that Geography is a multi-faceted subject and it comprises skills like diagrams which might include sketching, examining, calculating and deducing, among others. "The concepts in physical geography are based on landform formation and changes, soils and minerals, lakes and rivers, climate and the atmosphere, plant and animal distribution, ocean and coastal processes which are blended with practical techniques that include Geographical Information Systems (GIS) and cartographical techniques which require visualization hence needs a lot of observation skills".

The lack of relevant technologies to support LWVI studying Geography

The findings of this study also revealed that another possible barrier to teaching Geography to LWVI was that technologies available at resource schools were outdated. They could no longer use teaching aids, such as the machinery that operates with swollen papers that were used to raise or uplift diagrams or pictures so that LWVI could simply use their hands to feel/touch with their fingers, as was mentioned by Participant PRINC2. Furthermore, there are no financial resources to purchase new updated machinery. Participant SST2 stated that it was believed that providing proper education for people with visual impairment was expensive because there were many technologies involved. Ndegwa et al. (2015) support these findings by stating that teaching LWVI requires many specialised resources and technologies to function successfully in the school setting and for learners to study Geography well. However, most mainstream schools do not have the resources available to cater to LWVI, especially when teaching map work because there are no raised line maps or atlases for blind learners readily available.

This section deliberated the possible barriers to teaching Geography to LWVI, while Geography is deemed to be a visually demanding subject. Technology is now so advanced that most, if not all, challenges to teaching Geography to LWVI have been reduced. The next sub-section will look at learning support to LWVI to study Geography.

5.2.4 Teaching and learning Geography: Learning support to LWVI

Seven participants believed that teachers could, and should, teach Geography to LWVI. They suggested ways in which they could do it or what had to be in place at resource schools to teach Geography successfully to LWVI.

Geography versus inclusivity and human rights

This study found that 70% of the participants agreed that LWVI should be taught Geography while some of them strongly agreed because they believed that LWVI could benefit from studying Geography. Some participants agreed, based on it merely being the right of LWVI or because that was what was dictated by the inclusive education paradigm guiding the education policies and system in Namibia. These findings are supported by a study done on *The Inclusion of Visually-impaired Learners in Ethiopian Secondary Schools* by Negash (2017) who says that the inclusion and participation of LWVI are important for the effective practice of human rights. Thus, the one way of respecting the rights of LWVI will be to afford them the courtesy of studying all subjects, including Geography. Additionally, the Ministry of Education in Namibia in a document titled *Assessing Inclusive Education in Practice in Namibia: Challenges and opportunities in leaving no child behind* (2018) found that "the common view of these teachers was that a positive attitude towards learners with disabilities is the most important thing that a teacher needs to be successful" .

Geography versus visual impairment

This study also found that Geography content was too visually demanding and it was almost impossible to teach it to LWVI. Teaching the practical aspects of Geography will add to the difficulty of teaching LWVI. This finding is supported by the Ministry of Education, Arts and Culture (2018, p. 34-35) in the document titled *Assessing Inclusive Education in Practice in Namibia: Challenges and opportunities in leaving no child behind*: "Geography is having a lot of maps. A virtually blind learner won't be able to do all this, so we know we have to remove some of the topics. We look at the topics that are very difficult. He won't be able to cope with it, so we remove."

Additionally, this study is supported by the theory of dysontogenesis which argues that disability is intensified by society which imposes secondary disabilities on people with disabilities because of their primary disabilities. In this case study, the primary disabilities were the VI of the learners and the secondary disability was the decision made by the school as a society to remove Geography from the school curriculum of LWVI.

One participant stated that teaching Geography content to LWVI could be a waste of time because there are no job opportunities and the learners will never be able to work in Geography-related fields. This finding is contradicted by the findings of Kipkogei (2016) who states that Geography encompasses many different types of vocation ranges and thus it is a very essential subject to be offered. Schools should, therefore, consider the importance of Geography in equipping learners with basic foundation skills to tackle the different challenges they face in society. At the end of high school, learners are expected to join colleges or universities to study courses that will direct their career paths. As was previously discussed, there is a blind Geographer who literally assisted in creating tactile maps and was determined to achieve spatial competence for people with visual impairment. Bell (2005, p.13) adds that;

> Geography is about places. It is not just knowing about places themselves, but understanding the interdependence and connectivity of places. It is about empowering tomorrow's adults to develop real global understanding and global citizenship so they have the intellectual understanding to participate individually and collectively in shaping the world around them. This knowledge and understanding of other places, cultures and societies underpins sensitivity and tolerance and contributes to good citizenship. Good geographers develop a range of skills which make them highly employable and which are relevant to any future workforce. They are able to understand the language of maps, which is linked to a competency in ICT and the application of statistics provides a wealth of geographical information which is frequently used by both businesses and government.

Thus it is important that LWVI are not excluded from learning Geography because it will limit their chances of obtaining employment in Geographical fields of employment.

This section looked at whether Geography should be offered to LWVI. It also discussed supporting findings on why that should be done. Because the findings of the study indicated that participants felt that there were no career opportunities in Geography for people with visual impairment, contradicting studies were cited too.

The next section discusses the assistance that is required by resource schools catering to LWVI to enable them to teach Geography to the learners.

5.2.5 Assistance for resource schools catering to LWVI to teach Geography

This section presents the findings regarding suggestions made by participants about the kind of assistance resource schools catering to LWVI may require to teach Geography successfully.

Improved collaboration between curriculum developers and implementers

The findings show that there was no proper collaboration between the curriculum developers and implementers. Furthermore, part of the assistance for teaching Geography to LWVI to resource schools was in the form of proper connection and collaboration between the NIED personnel and these resource schools. Thus, clear channels of communication will make it easier, especially in the case of the implementation of syllabi.

These findings are supported by Nevenglosky et al. (2019) who advocate that, when there is collaboration and professional development through consultation with teachers during the curriculum development process, it enhances the successful implementation of the curriculum.

Finances for SEN training of existing Geography teachers

Another finding of the study is that a well-funded budget for the SEN programme needs to be made available by the government for training Geography teachers in order to teach blind children. This finding is supported by Josua (2013) who posits that

LWVI are also faced with a lack of support from teachers and parents, as well as insufficient financial support from the Regional Education Directorate.

Josua (2013) furthermore, states that teachers should receive professional development to respond suitably to the needs of LWVI. The Ministry of Education, Arts and Culture should widen in-service training for stakeholders in education.

Fully-fledged libraries (Educational centres for the LWVI)

Another finding stresses the need for improved centres for blind children, such as libraries and better technological equipment that teachers can utilise to make life easier at work in terms of the preparation of learning and teaching materials. Overall, the government must do better in funding the training of teachers to enable them to teach the blind child. This finding is supported by Murr and Blanchard (2011) who say that some of the barriers to teaching Geography to LWVI have been met through advanced technology.

Josua (2013) recommends that schools should obtain all the essential computer software to guarantee that every component of a subject is available to all learners, including LWVI. Furthermore, schools should approach their regional finance offices to request assistance to buy and maintain equipment for their special needs education sections. Additionally, the regional office should allocate, apart from the normal budget, a special budget for inclusive schools to be able to attain the additional equipment that they require.

Independent, trained staff members to Braille relevant materials

Another finding of the study is that the staff members that would do the Brailling (adaptation of materials) should be appointed by the Ministry of Education, Arts and Culture so that the subject teachers could focus solely on teaching. This finding is in line with the co-teaching model that was illustrated in Chapter 2 of this study and the findings of Katsoulis, et. al (2006, p. 1-2) which describe “a context which consists of two teachers in the same classroom; the general teacher and the special education teacher who is normally qualified in issues pertinent to special education”. Katsoulis, et. al (2006, p. 1-2) explain that the theoretical perspectives of this model relate to the concept of ‘co-teaching’ or ‘team-teaching’, when two or more professionals collaborate to plan, decide and deliver instruction to a variety of learners in the same physical place. “This is also called the ‘parallel support’ model and has become dominant among the current educational reformations regarding the education of students with visual impairment in Greece” (Katsoulis, et. al, 2006, p. 1-2).

This section looked at the assistance that could be rendered to resource schools catering to LWVI, suggested by the findings in this study, in order for them to teach Geography to LWVI.

5.3 Conclusions

The study answered the following three research questions:

- To what extent are educators aware of the Geography syllabus that is adapted for LWVI, and are they keen to teach Geography to LWVI?
- What are the barriers to offering Geography to LWVI, according to educators linked to resource schools?
- How could resource schools be empowered and supported in order to teach Geography to LWVI?

This study investigated the barriers regarding the offering of geography to learners with visual impairment in Namibian resource schools. It found that there were a number of barriers, ranging from structural barriers to policy. Furthermore, the mindset of educators, regarding learners with disabilities and a lack of expertise to teach Geography to LWVI connected to resource schools catering to LWVI, constituted further barriers. Another barrier was that the lack of financial allocations or resources to cater to education for LWVI was deemed costly. Additionally, the lack of advanced technologies, such as updated software programmes that could make it easier to adapt Geography materials to be more acceptable to LWVI, was regarded as a barrier to teaching Geography to LWVI. Another barrier that must have posed even a greater barrier to teaching Geography to LWVI is the miscommunication or lack of communication or connection between the resource schools teaching LWVI and the body of Namibia that develops policies and curricula, NIED. NIED drafted a Geography syllabus, adapted in 2010, which was supposed to be implemented in 2011. This syllabus was simply never implemented because these schools did not teach Geography to their learners and some SEOs also did not know about the existence of this syllabus. It is, thus, quite worrisome because SEOs are supposed to be the same people who provide training to the teachers on the implementation of curriculums in classrooms.

The study concludes that there is a dire need for collaboration between all stakeholders in the education sphere of the blind child. Geography is a practical subject that is visually demanding, but which school subject is not? Advanced technologies, such as the Brailling of maps and models, among others, accompanied by the right outlook/view or attitude by the teachers towards LWVI, can be incorporated to make materials on the subject accessible to blind children in order to benefit just as much as their sighted peers. In this way, inclusive education will be enhanced.

Lastly, the study recommends that the MoEAC implements courses or open institutions, or collaborate with the existing universities in the country, such as the University of Namibia (UNAM), International University of Management (IUM) and other smaller colleges. Offering SEN in visual impairment training to Geography teachers, who wish to teach Geography to LWVI, will equip them to teach these learners to the best of their abilities.

5.4 Recommendations

The following recommendations are based on the findings of the study and/or the literature that was reviewed. Recommendations were made to the teachers who teach LWVI, the resource schools catering to LWVI, the Senior Education Officers and the Ministry of Education, Arts and Culture.

5.4.1 Recommendations to teachers teaching LWVI

- This study reviewed literature that spoke to the unwillingness of teachers to teach LWVI. The findings indicate that part of the barriers to Geography not being taught to LWVI was because the teachers believed that Geography was too visually demanding and, thus, they were reluctant to teach the subject to LWVI. It is thus recommended that teachers foster positive attitudes towards teaching Geography to LWVI.
- The study reviewed literature, and part of the study findings indicate that there would be a variety of benefits in the study of Geography for LWVI. Therefore, this study recommends that teachers teaching LWVI should focus on the benefits that the learners can achieve from studying Geography instead of focusing on the difficulties.
- The reviewed literature argues that the outlook one has towards people with disabilities, in this case, LWVI, determines the efforts put into providing appropriate learning support in order to minimise barriers to learning. Therefore, this study recommends that teachers who are teaching LWVI should ensure that they have the right mindset regarding these learners and thus

put in appropriate effort in providing learning support that eradicates barriers to teaching Geography to LWVI.

- The findings and literature that was reviewed indicate that most teachers who are qualified to teach Geography may not have the expertise to teach Geography to the child who is blind. Therefore, this study recommends that teachers seek training for SEN. Teachers can seek this training from institutions in other countries with advanced education for the visually impaired, such as South Africa or countries in the Western world.

5.4.2 Recommendations to resource schools catering to LWVI

- The findings and the literature that was reviewed hold that the schools that are catering to LWVI do not have the necessary equipment and machinery to adapt pictures, graphs and maps in Geography textbooks so that the materials can be acceptable to LWVI. It is against these findings and literature that this study recommends that resource schools catering to LWVI should write submissions and requests to the relevant offices to receive these updated technologies so that they can teach Geography more effectively to LWVI.
- Schools have the ability to fundraise and create money for their own specific needs. Therefore, this study recommends that resource schools pull up financial resources to enable them to purchase relevant, advanced technologies they may require to adapt Geography content materials.

5.4.3 Recommendations to the Senior Education Officers (SEOs)

- According to the Queensland Government (2022) The primary responsibility of the SEO (Senior Education Officer) is to develop and execute strategic initiatives aimed at enhancing educational outcomes. This is achieved by offering specialized expertise and services to senior management and teachers in schools regarding various strategies. The SEO coordinates teams to participate in multiple projects aimed at implementing reform strategies. They ensure compliance with relevant policies and legislation that impact these initiatives. The fact that some of the SEOs interviewed in this study were unaware that the Geography syllabus had been adapted to cater to LWVI shows that there is a huge miscommunication or lack of communication. It could also be said that the SEOs are not as involved as they should be in the projects, reforming and making sure that curricula are implemented as they should be. Thus, this study recommends that SEOs look into the issue of the 2010 Geography syllabus adapted to cater to LWVI in 2011. SEOs must consult with NIED and work on ways to adapt the new Geography curriculum and see to it that the curriculum is implemented because Inclusive Education depends on everyone's participation in making sure that no learners are excluded from learning all subjects.

5.4.4 Recommendations to the Ministry of Education, Arts and Culture

- The study findings and literature that was reviewed indicate that qualified Geography teachers lack training in Special Needs Education (SEN). Thus, even though there are teachers who can teach Geography, they do not know how to teach Geography to LWVI. It is against this that this study recommends that the MoEAC implements courses or open institutions collaborate with existing universities in the country, such as UNAM, IUM and other smaller colleges, to offer training to Geography teachers who wish to teach Geography to LWVI.
- The study also found that there was a gap in communication between the Ministry's body of curriculum development, NIED, and the schools

catering to LWVI. It is against this finding that this study recommends that the MoEAC develop channels and ensure that there is a proper and profound relationship and communication between NIED and the resource schools.

- The study found that there was a lack of equipment, advanced technology and different software programmes in the resource schools catering to LWVI. The available programmes were outdated and not sufficient in number to cater to all the learners at the resource schools. This study thus suggests that the MoEAC looks at allocating a comprehensive amount of the budget to cater to the education of the LWVI and ensure that the updating of software programmes is conducted on a regular basis.
- The study found that the lack of resources and information centres at resource schools might prove to be a barrier to teaching Geography to LWVI. Therefore, the study finally recommends that the MoEAC must invest in fully-fledged libraries at resource schools catering to LWVI so that it will be possible for these schools to teach Geography.

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APPENDICES

APPENDIX 1: ETHICAL CLEARANCE CERTIFICATE FROM UNAM

UNAM
UNIVERSITY OF NAMIBIA

ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: WKC0007

Date: 30 May 2022

This Ethical Clearance Certificate is issued by the University of Namibia Decentralized Ethics Committee (DEC) in accordance with the University of Namibia's Research Ethics Policy and Guidelines. Ethical approval is given in respect of undertakings contained in the Research Project outlined below. This Certificate is issued on the recommendations of the ethical evaluation done by the **School of Education (Windhoek & Khomasdal Campuses) Decentralized Ethics Committee**.

Title of Project: Investigating barriers to the provision of Geography to learners with visual impairments in Namibian resource schools.
Researcher: Kandando Tendee
Student number: 201153890

Take note of the following:

1. Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the ethics committee. An application to make amendments may be necessary.
2. Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the ethics committee
3. The Principal Researcher must report issues of ethical compliance to the ethics committee (through the Chairperson) at the end of the Project or as may be requested by the ethics committee
4. The ethics committee retains the right to:

i) Withdraw or amend this Ethical Clearance if any unethical practices (as outlined in the Research Ethics Policy) have been detected or suspected,

ii) Request for an ethical compliance report at any point during the course of the research.

The ethics committee wishes you the best in your research.

Dr. Job U. Hengari (Chairperson, Windhoek & Khomasdal Campuses Decentralized Ethics Committee)

Prof. Davis Mumbengegwi
(Head, Multidisciplinary Research)

APPENDIX 2: PERMISSION FROM THE UNIVERSITY OF NAMIBIA

CENTRE FOR RESEARCH SERVICES

Office of the Pro-Vice Chancellor: Research, Innovation & Development

University of Namibia, Private Bag 13301, Windhoek, Namibia
340 Mandume Ndemufayo Avenue, Pioneers Park, Office F223 - Fblock, Second Floor
☎ +264 61 206 4673; E-mail:kmbulu@unam.na; URL.: http//www.unam.edu.na

UNAM
UNIVERSITY OF NAMIBIA

RESEARCH PERMISSION LETTER

Date: 20/06/2022

Student Name: TENDEE R KANDANDO

Student Number: 201153890

Programme: Masters of Education in Inclusive Education

Approved Research Title: Investigating barriers to the provision of Geography to learners with visual impairments in Namibian resource schools.

TO WHOM IT MAY CONCERN

I hereby confirm that the above-mentioned student is registered at the University of Namibia for the programme indicated. The proposed study met all the requirements as stipulated in the University guidelines and has been approved by the relevant committees.

The proposal adheres to ethical principles as per attached Ethical Clearance Certificate. Permission is hereby granted to carry out the research as described in the approved proposal.

Best Regards

Dr. AEE Shikongo
Head: Postgraduate Support Services
Tel: +264 61 206 3129
E-mail: aeshikongo@unam.na

CENTRE FOR RESEARCH SERVICES
Office of the Director
2022 -06- 20
University of Namibia
UNAM

APPENDIX 3: OSHANA REGION REQUEST FOR PERMISSION LETTER

P.O. BOX 63496
Windhoek
21 June 2022

The Director of Education
Ministry of Education, Arts and Culture
Private Bag 5518
Oshakati

Dear Madam

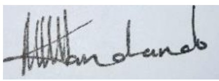
REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN OMPUNDJA CIRCUIT, OSHANA REGION

I am a student at the University of Namibia (UNAM), pursuing a Master’s Degree in Inclusive Education. I am hereby kindly requesting for permission from your good office to conduct an educational research with Eluwa Special School and the Oshana Regional Office (specifically with Education Officers responsible for Inclusive Education and those of Social Sciences).

My research topic is: **Investigating barriers to the provision of Geography to learners’ with visual impairment in Namibian Resource Schools.** Information that will be gathered from the study will be treated with confidentiality and will be used only for the purpose of the study. The information might help us to better combat these barriers and perhaps eradicate them and in turn introduce the subject at the school.

I am looking forward to hearing from your good office.

Yours sincerely



Tendee R. Kandando (0816155100/ ritjatk@gmail.com)

APPENDIX 4: PERMISSION: OSHANA REGION EDUCATIONAL DIRECTOR

REPUBLIC OF NAMIBIA

OSHANA REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS AND CULTURE
ASPIRING TO EXCELLENCE IN EDUCATION FOR ALL

Tel: 065 - 229800/25
Fax: 065 - 229834

Private Bag 5518
Oshakati

Enquiries: Hileni M Amukana
Ref. 13/2/9/1

Ms. Tendee R.Kandando
P.O. Box 63496
Windhoek

Cell: 0816155100

SUBJECT: PERMISSION TO CONDUCT A RESEARCH IN OSHANA REGION

Your letter dated 21 June 2022 on the above caption bears reference.

Kindly be informed that permission is hereby granted to conduct research study at Eluwa Special School and Oshana Region Office, in Oshana Region.

This permission is subject to the following strict conditions; **(i)** There should be minimal or no interruption on normal working schedule **(ii)** Ethical issues of confidentiality and anonymity should be respected and retained throughout this activity i.e. Voluntary participation, and consent from participants

Both Parties should understand that this permission could be revoked without explanation at any time.

Furthermore, we humbly request you to share your research findings with the Directorate of Education, Arts and Culture, Oshana Region. You may contact Ms. Hilma Nuunyango-George, the Deputy Director; Programs and Quality Assurance (PQA) for the provision of summary of your research findings.

We wish you the best in conducting your study.

Yours sincerely,

28/06/2022

OSHANA REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS & CULTURE
OFFICE OF THE DIRECTOR
28 JUN 2022
Private Bag 5518
OSHAKATI
REPUBLIC OF NAMIBIA

HILENI M. AMUKANA
REGIONAL DIRECTOR

Cc: Inspectors of Education: Ompundja Circuit

All Official Correspondence must be addressed to the Regional Director

APPENDIX 5: KHOMAS REGION REQUEST FOR PERMISSION LETTER

P.O. BOX 63496
Windhoek
21 June 2022

The Director of Education
Ministry of Education, Arts and Culture
Private Bag 9000
Windhoek

Dear Sir

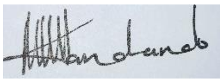
REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN MONTESSORI CLUSTER CIRCUIT 2, KHOMAS REGION

I am a student at the University of Namibia (UNAM), pursuing a Master's Degree in Inclusive Education. I am hereby kindly requesting for permission from your good office to conduct an educational research at The School for the Visually Impaired and the Khomas Regional Office (specifically with Education Officers responsible for Inclusive Education and those of Social Sciences).

My research topic is: **Investigating barriers to the provision of Geography to learners' with visual impairment in Namibian Resource Schools.** Information that will be gathered from the study will be treated with confidentiality and will be used only for the purpose of the study. The information might help us to better combat these barriers and perhaps eradicate them and in turn introduce the subject at the school.

I am looking forward to hearing from your good office.

Yours sincerely



Tendee R. Kandando (0816155100/ ritjatk@gmail.com)

APPENDIX 6: PERMISSION: DIRECTOR, KHOMAS EDUCATIONAL

UNITY LIBERTY JUSTICE

REPUBLIC OF NAMIBIA

KHOMAS REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS AND CULTURE

Tel: [09 264 61] 293 4356
Fax: [09 264 61] 231 367/248 251

Private Bag 13236
WINDHOEK

05 July 2022

Dear Tendee R. Kandando

PERMISSION TO CONDUCT RESEARCH WITH MONTESSORI CLUSTER CIRCUIT 2 AND KHOMAS REGIONAL OFFICE IN WINDHOEK, KHOMAS REGION

Your letter on the above topic is hereby acknowledged.

Permission is hereby granted to you to conduct research on "*Investigating barriers to the provision of Geography to learners' with visual impairment in Namibia Resources Schools*" at Special Schools and Khomas Regional Council in Windhoek, Khomas Region under the following conditions:

- The Principal of the selected school to be visited must be contacted in advance and an agreement should be reached between you and the Principal.
- The school programme should not be interrupted.
- The teachers and students who will take part in this exercise will do so voluntarily.
- The Directorate of Education, Arts and Culture should be provided with a copy of your thesis/ findings.

We wish you success in your research.

Yours sincerely

....
Paulus D. Nghikembua 05/07/2022
Director of Education, Arts and Culture

MINISTRY OF EDUCATION
ARTS AND CULTURE
PRIVATE BAG 13236 WINDHOEK
05 -07- 2022
DIRECTOR
KHOMAS REGION

Page **1** of **1**

APPENDIX 7: PERMISSION: PRINCIPAL, ELUWA COMBINDED SCHOOL

REPUBLIC OF NAMIBIA
OSHANA REGIONAL COUNCIL
ELUWA RESOURCE SCHOOL – VISUALLY IMPAIREMENT SECTION
OMPUNDJA CIRCUIT – MWESHIPANDEKA CLUSTER
DIRECTORATE OF EDUCATION, ARTS AND CULTURE

Enquiries: E.Nuugonya
Tel: (+264) 65 230017
Fax: (+264) 65 230475
Cell: (+264) 81 2994885
Email Address: amasistah@yahoo.com
Ref: 28/S3/7/2

Ehenge Street-Ongwediva
Private Bag, 5513
Oshakati

08 August 2022

SUBJECT: PERMISSION TO CONDUCT A RESEARCH

Dear Tendee

Kindly be informed that permission is hereby granted to conduct a research at Eluwa School of Visually Impaired.

We wish you the best in conducting your study.

Yours Sincerely
Nuugonya
Elizabeth Nuugonya
(Principal)

Ministry of Education, Arts & Culture
The Principal
Eluwa Special School
Private Bag 5513
08 AUG 2022
Oshakati-Namibia
Tel: 065-230017
Fax: 065-230475
Oshana Region

APPENDIX 8: PERMISSION: PRINCIPAL, SCHOOL OF VISUALLY IMPAIRED

SCHOOL FOR THE VISUALLY IMPAIRED CHILDREN

National Institute of Special Education
P. O. Box 10793, Khomasdal
Windhoek, Namibia
Fax: +264(61)217978
Tel: +264(61)217971

07 September 2022

To whom it may concern

Mrs. Tendee R. Kandando you are hereby permitted to conduct your research at the school for the Visually Impaired Children.

We wish you success in your research.

Yours in education

Mr. S.N.C. Engelbrecht
Principal

APPENDIX 9: INTERVIEW SCHEDULE FOR ALL PARTICIPANTS

Interview Schedule for educators who are connected to Social Sciences at Inclusive or Resource Schools in Namibia as they are deemed to possess enough knowledge on Geography as a Social science subject and visual impairment. Interviews will either be done face-to-face, via Zoom, or via telephone depending on the location and/or COVID-19-related issues as they arise during the data collection process.

1. Opening

A. (Establish Rapport) [shake hands/Elbow due to Covid-19] My name is Tendee (Ritja) Kandando, I am a Masters in Inclusive Education student at UNAM from the school of Education, and I have deemed you __________________ as a key informant connected to Social Sciences at an Inclusive or Resource School catering for learners' with visual impairment.

B. (Purpose) The purpose of this study is to gain a better understanding of the reasons for Geography not being offered to learners who are visually impaired and discuss possible solutions to addressing these barriers.

C. (Time Line) This interview should take about +/-30 minutes.

D. (Permission) Are you willing to participate? If yes, I would like to inform you that you have the right to withdraw from this interview at any time without penalty. The anonymity of your identity will be ensured. I request your permission for this interview to be audio-recorded for further data analysis. The confidentiality of what will be discussed is assured and the recorded information will be destroyed after a thorough data analysis is done.

(**Transition**: Let me begin by asking you some questions about your thoughts on Inclusive Education as a paradigm shift and how you are connected to schools teaching learners' with visual impairment)

2 Body

A. Demographic information

1. Are you male/female? (This question will be asked if the identity of the participant is not obvious through the mode of the data collection. See the introductory paragraph above)
2. Where are you based? (Oshana/Khomas Regions)
3. How are you connected to schools? Are you a teacher or an Education Officer?
4. How long have you been in service at this school/ as an EO for Social sciences?
5. What are your qualifications as related to Social Sciences?

B. (Topic): General Inclusive Education information

7. (Transition to the next topic :)

C. (Topic) Research Questions:

1. There is a Geography syllabus adapted to cater to learners who are visually impaired. Are you aware of it? Have you reviewed it?

(If the answer is yes, then what do you think about it? If the answer is no, let me brief you on this adapted syllabus)

2. Have you reviewed it?

3. Do you believe that the learners who are visually impaired should be taught Geography? Please support your answer.

4. What could be the drawback/disadvantages of teaching Geography to learners who are visually impaired?

5. What do you think could be the benefits of teaching Geography to learners who are visually impaired?

6. What do you view as the barriers to offering Geography (part of the Social sciences) to visually impaired learners??

7. As an educator connected to Social sciences at an inclusive or Resource school what assistance do you believe should be rendered in order for the school to be able to offer Geography to visually impaired learners?

(**Transition**: Well, it has been a pleasure finding out more about your views on Geography as a Social science subject and it being offered to LWVI. Let me briefly summarize the information that I have recorded during our interview.)

3 Closing

A. (Summarize) It was a great experience learning so much from you as an educator that is connected to Inclusive/Resource schools and Geography as a Social science subject.

B (Maintain Rapport) I appreciate the time you took for this interview. Is there anything else you think would be helpful for me to know?

C. (Action to be taken) I think I may have all the information I need from you. However, would it be alright to call you another time if I have any more clarifying questions related to your interview? Thank you so much again.

The end!!!

APPENDIX 10: PARTICIPANT INFORMATION LEAFLET AND CONSENT FORM FOR EDUCATORS CONNECTED TO RESOURCE SCHOOLS CATERING TO LWVI

ANNEX 5F

INFORMED CONSENT FOR QUALITATIVE STUDIES

Informed Consent for: Educators linked to Resource or Inclusive Schools and Social science who I the undersigned is inviting to participate in the research study, titled "Investigating barriers to the provision of Geography to learners' with visual impairment in Namibian Resource Schools.". An Informed Consent Form should be prepared for every different group of participants.)

Name of Principal Investigator:	TENDEE RITJAEREE KANDANDO
Name of Sponsor:	N/A

This Informed Consent Form has two parts:

- **Information Sheet (this section, to share information about the study with you)**
- **Certificate of Consent (for signatures if you choose to participate)**

You will be given a copy of the full Informed Consent Form.

PART I: INFORMATION SHEET

Introduction

I am Tendee (Ritja) Kandando, a postgraduate student pursuing a Master's degree at the University of Namibia. I am doing research on barriers to the provision of Geography to learners' with visual impairment in Namibian Resource Schools. I am going to give you information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research. Before you decide, you can talk to anyone you feel comfortable with about the research. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take the time to explain. If you have questions later, you can ask me.

Purpose of the Research

Geography is a vital subject and the Namibian government through its Ministry of Education, Arts and Culture saw its' importance and deemed that it should be a compulsory subject for the Junior Secondary Phase in its National curriculum for Basic Education of 2016. However, the Resource schools that were previously known as the Special Schools that cater to LWVIs do not offer Geography to the learners enrolled at their schools. Therefore the purpose of this research is to investigate the barriers to offering Geography to LWVI because I believe this knowledge might help us to better combat these barriers and perhaps eradicate them and in turn introduce the subject at these schools and in that way we will enhance Inclusive Education in Namibia.

Type of Research Intervention

This research will involve your participation in an individual (telephonic, zoom or face-to-face) semi-structured interview session that will take approximately +-30 minutes.

Participant Selection

You are being invited to take part in this research because I have deemed you as a suitable candidate because you are an educator that is linked to Resource or Inclusive Schools and or Social science and therefore you possess knowledge of Inclusive Education and Geography as a social science subject and thus your contribution will shed so much light in answering this research questions.

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not.

You may change your mind later and stop participating even if you agreed earlier.

Procedures

A. Provide a brief introduction to the format of the research study.

During the interview, I will sit down with you in a comfortable place at your office/classroom/via telephone. If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there. The information recorded is confidential, and no one else except Dr. Pamela.J. February (my supervisor) and I will have access to the information documented during your interview. The entire interview will be recorded with your permission, but no one will be identified by name in the recording. The recording will be kept in a secure place to which only I have access. The information recorded is confidential, and no one else except myself will have access to the recordings. The recordings will be destroyed after 8 weeks.

Duration

The research will take place over one (1) day. The individual face-to-face interview session or discussion will be held once and will take about +- 30 minutes.

Risks

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, I do not wish for this to happen. You do not have to answer any questions or take part in the interview session if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits
There will be no direct benefit to you, but your participation may assist in discovering barriers to offering Geography to LWVIs and possible solutions to eradicating these barriers so that the subject (Geography) can be introduced at the various resource schools and thus it will benefit the entire Ministry of Education as Inclusive Education will be enhanced.

Reimbursements
You will not be provided with an incentive to take part in the research.

Confidentiality
I will not be sharing information about you with anyone outside of the research team. The information that we collect from this research project will be kept private. Any information about you will have a number/code on it instead of your name. Only the researcher will know what your number is and we will lock that information up with a lock and key. It will not be shared with or given to anyone except for my supervisor Dr P.J February.

Sharing the Results
Nothing that you tell me today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you before it is made widely available to the public. You will receive a summary of the results.

Right to Refuse or Withdraw
You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the interview at any time that you wish without your job being affected. I will give you an opportunity at the end of the interview to review your remarks, and you can ask to modify or remove portions of those, if you do not agree with my notes or if I did not understand you correctly.

Who to Contact
If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact Dr P.J February, cell: 0812453155/email: pfebruary@unam.na.

This research has been reviewed and approved by the relevant Ethics Review Committee at the University of Namibia, which is a committee whose task it is to make sure that research participants are protected from harm. The committee reports to the University's Centre for Research Services. You can contact Tendee .R. Kandando at 0816155100 or the Centre for Research & Services at kmbulu@unam.na if you have any further queries about the study or if you have any concerns or complaints that have not been adequately addressed by the research team.

You can ask me any questions about any part of the research study if you wish to.

PART II: CERTIFICATE OF CONSENT

I have been invited to participate in a research study investigating barriers to the offering of Geography to LWVI.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked, have been answered to my satisfaction. I consent voluntarily to be a participant in this study

……………………………. ……………………….. ………………….
Name of Participant (print) Signature of Participant Date (day/month/year)

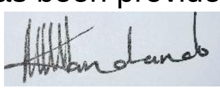
Statement by the Researcher

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that the following will be done:

1. After gaining permission from the Ministry of Education, Arts and Culture and the targeted participants, appointments will be made with the participants.
2. The researcher will individually administer the semi-structured interviews with the management and Geography or Social sciences teachers of the two chosen schools teaching LWVI in both schools.
3. The school staff and Education Officers in Windhoek will be interviewed via face-to-face mode while the staff of the school and Education Officers in Ongwediva will be interviewed telephonically or via Zoom meetings.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the participant.

TENDEE RITJAEREE KANDANDO  …………………
Name of Researcher Signature
……………………………. Date
(day/month/year)

APPENDIX 11: GRADE SUMMARY, GRADES: 8-9 OF THE SCHOOL FOR THE VISUALLY IMPAIRED

KHOMAS REGION

SCHOOL FOR THE VISUALLY IMPAIRED CHILDREN

GRADE SUMMARY SHEET: GRADES: 8-9

DECEMBER 2018

SCHOOL CODE: 7074

GRADE: 8A

	SUBJECTS	A	B	C	D	E	U	TOTAL	TOTAL ABOVE E	TEACHERS
1	English	0	0	2	2	2	3	9	4	Mr. E. Koopman
2	Afrikaans	0	0	2	1	4	2	9	3	Mrs. A. Van Zyl
3	Mathematics	0	0	0	1	1	7	9	1	Mrs. J. Amakali
4	Life Science	0	0	0	2	1	6	9	2	Mrs. J. Amakali
5	Physical Science	0	0	0	1	3	5	9	1	Mrs. J. Amakali
6	Entrepreneurship	0	0	2	1	3	3	9	3	Mr. R. Shishiveni
7	History	0	0	0	1	2	6	9	1	Mrs. C. E. Esterhuizen
8	Agriculture	0	1	2	1	3	2	9	4	Mrs. A. Shililifa
9	Computer Studies	0	1	0	3	3	2	9	4	Mr. R. Shishiveni
	TOTAL	0	2	8	13	22	36	81	23	

TOTAL PROMOTED	4
TOTAL NOT PROMOTED	4
TRANSFERRED	1
NUMBER OF LEARNERS IN GRADE	9