# ACADEMIC CHALLENGES FACED BY LEARNERS WITH VISUAL IMPAIRMENTS AT TWO INCLUSIVE EDUCATION SECONDARY SCHOOLS IN NAMIBIA

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## ABSTRACT

This qualitative case study explored the academic challenges facing learners with visual impairments (LWVI) in two inclusive secondary schools in Namibia. Purposive and convenient sampling were used to select two secondary schools and 11 participants (eight LWVI and three support teachers). The research instruments were semi-structured interviews and observation schedules, supported by still pictures. Data were analyzed using case-oriented qualitative content analysis. The data were presented in the form of a report. The findings indicate that LWVI are faced with multiple challenges. The study also shows that school infrastructure is not conducive for LWVI and that these learners are not fully included academically in mainstream secondary schools due to the lack of learning materials. LWVI are not enabled to do subjects such as Mathematics, Accounting, Geography, and Physical Science because teachers are not trained to teach graphs and mathematical formulae in braille to LWVI. Apart from this LWVI are unable to use computers during Information Communication and Technology (ICT) lessons due to a lack of computer programmes that support the teaching and learning of persons with visual impairments. In addition, LWVI are not fully integrated into the classroom because the teacher-learner ratio is too high for their teachers to attend to every learner. Teachers are unable to modify their teaching methods to accommodate LWVI. Lack of support from parents and other stakeholders in education is another challenge for LWVI. The researcher thus recommends that the Ministry of Education, Arts and Culture should restructure school buildings to accommodate LWVI. The Ministry should also provide professional development for Mathematics, Geography, Accounting, and Physical Science teachers to use available information and communication technologies to enable them to teach these subjects to LWVI. Schools should also buy computer programmes that support the teaching of LWVI.

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| | |
|---|---|
| **BETD** | Basic Education Teachers Diploma |
| **ICT** | Information and Communications Technology |
| **LWVI** | Learners with Visual Impairments |
| **MHETEC** | Ministry of Higher Education, Training and Employment Creation |
| **MKO** | More Knowledgeable Other |
| **MoBE** | Ministry of Basic Education |
| **MoE** | Ministry of Education |
| **MoEAC** | Ministry of Education, Arts and Culture |
| **NSPIE** | Namibian Sector Policy on Inclusive Education |
| **NIED** | National Institute for Educational Development |
| **PE** | Physical Education |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |
| **ZPD** | Zone of Proximal Development |

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## DEDICATION

This thesis is dedicated to my parents, Mr. Bathromeus and Mrs. Taina Ampweya for being caring and supportive parents. I also dedicate it to my husband and children, Penda, Vera, and Tuyeni, for their moral support.

## DECLARATIONS

I, Selma Namutenja Ampweya, student number 200832239 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 at any other institution.



Selma N. Ampweya 20.06.2022

Student name Signature Date:

# CHAPTER 1: INTRODUCTION

## 1.1 Orientation of the Study

Inclusive education became a popular educational approach in 1994, since the adoption of the Salamanca Statement and framework for action on special needs education (United Nations Educational, Scientific and Cultural Organization [UNESCO], 1994). Inclusive education means that everyone should be included in society on an equal basis: academically, socially, and culturally. This implies that learners with barriers to learning are provided with education in age-appropriate regular classes in local schools according to their special educational needs (New Brunswick Association for Community Living, 2021). According to the Norwegian Directorate for Education and Training (2008):

> …inclusion is both a process and a goal, where the educational institution should accommodate the individual's aptitudes and needs in the best possible manner. This requires diversity and adaptation in an educational program to enable each individual to participate more and receive more benefits from being an active member of a community (p. 3).

Many Southern African countries, for example, Namibia and South Africa, have introduced inclusive education in their education systems. Lebona (2013) explains how the South African Act 84 of 1996 (Republic of South Africa, 1996) emphasizes all learners' right to quality education. This is also supported by White Paper 6 (Department of Education, 2001), which outlines the South African policy of compulsory education for all South African children, regardless of their disabilities, and cultural and economic background.

Namibia introduced inclusive education in response to Article 20 (a) of the Namibian Constitution, which emphasizes the right to education for all learners (Republic of Namibia, 1990). Apart from its Constitution, the Namibian education reform was informed by various policies and conventions. The National Disability Policy in 1997 specifically called on the right to education for people with disabilities (Ministry of Lands, Resettlements and Rehabilitation, 1997).

After attaining political independence, Namibia has ratified some international documents to reform its education system to accommodate all learners. These international documents are in support of the right to education for all learners, including learners with disabilities. For example, the Jomtien World Declaration on Education for All (UNESCO, 1990) emphasizes that, in education, disability should be treated as a challenge to be faced and not as a problem to be addressed (UNESCO, 1994). The Salamanca Statement states that schools should accommodate all learners regardless of their physical, intellectual, social, emotional, linguistic, and other conditions (UNESCO, 1994). The Dakar Framework for Action (UNESCO, 2000) stipulates the importance of inclusive education and specifically the importance to teach learners with disabilities without discrimination. In 2007, Namibia ratified the United Nations Convention on the Rights of Persons with Disabilities (2006), which reiterates the right of persons with disabilities to education, which is a commitment to inclusive education for persons with disabilities.

In 2013, the Namibian Sector Policy on Inclusive Education (NSPIE) was enacted and launched. One of the key goals of this policy is to expand access to education and provide quality education to all learners. It also aims to support learners with a wide range of individual abilities and needs in education at early childhood development centers and

schools (Ministry of Education [MoE], 2013). The third strategy of this policy calls on all Namibian education institutions to become inclusive by accommodating all learners regardless of their disabilities and creating a welcoming community in terms of buildings and learning materials (MoE, 2013). The guideline also emphasizes that schools should provide a conducive teaching and learning environment in which all learners are cared for, irrespective of their diverse characteristics. Based on this provision, Namibian secondary schools are expected to accommodate learners with visual impairments (LWVI) and their academic needs. According to Seffeso and Ferreira (2020), LWVI in Namibian secondary schools were physically and socially included but not academically included. This means they were present in the classrooms but some of their academic needs were not catered for.

This implies that a grey area exists on how LWVI are incorporated into the mainstream. Studies conducted by Haihambo (2011), Haitembu (2014), Mokaleng (2019), Sheeya (2018), Samuel (2017), Shivute (2018), and Uusiku (2020) contributed immensely to literature on inclusive education, but none of them focused on the academic challenges of LWVI once they are either integrated or included in the mainstream education. Thus, this study sought to explore the academic challenges faced by LWVI at two selected inclusive schools in Namibia, unveil factors contributing to the academic challenges of LWVI in the two selected schools and finally identify support systems that are available or not to LWVI at these two schools in order to meet the academic needs of LWVI.

## 1.2 Statement of the Problem

Despite the Namibian Government's commitment to the inclusion of every child, inclusive education for LWVI continues to be hampered by aspects such as a lack of physical and

teaching resources and a lack of support from some stakeholders. Regardless of the challenges that LWVI face, they write the same national examinations as their sighted peers, and thus compete with them for places in institutions of higher learning (Hausiku, 2017). As a result, LWVI academic performance remains lower than that of their sighted peers (Hausiku, 2017). Besides, there is little documentation in the literature relating to academic challenges faced by LWVI in Namibian inclusive education schools.

The Namibian Sector Policy on Inclusive Education (NSPIE) (MoE, 2013), which is the guiding document for education institutions to implement inclusive education, calls for the identification and addressing of barriers and challenges in an education system. The NSPIE also emphasizes the importance of identifying and addressing the needs of LWVI. Based on this background, this study sought to explore the academic challenges faced by LWVI, and the type of support they are provided within two inclusive secondary schools in Namibia.

### 1.3 Research Questions

This study was guided by the following research questions:

- What are the academic challenges faced by LWVI at the two selected inclusive schools in Namibia?
- What are the factors contributing to the academic challenges of LWVI in the two selected schools?
- What support systems are available to LWVI at these two schools in order to meet their academic needs?

## 1.4 Significance of the Study

The findings of this study can be useful to the Ministry of Education, Arts and Culture (MoEAC), policymakers, and the Government of the Republic of Namibia. Information on the academic challenges faced by LWVI can contribute to a deeper understanding of how to support LWVI and improve their academic performance. This can also shape the discussions and the guidelines on how to respond to LWVI in inclusive school settings. The findings may also be useful in creating awareness and providing policy guidelines on how to support LWVI in the two selected secondary schools and similar schools in the region and other regions.

## 1.5 Limitations of the Study

This study was a case study of two secondary schools, represented by a sample of eight LWVI and three support teachers. Being a qualitative case study, the results of this study may not be representative of the situation across the whole country; therefore, they cannot be generalized to all inclusive schools in Namibia.

Language barrier was a limitation for some learners. Some learners in the two schools selected for the study were unable to express themselves well in English, and the researcher could not understand their first language. Although the researcher worked with a research assistant who served as an interpreter, the possibility of a loss of some information (verbal or non-verbal) in the process cannot be ruled out.

## 1.6 Delimitation of the Study

The findings of this study applied only to the two selected secondary schools, eight LWVI, and three support teachers. The targeted schools were two secondary schools that include LWVI, one school is in the Oshana region and the other one is in the Kavango East region. The Oshana region is 480 km away from the Kavango East region. The findings were limited to the experiences and views of these LWVI and the three support teachers in the two inclusive education secondary schools.

## 1.7 Definition of Terms

**Blind:** This is a situation whereby an individual has a visual loss severe enough to be unable to read printed materials and has to use alternative forms of communication such as braille (Diener, 2013). In the context of this study, learners who are blind and have been intentionally placed in inclusive schools with specified resources for learners who are blind, based on their diagnosed educational blindness. These learners are referred to as learners with visual impairments.

**Embosser machine:** An embosser machine is a technological machine that writes braille, and it can translate letters into contracted braille (Lerner & Johns, 2012).

**Fully-sighted:** A fully-sighted person is a person whose vision is not impaired (Bornman & Rose, 2015).

**Inclusive education:** In this study, inclusive education is defined as the practice of facilitating learning to all learners in the same setting while ensuring their maximum benefit, regardless of their special needs, and employing all possible resources, including

and involving all learners in class activities to enhance learning and develop their potential to excel in their studies (Sheyapo, 2017).

**Inclusive schools:** An inclusive school is a school where children with and without special needs are learning in the same classrooms, in the same school (Lerner & Johns, 2012).

**Learners with visual impairments:** In this study, this refers to both learners who are partially sighted and learners that are blind, who have been intentionally placed in inclusive schools based on their diagnosed educational blindness. Josua (2013) defines them as all learners who have accepted and demonstrate that they need help in the course of their study.

**Mainstreaming:** This refers to the inclusion of learners with special needs (in this case, visual impairments from a special school) in the regular school system (Josua, 2013).

**Mainstream schools:** Mainstream schools describe what is viewed by most people in a society as "normal schools"; schools that do not make provision for learners with special needs (MoE, 2013).

**Partially-sighted:** This is a situation where an individual experiences difficulty in seeing but they are not blind. They can read large print or regular print with special assistance (Diener, 2013).

**Scanner:** In this study, a scanner refers to a machine that scans written text and translates it into braille (Fanu et al., 2018).

**Scientific calculator:** This is a talking calculator that is used by learners with visual impairments for calculations (Landsberg, Kruger & Swart, 2013).

**Sighted peer/ learner:** This is a learner without visual impairment who is of the same age and class group as a learner with a visual impairment (Bornman & Rose, 2015).

**Support teacher:** In this study, a support teacher is a teacher who knows how to read braille and to help with brailling and de-brailling activities for learners with visual impairment (Shivute, 2018).

# CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

## 2.1 Introduction

This chapter reviews literature related to the topic under study: The Academic Challenges Faced by Learners with Visual Impairments at two Inclusive Secondary Schools in Namibia. First, the chapter presents the theoretical framework that informed this study. Thereafter, it briefly defines visual impairment, types of visual impairments and their impacts on learning, and vision loss as an academic barrier. This is followed by an examination of academic challenges learners with visual impairments (LWVI) face in the school system. Furthermore, the chapter explains the adaptive methods that can be used in inclusive education to improve the learning of LWVI. The section concludes with a discussion on possible support systems for LWVI.

## 2.2 Theoretical Framework

This study was based on Vygotsky's sociocultural theory. The main argument of Vygotsky's theory is that social interaction plays a fundamental role in the cognitive development of a child (Vygotsky, 1978). Vygotsky (1978) believes that everything is learned on two levels. First, learning takes place through an individual's interaction with others (social level). Second, learning takes place when new experiences are integrated into an individual's mental structure (individual level). Vygotsky (1978) explains that the psychological development of a human being can be influenced by acquiring a culture to which he or she belongs. The culture can influence human development through its cultural products. Cultural products are the facts that are manufactured and created by people in that culture, such as languages, traditions, beliefs, foods, and any other physical tools that are used in that culture; for example, gardening or kitchen tools (Verenikina,

2003). Vygotsky merged culture and the social aspect as a major part of development. This means that human development cannot be separated from the social and cultural context. Cognisant of this fact, the researcher was guided by Vygotsky's theory to study the two schools' social and cultural influence on the learning of LWVI.

Vygotsky argues that cognitive development is triggered by social interaction, meaning that unfavourable social interaction is likely to cause negative cognitive development (Ramos, 2017). For example, if there is no active academic interaction between teachers and LWVI or if they are not given enough classroom activities, LWVI cannot perform at a high level. Similarly, if the school or learning environment is not conducive for LWVI, their learning cannot be productive. Therefore, it can be argued that the academic challenges faced by LWVI may be due to poor social interaction in their schools. Their academic development can be influenced by interacting with their teachers and peers, with and without visual impairments, and parents as well as experts in the schools' surroundings. It can also be influenced by the schools' physical environment, whether it is favourable to their learning or not (Mokoena 2016). The researcher adopted the sociocultural theory because of its relevance in assessing how the two school communities accommodated LWVI, with regards to infrastructure, availability of learning materials, school cultures, assessment methods, and social interactions. This theory guided the researcher in evaluating how conducive the surroundings of the two inclusive schools are to LWVI, as an unfriendly learning environment may lead to poor performance among these learners.

The second aspect of Vygotsky's theory is the Zone of Proximal Development (ZPD). Vygotsky (1978) maintains that the cognitive development of a child is enhanced when

they learn in a ZPD. The ZPD is the difference between what a child can achieve independently or without assistance and what he or she can achieve with guidance from more skilled people (McLeod, 2018). More skilled people can be, teachers or more capable peers (using textbooks and other learning materials) (McLeod, 2018).

In the context of this study, LWVI need teachers who are knowledgeable in teaching learners with diverse learning needs in the same classroom. This is the standpoint of inclusive education. In many cases, inclusive school teachers only focus on teaching the subject content and ignore the needs of learners who need special support to grasp what is being taught. Many times, poor performance among LWVI is not a result of their disabilities (Nhemachena, Kusangaya & Gwitira, 2012) but is because of a lack of support from those who are more skilled. The lack of skilled people in the learning process of LWVI may results in LWVI only achieving what they can achieve independently, but not what they are supposed to achieve with the help of experts, in this case, their teachers. This theory has relevance to this study in assessing how the concept of ZDP is being applied in the learning of LWVI.

Specialist teachers, such as specialists in teaching LWVI, paraprofessionals, and orientation and mobility specialists, are supposed to be incorporated in inclusive education schools; however, the Namibian MoEAC does not provide schools with enough specialists (Haitembu, 2014). If schools had enough specialist teachers, it would lessen the number of challenges that LWVI face at school (Dakwa, 2014; Mantey, 2017; Nhemachena et al., 2012).

Apart from teachers serving as more skilled people on the basis of their qualifications and role, textbooks can also help LWVI to overcome the challenges they face (McLeod, 2018). Textbooks contain information that learners need to learn in order to pass. This means that what they can achieve with the help of textbooks can be better than what they can achieve without textbooks. Therefore, LWVI should be provided with textbooks in large fonts as well as in braille to improve their academic performance (Dakwa 2014). It was, thus, necessary, in this study, to assess the availability of textbooks for LWVI in the schools under study. In line with Vygotsky's sociocultural theory and the ZPD, the study also focused on how the inclusive education system in Namibia supports LWVI and the possible academic challenges that these learners face. Literature on various types of visual impairment and their impact on learning is reviewed in the next sections.

## 2.3 Types of Visual Impairment and their Impacts on Learning

Visual impairment can be defined legally and educationally. Bornmen and Rose (2015) assert that, legally, visual impairment is defined by considering the visual acuity of a person, whereas educationally, it is defined as an impairment in vision that, even with correction, will still affect the learner's educational performance. In this study, the educational definition is relevant because it directly shows the impact of visual impairment on the learning process of a learner.

Bornman and Rose (2015) state that visual impairment can be congenital, which implies that it can occur before or at birth. They argue that some of the congenital causes of visual impairment include conditions such as retinopathy, glaucoma, cortical visual impairment, coloboma, and optical nerve hypoplasia. Landsberg et al. (2013) concur with this and argue that visual impairment can also be acquired later in life as a result of factors such as

cancer, cataract, trauma, accidents, and nutritional deficiencies. Landsberg et al. (2013) add that genetic eye conditions, such as albinism, can also cause visual impairment.

The degree of visual impairment varies from those who cannot see at all (legally blind**)** to those who can see but not clearly (Bornman & Rose, 2015). In light of this, one may need to first understand the terms, '*visual acuity'* and '*visual field*' to understand the nature of the visual impairment. Uusiku (2020) defines visual acuity as the size and distance of an object a person can see, while the visual field is defined as an area that one can see when looking straight ahead, horizontally, which usually 120–180 degrees is, and vertically, which is 120 degrees. Thus, this term, 'partially sighted', plays a role in explaining the nature and degree of visual impairment. The following terms indicate the degrees of visual impairments:

**Legally blind:** This term is used to define a person who has visual acuity that is less than 6/60. This means that, what a person with normal vision would see at 60 meters, a person who is legally blind would see it at six meters (Bornman & Rose, 2015). Bornman and Rose add that learners with this degree of visual impairment largely depend on braille or enlarged print for reading and writing.

**Functional blindness**: This is a label given to a person who is unable to use his or her vision at all. This person only relies on other senses, e.g., tactual or hearing senses, to learn and experience the environment. From an educational perspective, this type of labeling is used to determine a teaching method and learning materials that would be assigned to such learners (Mays, 2020); for example, a learner with this condition depends on braille for reading and writing.

**Partial sightedness:** This term is used to define the eye condition of a person who has a visual acuity of 6/21. This means that what a person with normal vision would see from a distance of 21 meters, a person who is partially sighted would see it from a distance of six meters due to different eye conditions (Mays, 2020). Partially sightedness is grouped under the following subcategories:

***Refraction error***: Mays (2020) explains that there is one part of the eye, called a macular, which is a point of sharpness, where the lens focuses on an image. For a person with normal vision, light has to fall on the macular to produce normal vision. Mays (2020), further explains that the condition of the eye, whereby light is not adjusted well so that it falls on the macular, is called a refraction error. According to Landsberg et al. (2013), there are three types of refraction error, namely, nearsightedness or myopia, farsightedness or hyperopia, and astigmatism. Landsberg et al. (2013) further define these three types of refraction error as follows:

> *Nearsightedness or myopia is an eye condition whereby a light ray does not fall on the macular but in front of it. This results in a person seeing objects that are close to him/her, but not those that are far from him/her.*
>
> *Farsightedness is an eye condition whereby the right rays fall behind the macular instead of falling on it. Learners with farsightedness can clearly see objects from a distance but not objects that are close to them.*
>
> *Astigmatism: With this condition, the light rays, fall behind and in front of the macular, instead of falling on it. Learners with astigmatism find it difficult to distinguish between round letters, e.g., B and D, G and D, or P and R.*

***Macular degeneration***: This condition may result in the central vision being destroyed so that the person uses his or her side vision. This means that the person has to turn his head to see from the corners of the eyes. A person with this condition may also be sensitive to light (Landsberg et al., 2013). Teachers should bear with children suffering from this condition, because they may keep standing up and turning their heads a lot during the lesson. They also need to sit in areas with little exposure to light.

Apart from degeneration that causes light sensitivity, children with albinism are also sensitive to light. Therefore, if they are present in the classroom, teachers should come up with strategies that increase visual acuity and decrease visual fatigue. They can do this by controlling the illumination, that is, the type and amount of light received on the surface. Teachers can change the illumination if they have knowledge about the amount and type of illumination required, as well as its position (Bornman & Rose, 2015).

The definitions of eye conditions presented above are crucial in the education of LWVI. Knowing the visual conditions of learners is helpful to teachers and other stakeholders because it can determine the teaching method they can use to facilitate the learning of LWVI. Some eye conditions may require a teacher to modify the learning environment to maximize the functional vision of a learner; for example, changing the sitting position of a learner, enlarging letters, enhancing light in the class, or adjusting the picture colors (Morelle & Tabane, 2019). If teachers do not have enough information about learners' visual impairments, it can harm the process of including the LWVI in a mainstream school. Teachers will not be able to identify the kind of support needed to help these learners. Apart from categories of visual impairments, there are still many aspects that are

considered to be academic barriers for LWVI. Vision loss is considered to be one of the many aspects.

## 2.4 Vision Loss as an Academic Barrier

One of the dominant sense organs in the human body is the eyes. According to Landsberg et al. (2013), about 80% of the information reaching the human brain comes from the eyes. Therefore, if a learner loses vision, his or her development, as well as education, may be affected in the absence of the necessary support. Landsberg et al. (2013) add that educating a learner with impaired vision is challenging and can even be more challenging if the learner is being taught together with learners without visual impairments.

Furthermore, visual impairment can cause problems in learning because LWVI are expected to build up their conception of the world using their remaining senses (Kiomoka, 2014). In doing so, they rely almost entirely on tactual and auditory perception and kinaesthetic experiences. Kiomoka (2014) further stresses that although the auditory sense provides certain clues regarding the distance and direction, it does not convey any concrete ideas of objects as such. The main importance of the sense of hearing to a LWVI is to facilitate verbal communication and aid in movement. Morelle (2016) concurs that hearing is of very limited value in the acquisition of concrete clues of an object for a child who is blind. This implies that their learning cannot be restricted to one sense. The MoEAC, therefore, needs to provide learning materials that support all senses of LWVI, for example, the kinesthetic and auditory senses.

Topor and Rosenblum (2013) suggest that a LWVI who hears the twitter of a bird may know with more or less accuracy from where the bird's sound is coming, but all his or her

listening will not give him or her an idea of the bird's shape, size, or physical characteristics. It becomes a challenge for a LWVI to perceive spatial qualities of objects without being provided with materials in the form of models or embossed diagrams for touch and manipulation to which kinaesthetic sensation contributes. Tactual experiences among LWVI have distinct limitations because tactual perception requires direct contact with the object to be observed (Topor & Rosenblum, 2013). Some objects are inaccessible for observation (e.g., the sun, the moon, the clouds, and micro-organisms), as they may be dangerous to touch, while other objects are so large that they cannot be observed tactually (e.g., mountains, rivers, or large buildings). Topor and Rosenblum (2013) further argue that although LWVI can smell water or feel the sun's heat on their skin, it is still a challenge because they cannot have a deeper understanding like those that can see those things. This indicates that many experiences that are taken for granted by learners with no visual impairments are either impossible or much more difficult for children who are blind. Unlike learners with no visual impairments who are privileged to access most of the classroom activities, for LWVI, tactual perceptions only give a partial meaning of objects. Therefore, inclusive secondary schools that cater for LWVI should be equipped with teaching materials in the form of models to be used by LWVI during lessons for them to learn at the same pace as their sighted peers.

Visual loss can also be a learning barrier, as it may limit the learner in knowing his or her learning and social environment. Kiomoka (2014) explains that LWVI face difficulties in visual functions, social interaction, and orientation and mobility skills. Kiomoka (2014) further stresses that if LWVI do not know their surroundings well, it may affect their learning, as they may not be able to locate their classrooms on time. This means that upon

the admission of LWVI into a school, teachers and other stakeholders should help these learners with orientation around the school for them to know their environment. The school environment should be adjusted to make it accessible to LWVI. This can be done, by filling potholes and uneven surfaces, painting thick lines at the end of steps, for children who are partially sighted to notice them more easily, as well as putting tapes in bright colours on door frames (Fanu et al. 2018).

Even though visual impairment is a challenge to learning, it should not limit a learner's abilities to learn at the same pace as their peers. LWVI should be allowed to access education. Inclusive education classrooms should be equipped with all the necessary equipment to ensure the full academic inclusion of LWVI (Dakwa, 2014). Full inclusion of LWVI can be ensured by identifying the challenges and barriers to inclusive education and coming up with ways to address them, as recommended by the NSPIE (MoE, 2013). Having identified and discussed vision loss as an academic barrier, the next discussion focuses on negative attitudes as an academic challenge to LWVI's education. According to Mantey (2017), attitudes towards visual impairment education are different among people and might contribute to the challenges faced by LWVI.

## 2.5 Negative Attitudes toward a Child with Visual Impairment as an Academic Challenge

Kasiram and Subrayen (2013) and Mantey (2017) explain that globally, children with disabilities, including those with visual impairments, experience discrimination and marginalization when it comes to education. This is due to traditional experiences when only children without disabilities were viewed as worth educating, while those with disabilities were considered not worth educating (Kasiram & Subrayen, 2013).

In line with the above, some African countries are still experiencing challenges with stigma toward the education of learners with disabilities. South Africa introduced "White Paper 6" for special needs education in 2001, as well as other documents for learners with disabilities to be freely included in the mainstream education system (Department of Education, 2001). Namibia introduced the Sector Policy on Inclusive Education in 2013 (MoE, 2013). Although learners were successfully included in schools, they were only included physically but not academically (Haitembu, 2014). Uusiku (2020) concurs that LWVI in Namibian secondary schools are bullied by their sighted counterparts. Bullying is an indication that LWVI are not welcomed and will not work with ease in mainstream secondary schools (Nhemachena et al., 2012). It has also been reported that poor performance among LWVI is not always a result of poor learning methods, but it can also be a result of the negative attitudes of learners with sight and teachers (Mantey, 2017). Thus, it could be argued that bullying and discrimination may lead to poor performance among LWVI in inclusive secondary schools.

Therefore a negative attitude toward LWVI in schools may be one of the challenges faced by LWVI in inclusive schools. Apart from negative attitudes, LWVI also face the challenges of unaccommodating infrastructure, lack of parental support, lack of a sense of belonging or acceptance, limitations of the fields of study that they can choose from, and limited capacity to use ICT.

## 2.6 Unaccommodating Infrastructure as an Academic Challenge

The infrastructure of a school is made up of the school buildings, school grounds, classrooms, chairs, tables, sitting arrangements, lighting, and ventilation. There can be barriers to learning in these areas if the needs of LWVI are not considered (Kiomoka,

2014). Schools that accommodate LWVI should consider meeting the needs of these learners because inclusion is not simply placing learners in a mainstream class, but it involves the provision for their special needs, while they are learning together with those who can see (Mantey, 2017). Therefore, an inclusive school environment should remove architectural barriers, as well as other barriers in the school surroundings that may hinder the efficiency of LWVI (Landsberg et al., 2013).

Numerous studies conducted in Africa, which examined the challenges and barriers to the successful inclusion of LWVI, found that unaccommodating infrastructure is a common problem (Omede, 2015; Ambili, 2018; Haihambo, 2011; Landsberg et al., 2011). Adrew (2015) adds that many buildings in institutions that cater for people with visual impairment are not accessible to them because of the presence of high stairs and curves. Josua's (2013) study also identified the presence of poles, uneven pavements, and rubbish bins along the walls, which are the walking lines for learners, as barriers. This can hinder learners from moving from one class to another. A study that was done in Kwazulu-Natal revealed that the absence of elevators in buildings of institutions that accommodate LWVI adds to the academic exclusion of these learners as they struggle to get to the upper floor of these buildings (Kasiram & Subrayen, 2013).

The challenge of infrastructure is also observed in most Namibian school buildings. Ambili (2018) states that many educational buildings in Namibia were constructed before inclusive education was implemented in the country. It was then not mandatory for regular schools to admit learners with disabilities. Ambili (2018) explains that LWVI were automatically referred to and served by special schools. Thus, the infrastructure of Namibian schools that offer inclusive education does not support LWVI.

## 2.7 Lack of Parental Support as an Academic Challenge

According to Lebona (2013), it is crucial for parents to be involved in their children's education. Parents play a key role as primary healthcare givers to their children; thus, they can help by providing information about their children's physical and emotional wellness, assessment and support of their children, as well as helping with effective decision making, especially regarding the nature and extent of the academic support their children need. Therefore, schools, including those that cater for LWVI, should involve parents in the education of these learners. Hamutenya (2013) suggests that parents can be actively involved in the education of their children in several ways. They can be engaged in activities that are directly related to school programs such as parents' meetings, school fundraising programs, and members of the school board. However, Ambili (2018) asserts that many parents of LWVI in Namibia and, by extension, Africa, often make excuses for their poor participation in their children's education. They feel that they are not educated enough to effectively assist their children with disabilities, which results in their poor assistance and participation in their children's education. On the other hand, some Namibian parents are willing to be part of their children's education, but they are not able to visit schools regularly due to lack of funds, work responsibility, and fear of intimidation by teachers (Josua, 2013).

Mafa and Makumba (2013) argue that parental involvement should not only be viewed in terms of parents coming to the school to talk about the child or to perform certain activities. Helping the child during weekends and holidays and buying stationery and other school materials are also part of parental involvement and support. LWVI are likely to thrive in their academic endeavors when their parents offer additional support to help them

realize their educational dream (Haihambo, 2011). Habulezi and Phasha (2015) state that support for learners with any form of disability is crucial for achieving success and quality education for all learners irrespective of their differences. Habulezi and Phasha (2015) add that parental support for children with visual impairment facilitates access to curricula and improves learners' confidence and skills of social interaction and independence. When this support is delivered holistically, the impact could be far-reaching in the academic performance of the LWVI (Habulezi & Phasha, 2015).

## 2.8 Lack of a Sense of Belonging and Acceptance as an Academic Challenge

Polloway, Serna, Patton and Bailey (2013) reveal that every person needs to feel a sense of belonging and acceptance as an important member of society. A sense of belonging is facilitated by recognizing, valuing, appreciating, and celebrating the contributions that every member of society makes. Learners need to feel accepted and appreciated in a school society. The key element of inclusive schools involves learners being welcomed in the school society regardless of their disabilities. Therefore, LWVI in inclusive schools need to feel accepted by being involved in school activities. Uusiku (2020) points out that LWVI who are not accepted by their peers in the school system run the risk of developing low self-esteem. Uusiku (2020) adds that LWVI strongly want to be accepted in society, although they often do not know how to get along with their sighted peers. They tend to isolate themselves from those without visual impairments because they have conditioned themselves as not wanted in society.

Morris (2017) adds that LWVI are often rejected by their own parents. Some parents reject their children with disabilities due to the traditional belief that disability is caused by some supernatural powers. Morris (2017) argues that in the past, visual impairment was

perceived as a punishment for an offence that a parent might have committed. Morris (2017) continues to state that for some parents, a child with visual impairment becomes a source of guilt, shame, and stigma. The belief was that such a person could not become a valuable member of society and could not make a positive contribution to his or her family, community, and the country at large. Based on these negative perceptions, parents of children with visual impairments would prefer to keep these children at home rather than send them to school. According to Kabeto (2015), in most cases, the attitude of some teachers and sighted learners toward LWVI is also negative, leading to social isolation and withdrawal of learners with low vision from the sighted group.

## 2.9 Limited Fields of Study and Subject Choices as an Academic Challenge

According to the Namibian Basic Education Curriculum, all learners choose a field of study upon entering Grade 10 (MoE, 2016). Each learner chooses subjects from one field of study so that he or she will be able to further his or her studies in that field. The available fields to choose from are Natural Sciences, Commence, and Social Sciences (MoE, 2016). However, according to Josua (2013), Namibian LWVI are not able to follow a specific field because they are denied the opportunity to take some subjects in their chosen fields. Apart from languages, which are compulsory for all learners, they are not allowed to do Mathematics, Physical Science, and Accounting. Josua (2013) adds that LWVI usually take three subjects from the Science field of study and one from the Economics field or the Social Science field. This is because teachers lack knowledge on using existing information and communication technologies to teach calculations and graphs to LWVI.

The dynamics around subject choices are considered one of the academic challenges that affect the performance of LWVI in inclusive schools (Fanu et al., 2018). It is a challenge

because learners who wish to pursue their careers in the Science field are forced to take subjects other than Science subjects. Learners may therefore fail the subjects that they were forced to take (Fanu et al., 2018).

## 2.10 The Use of Information and Communication Technology

Information and communication technology (ICT) plays a major role in school (Westwood, 2013). It is believed that every learner should be computer literate to make his or her academic career and social life easier (MoE, 2016). According to the Namibian Vision 2030 (2004), the Namibian Government has clearly and positively identified ICT skills as core elements of living and participating in the 21st century. Education, therefore, plays a key role in providing these skills and competencies. The Namibian Education Training Sectors and Improvement Programme of 2006 aimed to embed ICT at all levels of the education system and to integrate the use of ICT as a tool in the delivery of curricula and learning, leading to a marked improvement in the quality of the learning and teaching process across all levels. The education levels include secondary schools that cater for learners with special needs (Ministry of Basic Education [MoBE], 2007). In addition, the 5th Namibian Development Plan (2017–2022) aims to integrate ICT in all sectors, with special attention to e-learning, with a target to cover 100% ICT infrastructure in all schools by the year 2022.

The Ministry of Higher Education, Training and Employment Creation (MHETEC, 2007) states that ICT must be taught as a subject in every school, including those that are catering for LWVI in inclusive settings. The Namibian Ministry of Education, through the ICT policy, urges every Namibian child at the secondary school level to sit at a computer for at least an hour per week (MoBE & MHETEC, 2007). In addition, Salend (2011) stresses

the need to use technology in the classroom with LWVI because assistive technology, such as computers, plays an important role in enabling LWVI to be independent and enhancing their literacy, learning, and social skills (Westwood, 2013). Westwood (2013) further explains that, even though technologies such as screen readers provide quality access to the text material, LWVI still encounter problems when using it, as these devices consist of unique symbols that take time for LWVI to study.

Apart from computers, other forms of technological devices, such as audio, optical, and non-optical devices, need to be incorporated into the education system of LWVI. Since LWVI rely mainly on verbal information for their learning, audio devices should be incorporated to aid their learning process. These include devices such as audio cassettes and compact discs. However, lesson contents with diagrams and tables cannot be explained well in an audio format (Fanu et al., 2018). Nevertheless, a lesson can be tape-recorded and given to LWVI for later playback at their convenient time (Kirk et al., 2011). Fanu et al. (2018) add that if a videotape, for example, has to be shown, it is wise to show it to LWVI before the lesson, so that, through the explanation of a specialized teacher or classmate, the LWVI can understand all the visual concepts in it before the rest of the class watches it. Fanu et al. (2018) maintain that for a film with subtitles, a learner or teacher can read aloud to the class to help those LWVI understand the content and setting.

Fanu et al. (2018) further note that optical devices such as eyeglasses, magnifiers, and telescopes use lenses to increase a learner's residual vision and that they are normally prescribed by a medical specialist; while non-optical devices do not incorporate a lens and do not need to be prescribed by a specialist. They state that large print, braille and braille writers, tape recorders, book stands, recorded and talking books, and calculators are

examples of non-optical ICT devices and that the role of both optical and non-optical devices is to improve vision and increase the functionality of LWVI through the use of other senses. Thus, it becomes the role of the teacher to encourage LWVI to use visual devices and assistive technologies to help them with vision.

In addition, Mbari, Kirika, and Walker (2017) presented a new ICT-based programme called in-ABLE, designed for learners who are blind. It is a complete assistive computer technology that provides learners who are blind with tools and training to pursue their capabilities regardless of their disability. They further add that this program is successful because the LWVI at the school where the program was practiced have mastered the keyboard and are able to access notes online, sending e-mail and performing many tasks on a computer. In agreement, Mahbubur (2017) states that teachers in his study have noticed that ICT can work for LWVI, and they can use it like sighted learners; therefore, in inclusive schools, ICT can help LWVI to learn together with sighted learners. ICT is regarded as supportive to the LWVI because, with its assistance, they can read and write like sighted learners using various tools. Mahbubur (2017) adds that the LWVI claim that ICT helps them to overcome classroom difficulties; for example, in the reading class, e-books are commonly used in reading-aloud activities. Learners can access all types of texts from beginning to advanced levels with ease through computers, laptops, or internet personal digital assistants. In fact, ICT can provide purposely designed applications that offer innovative ways to meet various learning needs. Elgi and Mwantimwa (2017) carried out studies on ICT accessibility and usability to support the learning of students with visual impairments in Tanzania. Although these studies were conducted with students at the university level, the findings that were established indicate that ICTs support

innovative learning, encourage independent learning, and promote participatory and collaborative learning among LWVI.

## 2.11 Adaptive Learning Methods for Learners with Visual Impairments

Shivute (2018) notes that in the Namibian educational context, teachers need to understand the challenges faced by LWVI. He argues that the lack of teachers' understanding of strategies for helping LWVI reduces the effectiveness of inclusive classrooms. She further suggests that teachers can employ adaptive learning methods to promote the academic achievement of LWVI. Adaptive learning methods refer to education in which specific teaching devices or instruments are employed in an effort to meet the specific learning needs of individuals (Rogers, 2018). It is a personalized type of learning that considers individual learners' learning characteristics (Rogers, 2018). Collaborative and adapted learning and teaching materials are examples of adaptive learning methods that can be employed to enhance the learning of LWVI. These are discussed in the next subsections.

### 2.11.1 Collaborative Learning

In a learning process, the capabilities of learners are different. Salend (2011) argues that learners with low ability can learn from their fellow capable peers through cooperative learning, which can promote academic achievement, positive attitude toward a subject, and social interaction among learners. Salend (2011) continues to state that cooperative group learning involves learners working together in small learning groups, which helps learners to assist each other in carrying out different tasks. This argument suggests that collaborative learning can also be a good strategy for teaching LWVI, particularly in mixed-ability groups (Salend 2011). Westwood, (2013) concurs that in such groups,

LWVI should be paired with their fellow learners with no visual impairments who can help them to organize their work, find correct pages and repeat the teacher's instructions. In addition, Manitsa and Doikou (2020) suggest that peer support arrangements consisting of both the provision of academic support (e.g., paraphrasing lectures, sharing notes) and social support (e.g., encouraging initiation of communication, talking about hobbies or interests) by classmates without disabilities can be particularly beneficial for LWVI with severe disabilities in secondary inclusive classrooms.

### 2.11.2 Adapted Learning and Teaching Materials

Omede (2015) highlights that to help LWVI, learning materials need to be adapted. For example, the printed text can be adapted by increasing the font size, bolding the text, increasing contrast, adding color, and adjusting spaces between characters. Omede (2015) further notes that the extent of these adaptations depends solely on the severity of visual defects and the needs of the learner concerned. Therefore, it is important for every teacher to be equipped with knowledge and skills in the preparation of materials before the lesson, as different learners use different materials depending on the degree of their visual impairment. Omede (2015) maintains that LWVI should be provided with a copy of the notes that the teacher writes on the board or presents on a projector, the support teacher for LWVI should help to clarify the lesson to them and, if possible, LWVI should be taught before the lesson starts.

Shivute (2018) recommends that teachers who teach LWVI in an inclusive classroom in Namibia should provide all the necessary learning materials that are needed to support learners in order to achieve the effective inclusion of LWVI. Therefore, there should be relevant specialized materials, specially designed to help LWVI learn at the same rate as

their sighted counterparts (Kiomoka, 2014). According to Shivute (2018), there is a lack of relevant teaching materials in Namibian secondary schools that cater for LWVI. Mays (2020) adds that LWVI, especially those with congenital visual impairments, have deficits in conceptual experiences and understanding due to their visual impairment. Therefore, the adaptation of learning materials becomes paramount if they have to learn all the things that other learners without visual impairments are learning in the class.

Nhemachena et al. (2012) concur by noting that LWVI should be allowed to explore tactile diagrams. This is because tactile diagrams are very important for understanding images and concepts that are difficult to explain and describe in words. Nhemachena et al. (2012) further stress that tactile diagrams should be used when shapes and patterns are important for understanding a concept, as well as when the real objects are not available. Tactile images or diagrams can be drawn on braille paper using a special mat and stylus. Nhemachena et al. (2012) maintain that this produces a relief image or diagram that can be easily felt. According to the MoE, (2018), Namibian teachers and principals have sufficient materials to meet the needs of learners with disabilities; however, some schools that have these materials do not have the skills to use them.

## 2.12 Summary

In this chapter, the researcher presented Vygotsky's sociocultural theory as the theory informing this study and established that social interaction plays a fundamental role in the cognitive development of a child. The researcher further established that children's learning takes place through an individual child's interaction with others (social level) and, second, when new experiences are integrated into an individual child's mental structure (individual level). The second aspect of the sociocultural theory is about the

ZPD, which focuses on what a child can learn on his or her own, and what they can learn with the help of more skilled people. The reviewed literature also revealed that inclusion is fundamental in education as it provides all children with an opportunity to build friendships and relationships and develop respect and understanding of each other, so that they are prepared to become responsible members of society. The literature review identified legal blindness, functional blindness, and partial sightedness as types of blindness and explained their impacts on learning. The review also revealed that un-accommodative infrastructure; the use of ICT; choices of fields of study; and lack of parental support, a sense of belonging, and acceptance are possible academic challenges faced by LWVI in inclusive schools. Finally, the review established that collaborative learning and adapted teaching and learning materials can enhance the inclusion of LWVI. The next chapter (Chapter 3) presents the research methodology adopted for this study.

# CHAPTER 3: RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter presents a detailed description of the research approach and design that were employed to achieve the research objectives of this study. It explains the methods of data collection and analysis that were used in the study. The ethical considerations are also addressed.

## 3.2 Research Design

According to Sandström, Borglin, Nilsson and William (2011), a research design is a plan that follows an ongoing set of principles that guide decision-making throughout a study. McMillan and Schumacher (2014) state that a research design indicates the general plan on how the research is set up, what happens to the participants, and what methods of data collection are used.For this study, a qualitative research approach was adopted. This accorded the researcher the opportunity to seek and explore experiences, emotions, views, and subjective positions of support teachers and LWVI (Creswell, 2014).

A case study can be defined as a research approach used to explore an event or phenomenon in depth and in its natural context, (Crowe, Cresswell, Robertson, Huby, Avery and Sheikh, 2011). It is a research methodology used in qualitative research to help in the exploration of a phenomenon within a particular context, based on various data sources. In qualitative research methods, the case study approach usually involves the collection of multiple sources of evidence using data collection tools such as interviews and observations. Data triangulation increases the trustworthiness of the study, as

supported by Rashid, Rashid, Warraich, Sabir and Waseem (2019), who posit that data collected in different ways lead to a holistic picture of the phenomenon.

In this study, the case study approach was particularly useful because the researcher needed to obtain an in-depth appreciation of the phenomenon under study, in its natural real-life context (Johnson & Christensen, 2012). A case study research design allowed for an in-depth understanding of the academic challenges faced by LWVI in inclusive schools (Creswell, 2014). The study used an embedded case study research design. An embedded case study approach is defined as a kind of case study consisting of more than one unit of analysis. This study was an embedded case study because it involved two inclusive education schools, whereby participants from these schools provided information under the same phenomena of study, of which each school was an independent unit of analysis.

## 3.3 Research Population

Cresswell (2014) defines a research population as the total of individuals, units, objects or events that will be considered in a research project. The research population for this study comprised all schools offering inclusive education for LWVI in Namibia.

## 3.4 Sample and Sampling Procedures

Creswell (2014) defines a sample as a sub-group of a target population, which a researcher studies with the aim to generalize the findings to the target population. This study used purposive and convenient sampling to select the two inclusive secondary schools and research participants under study. Purposive sampling attempts to select respondents based on certain characteristics (Tan, 2014). Therefore, schools and participants were selected based on the following criteria:

Two inclusive education secondary schools were selected because they are the only schools that include LWVI in the mainstreaming in the selected regions. The researcher also selected these schools on the basis of convenience because they could easily be accessed by the researcher (Johnson & Christensine, 2012). The researcher teaches at School A; thus, the school was easily accessible to the researcher. School B is about 480 km away from the researcher's residence, but it was near compared to the other school, which is in Windhoek, about 800 km from the researcher's residence.

Purposive sampling was also used based on the characteristics of the information-rich participants and the purpose of the study (Tan, 2014). Therefore, these eight LWVI and the three support teachers were handpicked because they were the only ones who met the criteria of the study at the two schools. Thus, the learners had the experience of learning in an inclusive classroom together with sighted peers and knew the challenges of being in one class. Among these eight learners, five were blind and three were partially sighted.

The support teachers were deemed suitable because they were responsible for providing information to LWVI and they were their advocates, therefore they were aware of the challenges facing LWVI. Therefore, five learners (two who are blind and three who are partially sighted) and one sighted teacher were selected from School A (Oshana region) and three learners who are blind and two teachers (one is blind and one is partially sighted) were selected from School B (Kavango East region).

## 3.5 Description of the Research Sites

### School A

**Figure** 3.1 *Entrance of School A: Main Gate*

**Figure 3.2** *Facilities at School A: Hostel and Dining Hall Side View*

School A is an inclusive education secondary school offering Grades 10–12 in the Oshana region. It was established in 1988 as a regular school, mainly accommodating learners who were returning from exile. It was the first school to start including LWVI in 1995, immediately after the Ministry of Basic Education identified schools to pilot inclusive education (Josua, 2013) following the Salamanca Declaration of 1994 in Spain.

School A accommodated LWVI in Grade 11 who were learning at a nearby special school that taught learners from Grade 0 to Grade 10. At the time of data collection for this study, School A had 1,056 learners, five of whom had severe to profound visual impairment. Two of these were blind, while three were partially sighted. The school have a hostel that accommodated all learners who were not from Ongwediva, but all LWVI were given priority to stay at the school's hostel. This was meant to reduce the burden of LWVI commuting between home and school.

The school had 37 teachers including the principal. The school have a Special Unit, which is generally a support section in schools that include LWVI. This is where learning materials for LWVI are kept, and their support teachers are stationed there. One of the teachers was working in the Special Unit as a support teacher for LWVI, registering LWVI when they enrolled into the school. She also kept records of the conditions of their visual impairments. She was the only teacher in the school who knew how to read braille. Therefore, she was the only teacher who transcribed learners' work into braille and then de-brailled their answer sheets for their teachers to mark. She once worked at a Resource School that caters for LWVI and this is where she was trained. School A had large surroundings, with sports fields inside the schoolyard. These included soccer fields as well as basketball and netball courts. There were no specific classrooms for LWVI; therefore, learners mingled with their sighted peers. The only space specifically allocated to LWVI was a small storeroom where they kept their books.

**School B**

School B is a secondary school for pre-primary to Grade 12. The secondary school was located in the Kavango East region. It had two sections, namely the special school section and the inclusive education section. The special school section ran from Grade 0 to Grade 7, which mostly accommodated learners with severe to mild visual impairments, from the Kavango East region and Kavango West region.

From 2008, since this school opened its doors, these two sections were operating as two different schools (a special school and a secondary school). When LWVI completed Grade 7, they were usually sent to one special school in Windhoek, which was 700 km away

from Rundu. After several complaints from the parents of LWVI in the Kavango East and West regions, about their children being sent to Windhoek, the Ministry of Education, through the Kavango East region introduced inclusive education at the Secondary Level at School B. Therefore, School B started including LWVI in 2014. When LWVI completed Grade 7, at the Special School Section, they joined Grade 8 in the inclusive education section. Here, they were taught together with those without visual impairment. Figure 3.3 shows the entrance to School B.


**Figure 3.3** *Entrance of School B*

School B has a hostel, and all the LWVI at this school were given priority to stay in the hostel, Figure 3.4 shows the overview of school B, the hostel sides.

**Figure 3.4** *Overview of School B: School Hostel Side*

At the time of the study, the school had 47 teachers, including the principal and four heads of department. Seven teachers were responsible for Grades 0-7. There were two teachers with visual impairment: one was blind and the other one was partially sighted. These two teachers served as support teachers for LWVI in the Secondary Education Section. The teacher who is partially-sighted brailled and de-brailled the work of the LWVI. The teacher who is blind can also braille the work of the learners with the aid of other teachers who read for them.

The school had about 800 learners, of which three had severe visual impairments; hence their inclusion in the inclusive secondary school.

## 3.6 Research Instruments

McMillan and Schumacher (2014) define instruments as techniques used to gather information for research purposes, while Gay, Mill, and Airasin (2011) describe them as tools for collecting information and data needed to find solutions to the problem under investigation. The instruments and techniques that were used to collect data for this study were interview guides and observation sheets.

### 3.6.1 Interviews

In this study, two semi-structured interview guides were developed separately to capture information from LWVI (see Appendix G) and support teachers (see Appendix H). These interview guides consisted of structured and unstructured questions. According to MacMillan and Schumacher (2014), an interview is a conversation between the interviewee and the researcher. The semi-structured interviews were done to elicit and capture the opinions of the learners and teachers on the research phenomenon.

The interviews involved discussions between the researcher and each research participant in a formalized, structured, and guided manner. Through the open-ended questions that were asked, the respondents were able to express themselves freely and the researcher was able to ask probing questions to encourage the respondents to give more information. All participants were interviewed privately to ensure confidentiality and openness. All participants gave their verbal consent to be interviewed. The researcher also made an appointment with the learners and the teachers, meaning that they were fully aware that they would be interviewed. They were also made fully aware that they had a right to withdraw, once they felt uncomfortable to continue with the interview.

#### 3.6.1.1 Interview at School A

School A was a secondary school in the Oshana region. The interviews at School A were done over two days, as they were done after classes and after lunch. Five learners were called in, one after another. The interviews were conducted in English, but during the interviews, the researcher and the learners were switching from English to Oshiwambo for the purpose of clarification and better understanding of the questions.

After the interviews with the learners were completed, the only support teacher at this school was interviewed in her office during break time. The interview questions were in English, but during the interview, the interviewer and the support teacher were switching to Oshiwambo for the purpose of clarification and better comprehension of the questions.

#### 3.6.1.2 Interview at School B

School B is a secondary school in the Kavango East region. The interviews at School B lasted for one day. They involved two teachers (one who is legally blind and one who is partially sighted) and three learners who are blind. Both the learners and the support teachers at this school were interviewed in English. Learners were interviewed after school, after they had finished their lunch. The learners were called in one after another, while others were waiting outside. All the interviews lasted for about 45 minutes. The support teachers at this school were interviewed in the morning, during their free time. One teacher was interviewed in the special unit department while the other teacher was interviewed in an empty classroom.

### 3.6.2 Non-Participant Observation

In addition to interviews, non-participant observation was used to collect data from both secondary schools. Creswell (2014) defines non-participant observation as a research technique whereby the researcher watches the subjects of his or her study with their knowledge, but without taking part in what they are doing. For example, in this study, the researcher simply observed classroom teaching and the school surroundings with learners' and teachers' knowledge but was not part of the lessons. The researcher was granted verbal permission by the schools' principals to observe the school surroundings. Permission for classroom observations was granted by the class teachers. Learners were also notified

about the presence of the researcher in their classrooms. An observation sheet was drawn up and used during the non-participant observations (see Appendix F).The researcher observed the lessons as they were presented. The observations at both schools were conducted in one week.

### 3.7 Trustworthiness

Trustworthiness means the believability of the researcher's findings. It refers to the degree of confidence in the data, interpretation, and methods used to ensure the quality of a study (Polit & Beck, 2014). According to Creswell (2014), trustworthiness is of utmost importance in qualitative research as it encompasses all that the researcher has done in designing, carrying out, and reporting the research to make the results credible (Polit & Beck, 2014). Qualitative research studies do not use instruments with established metrics about validity and reliability but employ criteria such as credibility, dependability, and conformability to establish trustworthiness. This study adopted the concept of trustworthiness by first conducting a pilot study to ensure that the research tools were reliable and consistent with the research objectives. The researcher further acquired consent and participants were accorded the right to decline participation or withdraw at any point of the research. Interviews and observations happened at times and spaces at which the participants were comfortable. The results were reported in a manner that did not compromise anonymity and confidentiality.

### 3.8 Credibility

The term credibility refers to how confident the qualitative researcher is in the truth of the study's findings. It implies ensuring that the researcher's findings are true and accurate, and this can be guaranteed using triangulation in data collection. For this study,

triangulation was used to ensure that the study's findings are credible. Two interview guides and observation protocols were used to allow for the triangulation of data. The different data generation methods assured the credibility, dependability, and trustworthiness of the findings. The collected data were cross-checked and by reading and re-reading the transcribed field notes to ensure that the researcher represents the views of the respondents and not her own. This was most important, especially in the one school where the researcher was a teacher (insider) who had to assume an outsider role during the research. To ensure the credibility and trustworthiness of the research results, the researcher compared the findings from the two sets of interviews (one from LWVI and one from support teachers) and those from the observations. Sandström et al. (2011) suggest that selecting participants with various experiences increases the possibility of responses to the research questions from various perspectives. Considering this suggestion, the researcher purposively selected participants who had experienced the challenges of LWVI in inclusive settings.

### 3.9 Transferability

Transferability is another method used by qualitative researchers to establish trustworthiness. It is how the qualitative researcher demonstrates that the study's findings are applicable to other contexts, that is, similar situations, similar populations, and similar phenomena. Creswell (2014), researchers can use thick description to show that the study's findings can be applied to these other contexts to ensure generalizability. Simply put, qualitative researchers use this method to provide a detailed description of the study's site, participants, and procedures used to collect data for other researchers to assess whether applying the results of one study is a good match and is generalizable. In this

study, transferability was observed whereby the researcher clearly explained the research site, described how participants were selected and their demographic data, indicated the delimitation of the study, and the data collection procedures.

## 3.10 **Conformability**

Conformability is the degree of neutrality in the study's findings. It means that the researcher's findings are based on participants' responses and not any potential bias or personal motivations of the researcher. It involves making sure that the researcher's bias does not skew the interpretation of what the research participants said to fit a certain narrative. To establish conformability, qualitative researchers can provide an audit trail, which highlights every step of data analysis that was made in order to provide a rationale for the decisions made. This helps establish that the study's findings accurately portray participants' responses (Rashid et al 2019). In this research, the researcher ensured conformability by being aware of her fault lines, especially in the one school where she was a teacher and also a researcher. She tried by all means to read and listen to what the data says rather than what she knows or thought she knows. The researcher further ensured that she did not manipulate the findings in any way.

## 3.11 **Dependability**

Dependability is a method that qualitative researchers use to show the consistency of their findings. According to Rashid et al (2019), qualitative researchers describe their methods of data collection, analysis, and interpretation in detail. This means the extent to which the study could be repeated by other researchers and that the findings would be consistent. This implies that other researchers can replicate the study and have sufficient information from the current research report to do so and obtain similar findings as those of the current

study. The researcher has sufficiently described the research methods and decisions taken to ensure dependability. Triangulation of methods as well as using two diverse research sites, enabled the researcher to demonstrate consistency throughout the data collection, presentation and analysis processes.

### 3.12 Data Collection Procedure

The researcher obtained approval from the University of Namibia's Centre for Research and Publications (see Appendix A). Secondly, the researcher obtained written permission from the Permanent Secretary of the MoEAC (see Appendix B), the Education Director of the Kavango-East region (see Appendix C), and the Education Director of the Oshana region (see Appendix D) and obtained verbal permission from the principals of the selected schools to conduct research at those schools. Permission to access the classrooms for observations was also granted by the class teachers. Consent was obtained from the research participants to take pictures (see Appendix E and F). In adherence to ethical research principles, the pictures that showed the participants' images did not reveal their faces (Haihambo 2011). Support teacher-respondents were asked to fill in a consent form before they were interviewed. The parents of the learner-respondents were asked to fill in informed consent forms (Appendix E) before their children could be interviewed. Face-to-face interviews were conducted with the assistance of a voice recorder, with the permission of the respondents.

At the beginning of this session, the purpose of the study was explained, and the participants signed letters of consent to indicate their willingness to participate in the study. It was stated in the consent form that their interview would be voice-recorded. They were informed that the transcription of data would be done immediately after the interview

and would be given to the teacher-respondents to confirm whether what was transcribed was in correspondence with the information the learners had provided. The researcher and respondents agreed on the appropriate date and time during the week that suited them for the interviews. The respondents were informed that taking part in the interviews was voluntary and, should they feel the need to withdraw, they were welcome to do so. Fortunately, none of the participants declined to take part in the study. For them to share their academic challenges without fear of intimidation by the presence of others, each respondent was interviewed in a private room. They were also informed that their responses would be used for the research purpose only. Both interviews lasted for 45 minutes.

### 3.13 Data Analysis

The analysis of data began while the interviews and observations were underway. The study employed a case-oriented analysis using qualitative content analysis to gain an in-depth understanding of the findings (Wakumbe, 2013). Qualitative content analysis is the process of identifying, coding, and categorizing the primary patterns in the data. In that regard, the data were presented and analyzed according to themes centered on academic challenges faced by LWVI, factors contributing to these challenges, the support system available to LWVI, and still pictures of the schools' surroundings. The pictures also accompanied the presentation of findings to enhance understanding of the research sites.

All audio-recorded interviews were transcribed. This process took about a week. First, the transcriptions of the learners and support teachers' academic challenges were read and re-read to identify the key elements of the themes. Second, the data from the different interviews were classified into, patterns, and categories that emerged after looking at

events that recurred in each school. The identification of themes provided what is called "an in-depth understanding of the central phenomenon through the description and thematic development" (Creswell, 2012, p. 247). The data were presented in a report form, but, in some cases, direct quotes were recorded to present the case as it was reported by the respondents. Apart from content analysis**,** some responses from the interviews were also analyzed using a narrative approach. The developed themes were then aligned to address the research objectives of the study. Verbatim responses from the study participants were used to substantiate the themes emerging in the study.

## 3.14 Ethical Considerations

The protection of human subjects through the application of appropriate ethical principles is important in all researches, therefore in qualitative study ethical considerations have a particular resonance due to in-depth nature of the study (Arifin, 2018). This study has defined ethical considerations with the following components**:** ethical clearance and permissions, voluntary participation, informed consent, anonymity, confidentiality, the potential for harm, and results communication.

### Ethical Clearance and Permission

The researcher obtained approval from the University of Namibia's Centre for Research and Publications. Thereafter, the researcher wrote letters to seek permission from the Permanent Secretary of the Ministry of Education Arts and Culture, Regional Directors of the Oshana and Kavango East regions, and school principals of the two selected schools, to conduct this study. The researcher obtained written permission from the regional

directors as well as a verbal permission from the two secondary schools. Permission to access the classrooms for observations was also granted by the class teachers.

**Informed consent forms:** Consent was sought from each of the learners and teachers who took part in the study. Those who agreed to participate had to sign informed consent forms before participating in the study. The learners who took part in the study and were under the age of 16 had to seek their parents' consent. The parents were asked to sign the consent form for the researcher to ensure that learners took the forms to the parents. Support teachers participants signed the consent after the researcher explained the purpose and objectives of the research.

**Confidentiality and anonymity:** To ensure confidentiality and anonymity, participants' names were replaced with codes in the report, and the school names were replaced with "School A" and "School B." The researcher ensured that the pictures taken did not show the respondents' faces or the schools' names. Participants were informed that the data collected would be used for research purposes only and that they had the right to withdraw from the research process should they feel the need to do so. They were also informed there were no negative consequences to their withdrawal. The parents of the learner-participants were asked to fill in informed consent forms (Appendix E) before their children could be interviewed.

**Voluntary participation:** Participants were informed that their participation was voluntary. They were also informed that they had the right to withdraw from the research process should they feel the need to do so. Fortunately, none of the participants declined

to take part in the study. Participants were also informed that the data collected would be used for research purposes only.

**The potential of harm:** After all consented, the researcher made appointments with the learners and the support teachers, to clarify the objectives and procedures of the study and explained possible harm of their participation in the research.

**Result communication:** Participants were informed that the results of the study will be reported through the thesis, University of Namibia Library and thesis presentation with the two regional directors of education, since the researcher promised to share the findings with the regional directors.

### 3.15 Summary

This chapter explored the research methodology that guided this study. It discussed the research approach, design, and procedures that were followed in gathering data. The study employed a case study design. The methods of collecting data were interviews and observations. This chapter further presented the sample and sampling procedures that were employed in the study. In addition, the chapter discussed the validity and reliability of the instruments that were used, together with the data analysis procedures and ethical considerations for the study. The ethical aspect includes how respondents were introduced to the interviews and issues of confidentiality.

# CHAPTER 4: DATA PRESENTATION

## 4.1 Introduction

This qualitative study aimed to explore the academic challenges faced by learners with visual impairment (LWVI) in two inclusive secondary schools in Namibia. This chapter presents the profiles of the participants and the data that were gathered through observations and interviews. The data were collected from two inclusive schools: School A in the Oshana region and School B in the Kavango East region.

## 4.2 Participants' Profiles

The participants of this study are described in Tables 4.1–4.4. The tables display the profiles of participants, including age, degree of visual impairment, and school grade level. Table 4.1 displays the profiles of the participating LWVI from School A. Table 4.2 displays the profiles of the participating LWVI from School B. Table 4.3 displays the profile of the participating support teacher from School A. Table 4.4 displays the profiles of participating support teachers from School B.

**Table 4.1**

*Profiles of Participating LWVI from School A*

| Code | Sex | Age | Grade | Degree of visual impairment |
|---|---|---|---|---|
| L1 | Male | 18 years | 12 | Blind |
| L2 | Male | 18 years | 12 | Partially sighted |
| L3 | Female | 22 years | 12 | Blind |
| L4 | Female | 18 years | 12 | Partially sighted |
| L5 | Male | 20 years | 12 | Partially sighted |

Five learners from School A participated in the study. Two were blind and three were partially sighted. They were all in Grade 12, with ages ranging from 18 to 22 years.

**Table 4.2**

*Profile of Participating Teacher from School A*

| Code | Sex | Age group | Academic qualification | Training on inclusive/special education | Degree of visual impairment |
|---|---|---|---|---|---|
| ST3 | Female | 40–50 years | BETD | Yes | Sighted |

There was only one support teacher at this school. She held a basic education teacher's diploma (BETD) and she had received training in special education.

**Table 4.3**

*Profiles of Participating LWVI from School B*

| Code | Sex | Age | Grade | Degree of visual impairment |
|---|---|---|---|---|
| L6 | Male | 22 years | 8 | Blind |
| L7 | Female | 16 years | 9 | Blind |
| L8 | Female | 16 years | 10 | Blind |

Three LWVI from School B participated in the study. They were in Grades 8, 9, and 10. All of them were blind and their ages ranged from 16 to 22 years.

**Table 4.4**

*Profiles of Participating Support Teachers from School B*

| Code | Sex | Age group | Academic qualification | Training on inclusive education/special education | Degree of visual impairment |
|---|---|---|---|---|---|
| ST1 | Male | 30–40 years | BETD | Yes | Blind |
| ST2 | Male | 40–50 years | BETD | Yes | Partially sighted |

There were two support teachers at this school. One was blind and one was partially sighted. They both held BETD qualifications, and they had both received training in special education.

## 4.3 Findings of the Study

The purpose of this study was "to examine the academic challenges that face LWVI in inclusive education secondary schools." To achieve this purpose, data were collected from both the learners and their support teachers through interviews and observation. The findings in this chapter are organized according to themes and categories as illustrated in Table 4.5.

**Table 4.5**

*Themes and Categories of Data Presentation*

| | Main theme | Sub-themes | Categories |
|---|---|---|---|
| **1.** | **Academic Challenges of the LWVI** | Challenges related to subject choices and fields of study | |
| | | Lack of learning materials | |
| | | Lack of textbooks | |
| | | Poor adaptation of teaching strategies by teachers | |
| | | Poor classroom participation of LWVI, poor interaction between the teacher and LWVI, and lack of note-taking in class | |
| | | Challenges related to practical activities | |
| | | Class assessment of LWVI | |
| | | Poorly organized examination sessions | |
| **2.** | **Factors contributing to the academic challenges for LWVI** | Challenges related to infrastructure | Pavements and stairs |
| | | | Protruding windows |
| | | | Sport fields |
| | | | Hostels |
| | | | School surroundings |
| | | | Light and ventilation in the classrooms |
| | | | Displays on walls and notice boards |
| | | Classroom arrangement | |
| | | Number of learners in the class and sitting position of LWVI | |
| | | The shift from a special school to an inclusive secondary school | |
| **3.** | **Support system** | Lack of parental involvement | |
| | | Support from special schools | |
| | | Support from support teachers | |
| | | Support from teachers and other institutional workers | |
| | | Support from sighted peers | |
| | | Support from the Regional Directorate of Education | Resources and financial support |
| | | | Provision of support teachers and paraprofessionals |
| | | Support from community members | |

### 4.3.1 Main Theme: Academic Challenges Faced by LWVI at the Two Selected Inclusive Secondary Schools in Namibia

#### 4.3.1.1 Sub-theme One: Challenges related to subject choices and fields of study

**School A**

The issue of subject choice and fields of studies was regarded as a challenge to LWVI at this senior secondary school. Regarding the question on the choice of the field of study, all the learners who are blind (L1 and L2) responded that, apart from English and Oshikwanyama, which are compulsory subjects, they were not allowed to take subjects such as Mathematics, Accounting, and Physical Science, which involved calculations, graphs, and diagrams. One of the learners said, *"We were told at the beginning that Mathematics, Accounting, and Physical Science were not for LWVI because there are contents that cannot be brailled, so we cannot choose to do these subjects."* (L1)

Asked which fields of study the learners were allowed to take, the support teacher said:

> *Learners are not taking these subjects, apparently because they have many drawings and graphs. For one to answer certain questions in Mathematics, he or she needs to plot graphs, I believe learners are not allowed because the education system is not ready. If Mathematics teachers were trained to write Mathematic Braille, and if we had programs that support Mathematics for people with visual impairment, I don't think it would be a problem.* (ST3)

**School B**

According to the Namibian curriculum, learners in Grades 8–10 are supposed to take nine subjects. This was not the case with LWVI at School B. Learners who are blind in Grades

8–10 at this school indicated that they were not allowed to do subjects such as Mathematics, Physical Science, and Geography. The following is an excerpt from one of the learners: *"Most of us are not allowed to do subjects such as Mathematics, Physical Science, and Geography. Those who are allowed to do them can only do some specific components where there are no calculations and diagrams."* (L6)

The learners further added,

> *I do not like what is happening in this school, where teachers keep us away from these subjects. I feel left out already by not doing Mathematics and Physical Science because this is a clear indication that my dream career has been shattered.* (L7)

On this same note, L8 added, *"We are not going to follow careers that require these subjects, because we do not do them."*

L6 also expressed his disappointment and said, *"When I was at that special school in Windhoek, I was very good at Mathematics, but since I came to this school, teachers are preventing me from doing Mathematics."*

On the question of whether the learners were able to do all the subjects, one support teacher responded:

> *Because the school does not have an Adobe Design Machine or program to braille tables, graphs, and other drawings for Mathematics, Physical Science, and Geography, LWVI are not allowed to do those subjects. Even if these programs were there, teachers are not trained on how to use those programs.* (ST1)

ST2 also reported, *"Sometimes the learners feel discriminated, and they do not have the motivation to study because they already know that they will not be able to follow their desired careers without certain subjects."*

#### 4.3.1.2 Sub-theme Two: Lack of learning materials for LWVI

**School A**

The lack of learning materials was one of the academic challenges at this inclusive secondary school. On the question regarding the availability of learning materials, L1, L2, and L3 responded that each of them (three learners who wrote in braille) had their own braille machine, which was working properly. They also had enough braille paper. The five learner-participants, concurred that the braille machines were kept in a small storeroom as their storing place where they kept other materials such as their notes and textbooks, and they had named it their "resource room." However, they did not take the braille machines to the hostel*: "We do not have access to braille machines once we have returned to the hostel, which forces us to do all our homework in the resource room after classes and during study time."* (L3)

The learner-participants further explained that there was only one scientific calculator, but it was not working. One participant explained, *"Ever since we lost the charger for this calculator, the school has not replaced it."* (L4)

L3 emphasized that, even if the calculator was working, one calculator could not be used by the two children who are blind at that school.

Apart from the one calculator that was available, L1 and L2 further added that there was also one radio that they used during English listening comprehension exams and activities.

The findings from the only support teacher on the issue of teaching materials were similar to those of learners; however, she focused more on computers:

> *The school has a computer laboratory where learners learn the ICT subject. The ICT laboratory at this school had about 40 computers. In addition, the computers in this laboratory were not programed to meet the needs of LWVI. They were only designed for sighted learners*. *Therefore, I can confidently conclude that the school does not have a computer for LWVI.* (ST3)

This was recorded as a challenge for LWVI because the computers were not designed to meet their needs, yet they were also supposed to use computers during the ICT lessons.

The researcher noted that School A had one embosser machine, but it was not working. An embosser is a printing machine that produces written text into braille. ST3 explained that the machine had broken five years ago and had not been replaced or fixed. Therefore, subject teachers had to take the activities to the support teachers for manual brailling. ST3 said,

> *I read the written text and transcribe it manually within a given timeframe. Although I arrange with subject teachers to submit the activities three days before they are written, only some teachers adhere to the three days' timeframe, which results in the LWVI not receiving their tests or activities on time.*

**School B**

Insufficient learning materials were also noted at this school. On the question about the availability of assistive devices at school, the three learner-participants at School B

indicated that they had magnifiers, but the learners with low sight could not use them because their tables did not have sufficient space to accommodate the magnifiers. L8 said, *"There are laptops that the school received as a donation from one company. That company donated them specifically to be used by LWVI, but the school did not install the programs for LWVI.*" School B had scientific calculators with audio output, enough for all LWVI, but the learners said that the calculators were not always functional since they needed to be recharged. L7 explained, *"Sometimes it can just switch off while you are busy using it. Maybe one needs to use it while it is on the charger."*

From the interviews, the researcher noted that School B had an embosser for transferring written text into braille, but teachers only used it to prepare activities for LWVI, such as tests and examinations, not for learning notes. In addition, ST1 said, *"This machine has a program that needs to be updated, for it to work properly."* This program needs Internet connection for it to update and one has to set up the update after school. ST2 said, "*We experience challenges from our colleagues who switch off the Internet for no reason, and this results in the machine not updating, and it would fail to perform its duties the next day."*

In addition, ST2 indicated that there is a lack of crucial materials for LWVI at the school, such as TV readers, compact discs, memory sticks, and voice recorders to record the lesson presentations. There were no white canes at the school to assist the learners to walk around, but some learners had their own canes, which their parents bought for them.

#### 4.3.1.3 Sub-theme Three: Lack of textbooks

**School A**

Regarding the issue of the availability of textbooks, the five learner-participants replied that there were inadequate textbooks in braille or enlarged fonts at the school. L4 explained that learners who partially-sighted were forced to use the available textbooks with small fonts, which were designed for sighted learners. Learner-participants at this school reported that they only had braille textbooks for Business Studies, but they did not have enough volumes. They only had Volumes 1, 2, 5, and 6, but not Volumes 3 and 4.

In other subjects, they only relied on notes, but teachers only provided notes during lessons. L1 explained, *"For us, we only write notes after classes, because our sighted peers have to read for us while we are brailling."* On the issue of textbooks, L3 complained about not having English literature books in braille:

> *I was forced by the situation to take the book to Oniipa Rehabilitation Centre for them to braille my literature book. I think this is unfair because my sighted peers received books from school, and I have to pay for my own book. The school does not even support me with transport.*

ST3 also confirmed that LWVI did not have enough textbooks. The school was not making efforts to provide these learners with textbooks. The office of the school principal was aware of this matter, but it seemed they were not concerned about the issue.

**School B**

The researcher found that School B had no textbooks in braille for Grades 8, 9, and 10. L7, who repeated Grade 8, explained that they had textbooks for Grade 8 in 2016 when they were following the old curriculum, but in 2017, when she repeated Grade 8, they did not receive books for the revised curriculum. L8, in Grade 10, told the researcher that they did not have textbooks and *"We only rely on notes that we write ourselves with the assistance of our sighted peers."*

The learners' responses were also supported by the support teachers. ST2 confirmed that the school did not have enough textbooks for the revised curriculum. He thought it would take a bit longer to get the ones in braille. He explained that:

> *This is because, once we receive books for sight, we have to inform the Oniipa Rehabilitation Centre, which is in the Oshikoto Region, to braille those books. They braille books in order, and they are doing first-come-first-served. We are not the only ones who have ordered books from them. Therefore, we have to wait a while longer.* (ST2)

The support teacher-participants further suggested that the National Institute for Educational Development (NIED), which prescribes textbooks, should give the prescribed books at least two years before the implementation of the revised curriculum. This would allow the braille books to be readily available during the implementation of the revised curriculum. ST2 said, *"It is not fair to LWVI that other learners have books while LWVI do not have them."* ST1 added,

> *This issue of lack of textbooks in braille frustrates learners, and it is also another burden to support teachers and sighted peers. It results in support teachers having*

*to work overtime to braille the notes of learners and sometimes the LWVI only ask their sighted peers to read for them while they are writing.*

#### 4.3.1.4 Sub-theme Four: Poor adaptation to teaching materials and teachers' strategies

**School A**

The issue of adjusting learning materials was only raised in the support teachers' interviews. Responding to the question of how teachers adapt the teaching methods and learning materials to meet the needs of LWVI, the support teacher-participant (ST3) explained that teachers were forced to use one method of teaching because of ignorance or, maybe, lack of knowledge to work with LWVI. ST3 revealed that

*Teachers are not even adjusting learning materials to fit these learners; maybe it is because they do not understand how to do it. Although many of these teachers did courses on inclusive education at university, it seems like these teachers were just studying to pass, because they are not applying the skills at all.*

Findings from classroom observations showed that the teachers at this school did not adapt to teaching methods to accommodate LWVI. In three of the lessons that were observed, they used lecture methods only. Teachers used projectors and chalkboards as teaching aids, while some of them used drawings on the chalkboard to teach and explain. This did not benefit LWVI much.

**School B**

All support teacher-participants at School B also stated that teachers did not adapt to teaching strategies that meet the needs of LWVI. They relied on the lecture methods in almost every lesson. ST2 reported, "*Our teachers are not even trying to come up with teaching aids that are benefiting LWVI, such as tactile diagrams. Some teachers are just failing even to enlarge text for peers who are partially sighted.* ST1 added, "*Teachers are very ignorant of appropriate teaching methods for LWVI and they are lazy to innovate when it comes to teaching LWVI.*

Classroom observation at this school showed that teachers were also using normal teaching methods without giving special attention to LWVI. In all the three lessons that were observed, teachers were using textbooks and chalkboards as the teaching aids. All the teachers were reading from the textbooks/prepared notes and further explained by giving examples on the chalkboard.

#### 4.3.1.5 Sub-theme Five: Poor classroom participation of LWVI, the interaction between the teachers and the LWVI, and lack of note-taking in classes

**School A**

Regarding the issue of whether LWVI write notes during the lessons, learner-participants expressed that, LWVI hardly took notes during the lessons because learners who are partially sighted could not see clearly on the chalkboard and learners who are blind did not always have their braille machines in the classroom. Another problem was that, many times, their teachers failed to prepare notes for them. Teachers only focused on sighted learners when it comes to preparing notes. L1 and L3 stated that most of the teachers

would come to class and ask the sighted learners to turn to a certain page in their books and start teaching, while LWVI listened without notes.

L2 and L4 further added that they felt left out or not included in the lessons, because some teachers would come with a prepared activity for sighted learners only. They would only remember if the LWVI asked about it. L2 explained, "*When we ask about our activities, that is when the teacher will apologize for forgetting us and rush back to the office to enlarge the question papers for learners who are low-sighted."* L1 added, *"for us who are blind, we have to wait until the next day to do the activity because the teacher has to have them brailled first before giving it to us."*

The researcher also asked the learner-participants how often their teachers involved them in the learning activities in the classroom. All five participants responded that their teachers for Business Studies and Agriculture actively involved them in the lessons, unlike other teachers. L2 remarked that it was only in these two subjects that they received class activities (homework and classwork) at the same time as sighted learners. L4 further remarked that the Agriculture teacher went to the extent of preparing written notes for them and all they would do was to ask one sighted learner to read for them while they brailled their notes.

Learners at School A indicated that they were seldom involved in the learning activities in the subject of ICT. L3 reported, "*When others are using computers, we are told to sit on a chair and wait for them to finish. This is not fair."* L1 added, *"We were even asked to contribute N$400.00, on a school project, to buy new computers, yet we do not use those computers." I think only sighted learners are supposed to give that contribution*

*because computers are theirs, not ours.* On the same issue, the support teacher explained that this was caused by a lack of computer programs. ST3 reported, *"It is very difficult for learners who are blind to be included because the available computers do not have programs that support persons who are blind.*

The support teacher-participant was asked if LWVI received activities and written notes on time. Her responses were in agreement with those of the learners. She agreed that most of the times, LWVI did not have written notes during lessons. ST3 explained, "*LWVI are always complaining about this, and I raised the matter in school meetings, but there is no change."* She further explained that the school management was also failing LWVI because they were not strict when it came to monitoring lesson preparations. The lesson preparations were supposed to be monitored by the school management. Members of management were also supposed to find out if the lesson plans included LWVI activities.

Observation results confirmed the above situation at this school. The English lesson took place in the classroom. The LWVI sat in front of the class, close to the teacher. Learners who are blind sat in the middle of the class and listened during the entire lesson. They did not indicate that they wanted to participate, nor did the teacher give them a chance to speak. The Oshikwanyama lesson also took place in the classroom. Learners were reading literature books. Only sighted learners had books, and they were the ones reading while the LWVI were listening. One learner asked the reader to raise his voice because they could not hear him. Another one asked for clarification. It seemed that those questions reminded the teacher about the presence of LWVI in the class. She apologized that she always forgot to make enlarged copies of the literature book for learners who are partially sighted.

It was also observed that learners that are blind did not have any notes or textbooks during all the lessons that were observed. The learners who are partially sighted also had no notes or textbooks but they were taking notes while the teacher was talking. The English teacher wrote notes on the chalkboard, but the learners who are partially sighted did not copy those notes. They indicated that they would copy from their friend's book after classes.

**School B**

The LWVI at School B also complained that not all the teachers actively involved them in the learning activities during the lessons. L6, L7, and L8 said that some teachers would come to class and leave without calling their names but only the names of their sighted peers. L6 and L7 further complained about Physical Science on a topic about the periodic table. When the teacher was teaching on this topic, he only focused on learners with sight, and only the sighted learners answered questions because they could see the periodic table. They added that the LWVI were all quiet in that lesson because they could not see, but the teacher did not notice their silence. L7 added, *"He just continued teaching without saying anything to us."* These findings concur with Maindi (2018) who emphasizes that curricula in mainstream schools are delivered more through sighted related tasks.

On the issue of taking notes, all three learners-participants at this school complained that they were not allowed to take notes during the lessons, apparently because braille machines make noise and disturb those who can see. L6 added, "*Teachers only give notes to those who can see and tell us to find ways to get notes. If teachers do not want us to write in class, they should at least have our notes ready before the lesson starts."* The learner-participants at this school felt that this was discrimination against them. L8

questioned, "*Why are the sighted peers taking notes during classes, yet they are the ones who do not have special needs, while we are asked to take notes in isolation?"*

Similarly , ST2 explained that LWVI went to class without notes because their teachers failed to prepare their notes on time: *"We (support teachers) are here to help with brailling and de-brailling for learners who are blind, but teachers do not submit notes for brailling on time. If LWVI failed, they are the ones who have contributed to their failure.*

Observation result from this school shows that in all the lessons that were observed, LWVI did not have textbooks or class notes. They were just listening to what the teachers and other learners were saying. In the English lesson, however, a Grade 9 learner who is blind was observed asking questions, but learners who are blind did not ask questions in other lessons. In all the lessons that were observed, teachers did not show any indication of paying special attention to learners who are blind.

#### 4.3.1.6 Sub-theme Six: Challenges related to practical activities

**School A**

The researcher observed four lessons at School A. At the time of data collection, learners were busy with the practical lesson of Agriculture, which took place in the open field, behind the classrooms.

Learners gathered at the field, and the teacher explained the rules of the practical lesson and how it would work. All learners, including LWVI, listened attentively. They worked in groups. Sighted learners took notes while the teacher was explaining. Asked why they

were not taking notes, L3 replied, *"We are just listening without taking notes because we cannot carry our braille machines to the field. If I missed something, I will ask others because they are taking notes."*

The teacher also showed pictures of how previous learners carried out their practical lessons. Learners with sight observed the pictures while LWVI were asking what was happening. Their peers described to them what was in the pictures. This was already a challenge to their learning because they were unable to take notes while in the field, and they were unable to study those pictures before carrying out their own practical lessons.

Learners observed a goat's digestive system. They had slaughtered a goat and then observed it, and later drew what they had observed. The three LWVI (who are blind) were all present at the field. They did not take part in the slaughtering of the goat; instead, they were just asking questions and they appeared excited. Some of the questions they asked were: *Who is killing it?" "Is it dead?" "What are you busy doing now?" "Let me touch the stomach; let me touch it before you cut it open."* (L5)

It appeared that LWVI were trying to attract the attention of their sighted peers. It seems they were afraid that, if they did not give signals, their sighted peers and the teacher might not notice them. They had to talk and shout for their sighted peers to react and help them. The teacher did not ensure that the LWVI had access to all activities and were included.

After the practical, the teacher asked the learners to draw the ruminant's digestive system. She explained to the LWVI that they should write a paragraph describing the digestive system, since they could not draw. This was an indication that some subjects, such as Agriculture, may not be suitable for LWVI because they involve practical activities and

drawings which rely on vision. In the absence of relevant technological devices these activities will remain challenging for LWVI.

The researcher also observed a Physical Education (PE) lesson, which took place at the sports field. The PE subject involves sports and always takes place at the sports field. This lesson did not seem to have been properly organized because the teacher did not accompany the learners to the sports field. Only a few learners were present when the researcher arrived there. After five minutes, the other half of the class arrived. These learners were jumping over the pavement to get to the sports field. After 10 minutes, two LWVI (one who is blind and her guide, with low vision) arrived as well, coming from a different direction. They were coming from the direction of the stairs, down the pavement. The LWVI did not arrive at the sports field at the same time as their sighted peers because they could not jump the high pavement.

L1 and L3 explained, "*Other learners jumped over the pavement, but they had to take the stairs, which was a distance away from the field.* L1 added, *"I cannot take such a risk of jumping over the pavement because I might step on a stone. This is always causing us to arrive late at the Physical Education lesson.*

When the LWVI reached the sports field, one of their sighted peers asked them, "*Where are the other three?"* (mentioning the names of the other three LWVI). They replied that they did not want to come to the PE lesson. The LWVI found others playing; the boys were playing basketball while the girls were playing netball. LWVI did not join others on the playground but went and stood under a tree.

L1 and L3 told the researcher that, even though they joined, they cannot see the ball, and they might bump others while they were playing. Therefore, they felt it was better not to go onto the field:

> *One day, we suggested that they should tie a plastic bag on the ball so that we can hear the sound of the plastic bag to be able to know where the ball is, but our sighted peer just made a joke out of it and did not take it seriously. So they did not try it.* (L1)

After the bell for the second lesson rang, everyone went back to class. Learners with sight were holding each other's hands and pulling each other up to climb the pavement (see Figure 4.1 below). The LWVI took their way toward the stairs to go to class. By the time they reached the stairs, their sighted counterparts had already reached the classroom. On this issue, L3 suggested, *"Our PE teachers need to change the PE lesson venue because we are always late either for the PE lesson or for the lesson that comes after PE."*

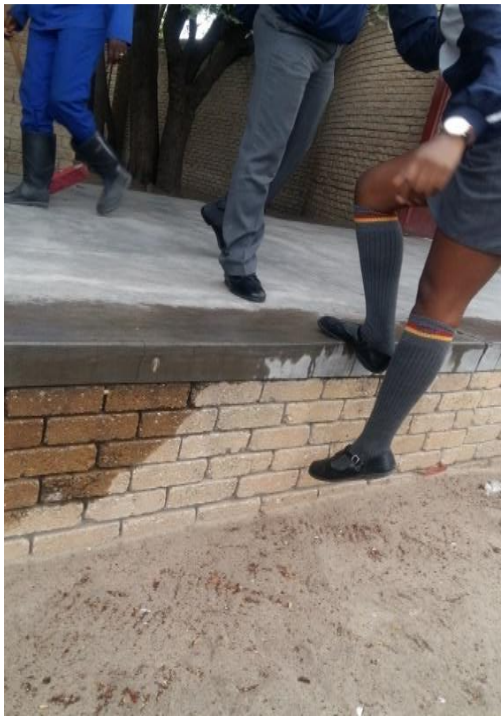

**Figure 4.1** *School A: A Learner Supports Another Learner to Climb the Pavement*

**School B**

During classroom observation at this school, no practical activities took place. However, the learners said they only did practicals in Physics and Agriculture but sometimes they were not allowed to do practicals. L6 said, *"We do not do practical activities in Physical Science because we cannot measure and we cannot observe the changes in reaction since we cannot see."*

#### 4.3.1.7 Sub-theme Seven: Class assessment of LWVI

**School A**

On the issue of whether they felt included by the assessment policy, the five LWVI in Grade 12 indicated that they felt left out. They did not know whether their teachers did

not understand the assessment policy on LWVI or it was supposed to be like that. They felt that some of the components needed to be removed from their question papers (the question papers for LWVI) because they were just a waste of time. L2 complained about the topic of the microscope in Biology: *"This topic required using a microscope to see micro-organisms."* L4 explained, "*Learners without visual impairment can see, but some of us (*who are *partially sighted) can only see too much light under the microscope."* The LWVI also complained about diagrams and graphs in Biology and Mathematics. L5 added,

> *Even if the question paper was enlarged, graphs are just too small that a person who is partially sighted cannot read. At least the graph fonts are supposed to be big enough that a person with low sight can read.*

Learners who are blind complained about Biology as a subject because there were too many diagrams and sometimes a question required labeling the diagram. L3 complained about the characteristics of the question paper: *"How can someone label the diagram while he/she cannot see whether it is a cat or a leaf?*" In addition, L1 suggested, "*Our teachers are supposed to remove diagrams from our activities. If they cannot remove, they must explain the diagram in detail for us to understand*."

ST3 indicated that the final national examination papers did not always match what the learners were taught during the year. She complained about the mismatch between the type of braille that the learners knew and used throughout the year and that which came with their question papers:

*The learners are trained to write non-contracted braille, alphabetical braille, and contracted braille, but the examination question papers come in alphabetical braille only. These differences are causing confusion and it makes them fail at the end of the year. I think teachers need to be trained on how they should set learners' activities so that they match with the final examination paper.*

During the class observations, the researcher also noted how the LWVI were assessed. The Oshikwanyama teacher did not give homework that day. The English teacher was teaching a poem. After teaching, she wrote the homework prompts on the chalkboard and asked the learners to copy them. The letters on the chalkboard were not big enough to be read by the learners who were partially sighted. Therefore, LWVI did not copy the prompts; neither did they ask the teacher about the homework, nor did the teacher say anything to them. This indicated that classroom assessment was not favoring LWVI sometimes.

During the Agriculture lesson, the assessment required learners to draw the digestive system. The LWVI were asked to write a description of the ruminant's digestive system, instead of drawing. Describing a diagram is the simplest way for LWVI to show that they understand what is presented in the diagram. On this issue, ST3 commented that LWVI were not expected to finish their class activities during the lesson, because they did their work after classes in their resource room with the assistance of their sighted peers.

**School B**

The researcher also asked the participants at School B about classroom assessment. The three LWVI complained that they were not happy with the assessment policy at their

school because they were not assessed at the same time as their sighted classmates. L8 (a Grade 8 learner) complained about how they wrote tests and other activities. The following is an excerpt that represents misgivings from the LWVI:

> *Many times, our sighted peers write tests during the lessons and submit their papers to be marked, while we (LWVI) are told to go and collect our test question papers from the special unit after classes. Once we finish writing, we are told to submit our answer sheets at the special unit again for the support teacher to transcribe them into written text. The next day, the teacher comes to class with the marked papers for sighted learners only and gives feedback about the test, while our papers are not yet marked.* (L8)

L7 added that they were always getting their marked papers two to three days after the feedback had already been given.

On the question about whether LWVI were accommodated by the assessment procedures, the two support teachers indicated that it only happened occasionally. ST2 highlighted that this was because the teachers did not know how the assessment for LWVI should be done. She advised that the assessment tools needed to be adjusted to meet the needs of learners with special needs. ST1 said, *"Teachers do not adjust the assessment tools because they seem to be not aware of how the system of inclusive education should work."*

ST2 added,

> *Only after the teacher has submitted the question paper for brailling, you will notice that some questions need to be changed, and sometimes it is too late to*

*change and we are only forced to remove those parts out of the question paper. This will result in LWVI writing a shorter paper than their sighted peers.*

Three lessons were observed at this school. English, Physical Science, and Rukwangali. The assessment took place in English and the same thing that happened at School A happened at School B. The teacher gave activities that were only meant for sighted learners and forgot about the LWVI. She gave activities in written text and did not prepare the braille version of those activities. She only remembered the LWVI after one learner who is blind indicated that she did not get the activity. The teachers asked one of the sighted learners to read for her. In other lessons, only verbal assessments took place, whereby the teachers just asked questions while presenting a lesson and all learners were given a chance to answer when they raised their hands.

#### 4.3.1.8 Sub-theme Eight: Poorly organized examination sessions

**School A**

LWVI said they felt challenged during examination times due to poorly organized examination sessions. On the question of whether they received examination question papers at the same time as their sighted peers, the five participants replied that examination time was their most stressful time because they did not get their question papers on time. L1 said, *"Sometimes we would not get question papers at all, and we only write the second day."* L3 and L4 expressed that the sighted peers who had a shorter duration to write were the ones who received the question papers first and that the LWVI received their question papers late, which would make them finish late. L3 further complained,

> *This is not good, especially if we have to write in two sessions. If we get the question papers for the first session late, sometimes we do not finish until the second session has started. This can lead to panic. Just imagine, you did not finish one paper and here comes the other one, ready to be written. It will make you not think properly.*

Another problem they experienced was the lack of invigilators during examinations because they write at a different venue. L5 explained, "*We wrote at a different venue to avoid disturbing our sighted peers with our braille machines. This is understandable, but sometimes we end up without invigilators."* L4 added,

> *We were also given a separate examination venue because our writing time was always longer than that of our sighted peers. Being in the same venue with sighted peers would cause some disturbances when the time for the sighted learners was over, while we were still writing.*

ST3 indicated that the separation of venues caused LWVI to end up not having invigilators:

> *Sometimes the examination is ready to start but the LWVI do not start because the teachers are not willing to invigilate them because their writing time is too long. Some teachers just give the learners the question papers then go to the staffrooms to chat with their colleagues.* (ST3)

Results further indicated that the learners sometimes encountered questions that were not clear or that needed extra answer sheets. Those who are partially sighted were the ones who went to get extra papers for those who are blind or called a subject teacher to explain.

Although various challenges were identified in School A, the above narratives, revealed that there are some elements of good inclusive schools in School A: concessions are made in terms of providing extra time to LWVI to complete examinations. Also, LWVI showed understanding with their separation from others by using separate examination venues.

**School B**

One of the three learners interviewed pointed out that examination times at this school did not consider LWVI. One Grade 10 learner at School B expressed how stressful examination time could be by narrating what happened the previous year:

> *A teacher of a certain subject did not hand in the question paper to be brailled. When it was time to write, the three of us (who are blind) did not receive question papers. Our support teacher who was responsible for brailling and de-brailling our examination decided to read the questions for us while we were writing. (L7)*

It was further revealed that the three learners were not in the same grade; therefore, this teacher had to read for one learner and then went on to read for the next learner. Examinations ended at around five o'clock in the afternoon. L6, L7, and L8, further indicated that teachers did not have LWVI at heart. There was no system in the school to check whether papers were available in all the needed formats.

The two support teachers pointed out that the other teachers felt that invigilating LWVI was a duty of support teachers only. Therefore, they sometimes refused to invigilate LWVI even if they were assigned to do so.

ST1 said, *"If assigned to invigilate LWVI, teachers only drop the question papers and leave. There was a time when LWVI did not write that day's paper because we the support teachers were not around."* ST2 added that the poorly organized examination sessions can make LWVI unwelcomed and may lead to poor performance.

### 4.3.2 Main Theme: Factors Contributing to the Academic Challenges of LWVI

The second research question was about factors that contribute to the academic challenges faced by LWVI. The sub-themes under this theme are physical facilities and infrastructure, the number of learners in the classrooms, beliefs that were brought by the shift from a special school to an inclusive school, and lack of parental involvement.

#### 4.3.2.1 Sub-theme One: Challenges related to infrastructure

This section presents the findings on how the physical facilities contribute to the academic challenges of LWVI. The categories of infrastructural barriers included pavements and stairs, protruding windows and rough walls, sports fields, hostel, school surroundings, light and ventilation in the classrooms, displays on walls and notice boards, and classroom arrangements and sitting positions of LWVI.

***Category One: Pavements and stairs***

**School A**

Three out of the five learner-participants at School A indicated that sidewalks presented barriers to their movement from the hostel to the school. They explained that, although the pavement was wide and guided them to the classrooms, some parts were hazardous, and prevented them from reaching the classrooms on time. L3 said,

> *The way from the hostel to the classroom is a barrier because it passes through the corridor that has a pavement. This pavement guides us, especially when we do not have a human guide, but it is narrower at some parts.*

In addition, L2 said,

> *This corridor with a pavement is wide enough that one can walk freely but at some points, especially on your way to the hostel, before you reach the dining hall, the corridor becomes narrower that one may fall off.*

Figure 4.2 supports these statements. This issue was further highlighted by L1 when she said, "*This narrower part is hazardous even to our sighted peers."* However, L4 and L5 did not find anything wrong with this pavement as indicated in the following excerpts:

"*I do not walk at the edge of the pavement because I will obviously fall off."* (L4)

*"I am used to this place and I do not find anything wrong with the higher pavement."* (L5)

**Figure 4.2.** *Picture Showing the Narrow End of the Pavement*

The comment on the same question by the only support teacher at this school was almost similar to that of L1, L2, and L3 learners. When the support teacher was asked if the pavements around the school were conducive for LWVI, she said,

> *There are no proper pavements that are meant for LWVI in our school. This pavement is very high and not even safe for those without visual impairments. Imagine, if something is not even safe to those that can see, what about LWVI?* (ST3)

The support teacher further explained the nature of the pavement as thus:

> *This pavement is about 80cm high, (see Figure 4.3). The distance from the classrooms to the hostels is about 700 meters. The sports field and the school garden are on the way from the hostel to the classrooms but are way below the level of this*

*pavement. The LWVI have to use the sports field for PE lessons. Some learners have Agriculture as a subject. They also need to use the garden during lessons.* (ST3)

The researcher observed that all the five LWVI were late for an Agriculture practical lesson because of the challenges presented by the pavement. The learners had to walk 500 meters to the garden, which was 30 meters away from the classrooms, as they had to go through the stairs and then through a sandy field to reach the garden. All the five learners were also late for PE lessons. They had to walk a long distance because they could not climb the pavement. The researcher also observed that all the five learners were unable to reach the playground and the sports field without a guide.

**Figure 4.3** *Pavement with Metal Poles Learners Have to Jump to Go to the Garden and Sports Field*

**School B**

The physical infrastructure of School B seemed friendlier to LWVI. The pavements were not very high. The pavement that ran through classes had a rump at some points (see Figure 4.4).

On the question of whether the distance from the classrooms to the hostels was a barrier to their learning, three learners explained that the pavements could guide them sometimes, especially if they did not have a human guide. They only needed to get onto the pavement and the pavement would lead them to wherever they wanted to go.

However, L8 added that there were high stairs at the entrances of some classrooms, which might be hazardous for them (see Figure 4.4).

All the three LWVI mentioned that the hostels of School B had two floors, which presented challenges to them. One learner said,

> *We, the LWVI stay downstairs and the rest stay upstairs. We have to take the stairs to go up or down. These stairs are a barrier to us whenever we want to seek academic assistance from other learners or when we want to socialize with our peers who stay upstairs since there is no elevator in the hostels.* (L7)

**Figure 4.4** *School B: Pavements and Stairs to the Learning Areas*

One of the three support teachers (ST1) commented, *"The school environment is friendly because the school's pavements are not too high for the LWVI."* However, the other two support teachers felt that the pavement to the dining hall entrance presented challenges to LWVI. One of them said,

> *The only dangerous pavement is the one at the entrance of the dining hall. It can be hazardous to LWVI because it has higher stairs of about 80 cm (see Figure 4.5 below). Learners may fall off the pavement or stairs if they do not have a human guide.* (ST2)

**Figure 4.5** *Stairs of an Entrance to the Dining Hall at School B*

***Category Two: Protruding windows and rough walls***

**School A**

On the question about other infrastructural challenges to LWVI, the five learner-participants mentioned protruding windows as hazards. For example, L1 said, *"Protruding windows are really dangerous to us. Without a human guide, we can hardly walk around safely*." L2 added, *"Many times, our sighted peers rush to rescue us when we are almost bumping into the protruding windows."* L4 and L5 shared the same sentiment that the protruding windows presented challenges to them, especially when changing classrooms. The support teacher also mentioned protruding windows as a hazard to LWVI. She said,

> *Protruding windows are a real danger to these LWVI. Many times, their sighted learners have rescued them from bumping into the windows. In addition to the protruding windows, the school also has rough walls made of rough bricks, which*

*may also be dangerous to LWVI when moving across classrooms.* (ST3) (See Figure 4.6).

The researcher observed that the five learner-participants experienced challenges of protruding windows when they were roaming around the school and exchanging classes. The observation confirmed the results obtained from the interviews with both the learners and the support teacher.

**Figure 4.6** *School A: Protruding Window and Wall with Rough Bricks*

**School B**

On the question about other infrastructural challenges to LWVI, all the three learners indicated that protruding windows presented challenges to their movement. L8 said, *"We are always afraid of bumping into the windows as we move around the corridors. If our sighted peers are not close by, the protruding windows are a serious hazard."* Two support teachers also mentioned protruding windows as a hazard to LWVI. One of them

said, *"The protruding windows are quite a danger to LWVI. To avoid possible injuries, LWVI need to have human assistance to maneuver around the classrooms."* (ST2).

The researcher observed that the LWVI at School B were very slow when they were moved in the corridors. She also observed that the sighted learners were watchful of their counterparts with visual impairments as they moved along corridors.

***Category Three: Sports fields***

**School A**

All the five learner-participants from this school explained that they did not care about how the sports fields looked because they hardly took part in sports but did PE on a sandy soccer field. One of the learners (L4) said, *"We only use sports fields during PE lessons, which usually take place on a soccer field. The soccer field is sandy and not hazardous to us."* However, L5 added, "*the netball and basketball courts have concrete floors, interlocking blocks, and stones which may pose harm to us [LWVI]*."

The support teacher at the school (ST3) indicated that the LWVI had no problems with the nature of the sports fields since they hardly used them, except for the sandy soccer field.

The researcher observed that all the five LWVI were comfortable with the soccer field because it was sandy. The field looked friendly to LWVI because even when they fell, they would not harm themselves (see Figure 4.6). The researcher observed that the netball and basketball courts had concrete floors, interlocking blocks, and stones, which may pose

harm to LWVI. Although they were made of interlocks, the sports fields were clear of obstructions, and LWVI could walk freely.

**Figure 4.7** *School A: Sandy Soccer Field That May Be Safe for LWVI*

**School B**

Two of the three learner-participants said that the sports fields were not that bad because the soccer field was sandy and the other sports fields were plain. L6 said, "*Although the fields have concrete, there are no hazardous areas there, such as pavements.*" However, L7 did not feel safe playing on the sports fields with the concrete floor: *"I feel it is not safe in the concrete sports fields because if one falls, he/she may get harmed."*

The two support teachers at School B said that the sports fields were not very friendly as the pavement on the basketball and netball courts may be a danger to LWVI.

Findings from the observation showed that the soccer field at this school was also sandy, which the researcher thought was not a threat to LWVI. Only the other fields such as the netball and basketball pitches were not friendly to LWVI (see Figure 4.7).

**Figure 4.8** *Sandy Soccer Field at School B*

***Category Four: Hostels***

**School A**

The five learners at the school complained that the hostel was a hindrance to their learning. Although it provided them with a place to sleep, there were no rooms for LWVI to study.

L3 said, *"Sometimes you need to study while writing, but we are not able to use our braille machines at the hostel because there are no tables in our rooms."* On this point, L2 added, *"There is no safe place to keep our machines at the hostel."* L4 and L5 who were partially sighted further complained that they were not able to study at the hostel because, to use a magnifier Close-Circuit Television (CCTV), their books needed to be on a table.

In addition, all the five participants stated that the hostel was only conducive for sighted learners because they could study while lying on the bed.

They also complained about their scientific talking calculators, which required electricity to function. L1 said, *"We are not allowed to use electrical appliances in the hostels, yet our scientific talking calculators require electricity to function."*

The learner-participants also complained about unhygienic toilets, especially during the weekends when cleaners were not working. One learner said, *"You have to ask your guide to check which toilet is clean for you to use it. This is not always good because sometimes sighted peers get tired of checking the toilets for us.* (L1)

The support teacher stated that the school did not have study rooms at the hostel. The excerpt below represents the teachers' views:

> *It is unfortunate that the school does not have study rooms at the hostel for everyone including learners without visual impairment, but LWVI are finding it hard to study at the hostel because sometimes they need to use magnifiers and braille machines, which one can only use if they have a table. Again, it is not possible to bring tables into the hostel rooms because there is not enough space for tables.* (ST3)

**School B**

All the three learners at School B indicated that the hostel was not favorable to their learning.

L7 explained, *"It is not a good studying place, because we do not really come with our studying materials to the hostel. Our study materials are kept at the special units for safety purposes.*"

On the issue of the hostel, one support teacher revealed that the hostels lacked convenience for learners to study after school and had this to say:

> *I don't think the hostel is convenient for LWVI to study because they are only allowed to take books, but we cannot allow them to go with other studying materials to the hostel because they might break or lose them. These materials are very expensive and they really need to be taken good care of.* (ST1)

***Category Five: School surroundings***

**School A**

The five learner-participants were asked whether the school surroundings hindered their learning and they all pointed out that the school surroundings were not safe. There were trees, poles, and other broken chairs in the surroundings. However, L1 and L3 explained that trees were not that much of a threat to them because many trees were down the pavement. Trees only became a problem when they were going to the school garden but the sighted learners disturbed the movement of LWVI. L3 said, "*When we are exchanging classrooms, our sighted peers do not walk in an organized manner. You need to be careful when walking so that you do not bump into them."*

On that same issue, the support teacher explained that the surroundings at School A were not supportive of the movement of LWVI around the school: *"There are table frames scattered all over the place, so learners are not safe at all."* (ST3) (see Figure 4.9). The support teacher further highlighted that LWVI were not safe as they sometimes bumped into their sighted counterparts who would be rushing for lessons and unwary of the LWVI.

**Figure 4.9** *School A: Chair Frames Scattered All Around the School*

The researcher noted that the movement of learners in the school was not organized. This was dangerous to LWVI who might bump into their sighted peers. The observations further revealed that School A had many trees in the open space between classrooms and the hostel as well as classrooms and the school garden (see Figure 4.10). This was hazardous to LWVI when moving around.

**Figure 4.10** *Trees at School A at an Open Space May Be Hazardous to LWVI*

**School B**

Findings from interviews and observations show that the surroundings at School B were also not supportive of the movement of LWVI around the school. All learner-participants at this school (L6, L7, and L8), complained that, whenever they were exchanging classrooms, everyone moved randomly and not in a coordinated manner, which was not conducive to LWVI because they might bump into others when they were walking. L8 added,

> *Unless you have a guide, if there is no one to guide you, you have to be late for the next class because you have to wait for about five minutes for the crowd to clear for you to go to the next classroom.*

The two support teachers concurred that the school environment was hazardous to LWVI because of the broken furniture that lay around on the ground. The following excerpt represents the teachers' views:

*I think the furniture lying on the ground should be picked up and stored in a storeroom or it should be completely destroyed. The LWVI face the danger of falling after bumping onto the broken chairs and tables.* (ST2)

The researcher observed that sighted learners were just moving randomly and not in a coordinated manner, making the surroundings not conducive to LWVI. The observation revealed that there were also broken door frames inside the classroom which may pose a danger to LWVI.

***Category Six: Light and ventilation in classrooms***

**School A**

On the question of how the lighting and ventilation system in their classrooms supported their learning, all the five participants at School A replied that they had problems with their resource room and the storeroom windows, which were too small to allow adequate air circulation. The following excerpts confirm the learners' misgivings about light and ventilation in the classrooms:

*The resource room is not very conducive since it is a small storeroom that was designed to store books only, but this is where we [LWVI] keep our materials. The room is too small to cater for all our needs.* (L5)

*We also have to be in the resource room after classes so that we can write notes. This is the only place we can stay without disturbance from our sighted peers. Lack of sufficient air can be a health risk to us.* (L3)

*We sometimes have to invite our sighted peers to read for us while we braille and the storeroom becomes overcrowded, especially during afternoon studies.* (L2)

Apart from their storeroom's window, learners who are partially sighted also complained about dim lights and flashing bulbs in their classrooms. (see figure 4.11).

*The flashing bulb in the classroom disturbs my sight. However, the school often replaces the bulbs the moment they become dysfunctional.* (L4)

**Figure 4.11** *Classrooms with Non-working and Flashing Bulbs*

Regarding the issues of light and ventilation, the support teacher at this school also complained about the resource room where LWVI keep their materials. She had this to say:

*This storeroom is too small to accommodate all the learners. Unfortunately, there is no other room to keep their materials. I have reported this issue to the school management, but the school management has not done anything; they are just telling me they will include it in the next budget.* (ST3)

The researcher observed that many classrooms at School A were well ventilated and lighting was sufficient for LWVI. However, the researcher noted that some classrooms had missing light bulbs, while others had flashing bulbs. For example, the Biology and ICT laboratories were somehow dark despite their lights being on. The researcher further observed that the storeroom was also dark since the light provided by the bulb was dim. In one of the classes, the researcher observed that the teacher closed the door while teaching. Keeping the door open allowed too much light to enter the classroom, thus affecting those learners who were sensitive to light. She also observed that most of the classroom windows had no curtains. Only the Physical Science and ICT laboratory had curtains that could minimize sunlight rays from entering the laboratory.

**School B**

When the researcher posed a question to the learner-participants at School B on how the classrooms were supportive to them in terms of lighting and ventilation, all the three respondents remarked that they did not have problems with the lighting system at the school. For example, L8 said, *"We do not have problems with the lighting system at the school."* The two support teachers also acknowledged the good ventilation system at their school. ST2 said, *"Most of the buildings are well ventilated and are very supportive to LWVI. Most of our classrooms have curtains to prevent too much light."*

The researcher observed that the classrooms had adequate lighting and ventilation. The school provided curtains on the windows, which minimized the amount of light that entered the classrooms.

***Category Seven: Displays on walls and noticeboards***

**School A**

When the researcher asked the learner-participants whether the noticeboard displays at their school were friendly to them or not, the two participants that are blind (L1 and L3) replied that they did not care about what was being displayed on the noticeboards because they could not see it. L3 said, *"We get to know about the display on the walls when our sighted peers talk about it and usually when they are talking about the display, they will be informing us about what is on the notice board."*

On that same note, the three participants who are partially sighted complained that some of the notices were in small fonts and they had to ask others to read for them. One learner said,

> *Our Biology teacher likes to display pieces of information that she gets especially from newspapers or the Internet on the noticeboard. She only tells us to go and read for ourselves. Some fonts are too small that I have to ask my sighted friends to read them for me.* (L2)

On the issue of noticeboards, ST3 commented that some of the notices that were displayed on noticeboards were not supportive to LWVI, but these were displayed by learners. She said,

> *Most of the displays that are handwritten and in small font are notices displayed by learners. Official notices are not displayed on notice boards but they are announced at the morning assembly. I, therefore, do not think noticeboards are a serious challenge to LWVI, because the mode of communication in the school is not primarily through noticeboards.* (ST3)

The researcher observed that the school had some noticeboards outside the classrooms. The noticeboards at School A had handwritten notices that were displayed by learners. The letters were so small, such that learners who are partially sighted could not properly read them. There were also notices on the library walls, Biology laboratory noticeboards, as well as a periodic table in the Physical Science laboratory (see Figure 4.12). All these notices were not visual impairment-friendly. No notices in braille or three-dimensional form were observed at this school.

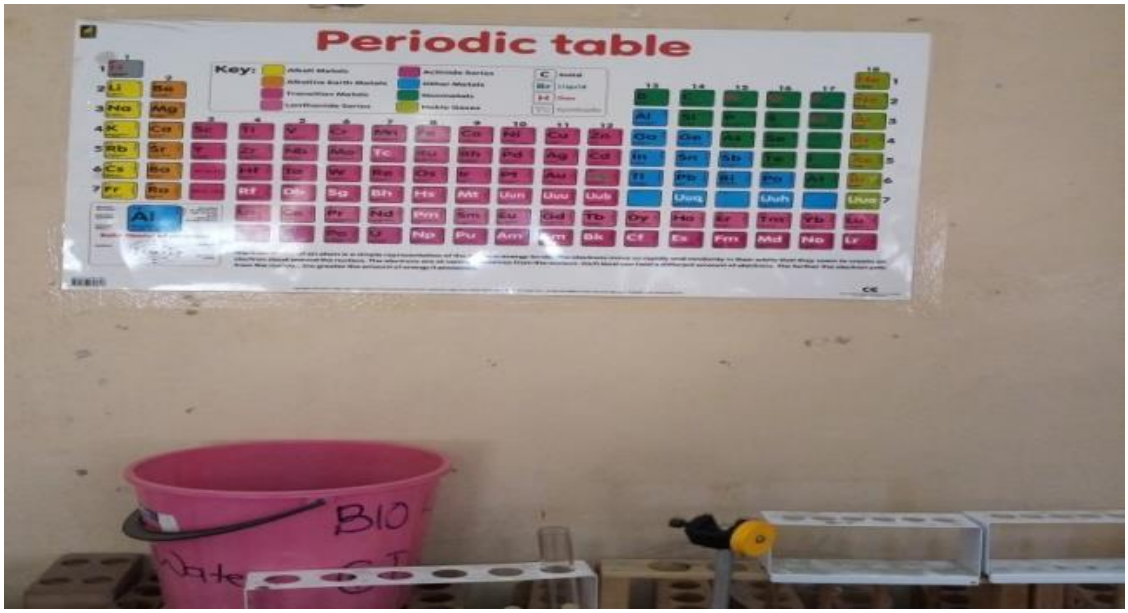


**Figure 4.12** *Periodic Table in the Physical Science Laboratory*

**School B**

All the three learner-participants at this school stated that the types of notices displayed on the walls inside the classroom were birthday charts and cleaning lists, of which they were not part of the cleaning teams. L8 said, *"Important announcements were done verbally during morning assembly; as a result, we do not feel left out when the notices are posted on the walls."*

The two support teachers (ST1 and ST2) at this school remarked that most of the important announcements were done verbally during the morning assembly.

The researcher observed that the displays on the noticeboards at School B were in small font. They were not visual impairment-friendly at all, as it was cut out from a newspaper and then displayed on the noticeboard. There were also noticeboards at the back of each class. However, the displayed notices such as cleaning lists and birthday charts were not

meant for LWVI, and they were both in handwritten text and small fonts. There were no displays in braille or three-dimensional forms observed.

#### 4.3.2.2 Sub-theme Two: Classroom arrangement

**School A**

The five learner-participants were asked if the classroom arrangements were conducive to LWVI. They all indicated that the classroom arrangements were not in favour of LWVI because there were noticeable obstructions to their movement. The following excerpt confirms the learners' disgruntlement with classrooms arrangements: *"Chairs in most classrooms are usually not properly arranged and this obstructs us when moving in and out."* (L1)

The support teacher agreed with the learners that the classroom arrangement was poor. However, she acknowledged that furniture in the Biology and Physical Science laboratories was properly arranged because there were fixed benches and tables, but ST3 pointed out, *"Some learners bring in extra tables and chairs, which are now blocking the pathway. This is hazardous to LWVI."*

The researcher observed that some chairs were lying around on the floor, while others were on top of the tables. She further observed that unarranged chairs obstructed the movement of the LWVI. Apart from chairs, the researcher observed that electricity sockets in one of the laboratories also obstructed the free movement of LWVI. The electricity sockets in the computer lab were fixed to the floor to make it easier for each computer user to plug it into a nearby socket, but these sockets were hazardous to LWVI, as they bumped into these sockets.

**School B**

It emerged from the observation of all the classrooms that the chairs in some classes were not arranged in straight lines. There were also broken doorframes inside the classrooms, which posed a danger to LWVI. This was confirmed by L8 and L7, who said their chairs were not always arranged, which required them to be extra careful when they were in the classrooms. L8 added that chairs were always scattered around the classrooms, especially after the break:

> *One day, when I entered the classroom from tea break, I bumped into the table and the chair that was on top of the table almost fell on me. From that day, I do not feel it is safe for me to move around the classroom after break anymore."* (L8)

ST1 explained, *"The chairs in the classrooms are not checked properly because of the rotation system that we have at the school. Learners move chairs from place to place. These scattered chairs may cause danger to LWVI*." ST3 added, *"Children are just children; no matter how much you tell them about the importance of a well-arranged classroom, they do not take it seriously."*

#### 4.3.2.3 Sub-theme Three: Number of learners in the class and sitting positions of LWVI

**School A**

The researcher asked how learners felt about their class size and if numbers affected their learning. All the five learner-participants at this school expressed that a large number of learners in their classes prevented the teachers from giving them enough attention. L1 said, *"I understand that we are too many in one class, but teachers must try their best to*

*reach all of us."* L3 added, *"The same methods a teacher uses to meet the needs of 40 learners with sight in the class are the same ways the teacher should use to meet the needs of the two or three LWVI in his/her class."*

On the question about where LWVI preferred to sit during lessons, L2 replied that their teachers instructed them to sit in the front. The learner-participants who are partially sighted replied that they preferred to sit in front of the class. However, L5 pointed out, *"Even though the teacher said that learners who are partially sighted must sit in the front, if we do not go early to class, we find the front seats already occupied by our sighted peers."* L4 added, *"I prefer sitting in the front, but I still cannot see the letters on the chalkboard. I feel like standing up but I am afraid to block my peers' view."*

ST3 expressed that the subject teachers were also complaining that their classes were too big and, as a result, they could not attend to all the learners. She further added that LWVI need more attention, but with this large number, the teacher might not be able to reach them. Large numbers of learners in the classrooms are contributing to the academic challenges for LWVI. These findings agree with those of Kiomoka (2014), who found that teachers were facing difficulties in meeting the needs of LWVI, due to large numbers of learners in classes.

The researcher observe the class size and the sitting positions of LWVI and found that although classrooms were very big, they were still overcrowded with about 47 learners in one class. The sitting positions of the LWVI in all lessons that were observed were in front of the class.

**School B**

The three learners indicated that the classrooms at their school were of normal size, but the number of learners in the classes was big, ranging from 45–55 learners per class. On the question about where the LWVI sat during the classes, the three learners replied that they sat in the front of the class so that they could see on the chalkboard. However, sometimes their sighted classmates took the seats of the LWVI when they reached the classes before them. L7 (a Grade 9 learner at School B) complained, *"The rotation system in our school irritates me because there are not enough chairs in some classes. My sighted classmates rush to the next class and grab chairs while I remain standing*." Notably, L7 narrated an incident that happened to her and her friend during class rotation:

> *"Our sighted peers grabbed all the chairs, and only we, the three learners that are blind remained without chairs." One learner informed the teacher that we three did not have chairs but the teacher told us not to blame her for that but our government, which allows everybody to be at that school."* (L7)

The learner said that she was offended and waited for everyone to go out of the classroom; then she told the teacher that she had been offended. The teacher apologized.

Regarding the issue of sitting positions and class size, the two support teachers indicated that having a large number of learners in a class was a challenge at their school. ST1 said, *"Even if a teacher is willing to attend to the needs of LWVI, the number of learners is too big to give them extra attention."* ST2 also complained about the large numbers, but he acknowledged that some teachers tried their best to attend LWVI, despite this challenge.

The researcher noted that the school had a high teacher-learner ratio of about 45–50 learners per teacher, which could affect the effectiveness of teaching and learning for all

learners since teachers might not be able to give individualized attention to learners with diverse abilities.

#### 4.3.2.4 Sub-theme Four: The shift from a special school to an inclusive secondary school

**School A**

The five learner-participants were asked to express how they felt about being moved from a special school to a mainstream school. They indicated that LWVI in special schools were in a restricted environment as hostel matrons were concerned about their safety and had to make sure that they were always in the vicinity of older people. For example, L3 indicated that they *"preferred inclusive education because the social life is better there."*

Another learner-participant, L1, pointed out that she preferred an inclusive education school. L1 reasoned, "*We do not rely on teachers for summaries. We can ask our sighted peers to read for us while we are brailling our notes*." L3, who was blind, indicated that he preferred to be in an inclusive setting because sighted peers were always willing to tell them what was happening at that moment, especially during practical lessons:

> *My peers can take me to the sports field, and tell me how the games are going on. Sometimes they can even hold my hand so that I feel things, for example, I can feel how big our plants have grown.* (L3)

L4, L2, and L5 indicated that they preferred learning at a special school. L4 (a learner who was partially sighted) reported that socially, she preferred an inclusive setting, but academically, she preferred a special school where she would be free to stand up and copy

notes while standing close to the chalkboard, without anyone complaining about their view being blocked.

L5 explained that at the inclusive school, they were not treated equally as at the special school. He then requested teachers to lighten the grading criteria for them to equitably fit with their sighted peers during school award ceremonies. The school award ceremonies have requirements; for example, only scores of 75% and above will be awarded. It is a challenge for LWVI to reach that percentage because they would not have received enough attention as their sighted peers during class activities.

On the issue of LWVI being moved from special schools to join inclusive schools, ST3 agreed that it was a good idea because children with visual impairments were no longer isolated from the rest of society. When in special schools, they are in isolation, because they are only exposed to people with disabilities in their surroundings. ST3 also said,

> *The idea of moving LWVI to mainstream secondary schools prepares them for adulthood, and they need exposure to sighted people as they will be working with them when they get jobs. However, they are faced with the challenge of not receiving academic benefits as their sighted peers.*

**School B**

The two learner-participants at this school indicated that they preferred a special school. L7 said,

> *We were receiving good treatment at the special school. We usually never experienced the issue of not having question papers to write, but here at the*

> *mainstream, you can find learners with vision writing, while we do not have question papers, but we are writing the same subject, taught by the same teacher. Teachers are not treating us the same way they are treating learners with sight.*

In addition, L2 wanted teachers to give them the same love that they gave to learners with sight. She remarked, *"It does not sound good for a teacher coming to the class and telling you that he/she forgot to prepare your activities while he/she prepared for others. This is what they do here at the inclusive school."* Another learner-participant (L8) indicated that she preferred the special school because *"Some of the learners with vision do not have good manners."* L7 complained about some of the silly jokes made by some learners without visual impairments. She narrated,

> *One day, they were giving out papers and they put one on my table and told me to take it; apparently, it was mine. How can they put a paper on my table while they know that I cannot see?*

L8 added that this kind of treatment was affecting them psychologically and made them feel unwelcome. Only one respondent from School B (L6) supported the idea of inclusive education.

Both ST1 and ST2 supported the idea of inclusive education, but they felt that the system was not ready, as teachers were not sufficiently trained to handle LWVI, especially in mainstream schools. They felt that teachers were not ready because in many cases, they failed to include LWVI in their lesson preparations and presentations. Apart from lessons, LWVI were also left out when it came to sports and other social activities.

#### 4.3.2.5 Sub-theme Five: Lack of parental involvement

**School A**

Findings from the interviews showed that parents did not visit the school to check how their children were learning. The five learner-participants expressed that their parents only came during the parents' meeting. However, they did not get a chance to interact with teachers, one on one, because the meeting was never scheduled for one-on-one meetings with parents.

The learner-participants believed that, although their parents did not visit the school, they were interested in their learning, because they bought them learning materials. L1 reported,

> *My parents did not visit the school to talk about my learning, but I have a strong feeling that they care for my learning because they are always providing me with the materials that I need to stay at school.*

L3 added,

> *My mother is very interested in my study although she does not visit my school. She bought me a talking watch, and it is the one that we are using with my fellow learners who are blind when writing examinations because the school does not provide us with one. My mother makes sure I have books in braille by giving me money to print my books at Oniipa Rehabilitation Center.*

The response from the support teacher-participant corresponded with those of the learner-participants; that is, parents of LWVI only came to school when they were invited for a

parents' meeting. Specifically, ST3 pointed out, "*I have never seen a parent of a LWVI visiting the school office to see how his/ her child is learning at school."*

**School B**

The three learners revealed that their parents only visited the school when they were invited; they only came during parents' meetings. They further indicated that their parents attended parents' meetings but they never interacted with the teachers at the school. L6 said, *"My parents are working far from the town; maybe that is the reason why they don't visit the school."* L8 added, "*My parents have never visited the school, but they have my class teacher's number. Sometimes my class teacher gives me messages from my mother."*

The two support teacher-participants revealed that it was not just the problem of parents of LWVI who did not visit the school, but it was also the attitude of all parents, including those of sighted learners, and that it was a problem.

### 4.3.3 Main Theme: Support System

Support systems involve collaboration or cooperation among teachers, parents, learners, community members, and regional directors of education (Lerner & Johns, 2012). This section focuses on how the learners received support. It includes the additional support that LWVI received from teachers and paraprofessionals, other learners, as well as financial and material support from outsiders.

#### 4.3.3.1 Sub-theme One: Support from special schools

**School A**

The questions on support from special schools were only discussed with the support teacher-participant. The support teacher indicated that School A depended on nearby special schools for support such as educational materials. ST3 said, *"I was transferred from a nearby special school to join the inclusive setting, so this is some kind of support we got at the resource school."* ST3 further mentioned that their school depended on special schools for support with equipment since they did not have enough. The nearby special school was the one that had programs such as Jaws and MathType, which can help in teaching LWVI. As mentioned earlier, ST3 elaborated that, the embosser machine at School A was broken; so they had to make soft copies of the question papers and the special school would print them into braille.

ST3 further elaborated that, apart from the support teacher, no other person knew how to read braille at School A; therefore, if the support teacher was not around, the principal had to take the learners' activities for brailling and their answers for de-brailling at that nearby special school.

**School B**

The two support teacher-participants at School B agreed that they strongly depended on the special unit departments, given that the two teachers initially worked at the special unit department, which is a primary school, and they were moved to an inclusive school.

ST1 explained that, in terms of materials, they did not depend on the special schools.

> *Our school started incorporating LWVI in the mainstream just eight years back, and we were fully funded by the government before we started. Our materials are still*

*new, at the same time, we were provided with a lot of necessary support before we started. Therefore we do not borrow from the special unit department.*

#### 4.3.3.2 Sub-theme Two: Support from support teachers

**School A**

The five learners responded that their support teacher was the backbone of their learning because, when she was not around or busy, the learners suffered. The teacher had other subjects to teach; therefore, sometimes she could not finish the brailling work on time, which could make life difficult for the LWVI. L1 said, *"At one time she was not around and we suffered because there were no other teachers who could read braille for us at the school."* (L1)

The learner-participants narrated their ordeal at one time when their support teacher was on sick leave. L4 said,

*When our teacher was on sick leave, for us to write other teachers' activities, the subject teachers read questions to us, and after writing, they kept our answer scripts and waited for the support teacher to come back to school to de-braille so that they could mark our work.*

They added that this kept the LWVI for a whole week without receiving feedback on their activities. L3 concluded, *"This just showed us that support teachers are the backbone of inclusive education."*

The learner-participants confirmed that their support teacher was the only person who responded immediately to their needs. L1 stressed, "*If he is not around, it is better that we*

*go back to the hostel because the possibility is very high that we are not going to write any activity that day."* This was because no one would be able to transcribe for them.

On the question about the kind of support the support teachers provided to LWVI, ST3 replied, *"I am the advocate for these learners. I braille their class activities."* ST3 further added that she helped in terms of providing counseling to LWVI, especially making sure that they have all the necessary learning equipment.

**School B**

The three learner-participants explained that their support teachers were the only people that made their learning possible because, if they were not around, no one could transcribe their brailled work into written text so that it could be read by teachers for marking.

On the questions about what kind of support they provided to LWVI, two support teachers explained that they provided much help. ST1 elaborated,

> *I am the one who prepares their activities and examinations. It is also my responsibility to order books for them from Oniipa Rehabilitation Center. ST2 added, "If I and my colleague are not around, LWVI's learning is affected because there is nobody at school who can assist them with their work.*

The researcher observed that while she was interviewing the support teachers at this school, the interviews were interrupted several times by LWVI who were coming to see them. This was a clear indication that there was a good relationship between the support teachers and the LWVI. The researcher observed that the support teachers were very

supportive of their LWVI. The researcher also found one support teacher at School B busy transcribing notes for the LWVI.

#### 4.3.3.3 Sub-theme Three: Support from teachers and other institutional workers

**School A**

The learner-participants indicated that some of their teachers would go through the learners' notes to check if they had copied the right things. L5 and L4 stated that the Agriculture teacher at School A provided extra activities and remedial teaching to LWVI only. L5 elaborated that other teachers only came to class and taught; they gave notes and activities to sighted learners and claimed to have forgotten about the LWVI.

The fact that most teachers did not provide special help to LWVI could also have contributed to the lower performance of LWVI. L1 reported, *"Teachers who invigilate us when we are writing only provide support by telling us the remaining time of our examination writing time since we do not have talking watches."*

On the issue of support from teachers, ST3 explained that only some teachers were willing to spend extra time helping the LWVI. Those teachers spent time with LWVI in the afternoons to help them catch up with what they may have lost.

The researcher did not observe any extra support given to LWVI by the teachers, except that one teacher at the school used enlarged characters on the chalkboard for LWVI to benefit as well. This was being done during their normal lesson time.

**School B**

The three learner-participants at this school reported that they could not remember any extra support from their teachers; for example, spending time with them after classes or trying to give them extra work.

On the question of how other institutional workers helped, L7 and L8 acknowledged that institutional workers were the ones who recommended that their hostel rooms should be downstairs. The three learners acknowledged that their kitchen workers did not allow them to stand in queues when getting food.

On the question of what kind of support LWVI received from teachers, support teachers explained that teachers were the ones who taught these learners; by doing so, they were already providing support. However ST1 argued,

> *Apart from normal teaching, lack of support from teachers is one of the challenges that face LWVI in inclusive schools. Teachers only teach in a normal way as they do with learners without special needs, then they go. They should at least provide extra support to LWVI.*

#### 4.3.3.4 Sub-theme Four: Support from sighted peers

**School A**

All the learners who are blind admitted that they had guides who were partially sighted. They further acknowledged that their sighted classmates helped with mobility by guiding them to and from classes. They also read for them while they took notes. They provided their notebooks after classes for LWVI to copy notes. Apart from schoolwork, their sighted peers guided them in the hostel. For example, L3 said, *"When we need to use the*

*toilet, our sighted colleagues make sure that the toilet seat is always clean so that we can sit."*

**School B**

During the interviews, the three learner-participants indicated that their sighted peers were their main support. L3 stated, *"I call them my 'eyes' because I am well informed about anything that happens at school because they are around.* L8 added, *"My peers without visual impairments read for us literature books because we do not have books in braille, and we do not have any problem with answering literature questions during examination. They are so helpful."*

The researcher observed that learners who are blind at this school were also guided by peers who are partially sighted and sighted learners. She noticed a boy that is blind being guided by a learner that was partially sighted while two girls that are blind were guided by one sighted learner. This showed that sighted peers helped LWVI in terms of mobility.

#### 4.3.3.5 Sub-theme Five: Support from the Regional Directorate of Education

***Category One: Resources and financial support***

**School A**

The question on what kind of financial and resource support the school received from the Ministry of Basic Education Arts and Culture was only in the interview guide for the support teachers. ST3 expressed that they did not get financial support from the Regional Directorate of Education. This Directorate is the department that is responsible for allocating funds to schools in the Ministry of Basic Education Arts and Culture. The

Regional Directorate only allocated money for buying textbooks for the whole school, then it was the responsibility of the school management to divide the funds across the school departments, including the special unit. However, ST3 indicated that the special unit was not regarded as a department on its own. The responsibility of ordering books for LWVI was given to the subject teachers. Unfortunately, the teachers only ordered books for learners with vision, so there were no textbooks for LWVI. Additionally, the budget from the Regional Directorate did not include other materials such as CCTV, embosser machines, etc. The support teacher at this school said, *"I once told the principal to include LWVIs' textbooks and other materials in the budget, but the principal only agreed but did not act on my suggestion."* (ST3)

**School B**

The two support teacher-participants commented on the lack of financial support from the Regional Directorate of Education. For example, ST1 reported, *"The region does not provide support to inclusive education settings; they only provide financial support to the special schools."* All the support teachers complained about the Namibian free education system, which allocated the same amount of money to every child in mainstream schools. ST2 felt that LWVI were supposed to be allocated more funds because their textbooks are expensive and that they also needed extra materials to assist them in their learning. The support teachers also complained that, sometimes, LWVI did not benefit from the government's educational grant, because apart from their brailling papers, schools did not buy any other materials for them. They complained that schools received money for every child, including those with visual impairment, but their money was used for sighted

learners. The participants mentioned the lack of financial support from the Regional Directorate as a challenge to LWVI in Namibian inclusive secondary schools.

***Category Two: Provision of support teachers and paraprofessionals by the Regional Directorate***

**School A**

All the five learners revealed that the school did not have paraprofessionals but just depend on a support teacher.

The support teacher-participant indicated that the Regional Directorate of Education managed to provide a support teacher to the school, so there was one support teacher who brailled learners' activities and de-brailled for teachers to mark. She had no other helper apart from fellow teachers.

**School B**

All the three LWVI responded that they had never received a person from outside to teach them or to explain things to them. L8 said, *"We have heard that we have a representative at the regional office, but we have never met that representative. We always think that the regional representatives only speak to our teachers."*

The two support teachers indicated that the MoEAC, through the Regional Directors, had managed to provide two support teachers, both with visual impairments. ST2 said, *"One of us is blind and cannot do some of the work because of his condition so I do most of the work."* However, the Regional Directorate has failed to provide some other professionals regarding inclusive education, such as paraprofessionals.

#### 4.3.3.6 Sub-theme Six: Support from community members

**School A**

The aspect of support from community members was discussed through a support teacher-participant who provided help to this school. The support teacher highlighted that Valombola Vocational Training Centre had donated a second braille machine to the school. Valombola gave the machine away because they did not have students with visual impairments anymore. ST3 also mentioned that learners at this school also received support from the Oniipa Rehabilitation Centre by brailling their books. ST3 said, *"Although we have to pay for this, we regard it as help because the Oniipa Rehabilitation Centre puts aside their work they were busy with to braille our learners' books."*

**School B**

The three LWVI at School B indicated that they were given beds and wardrobes by the Red Cross volunteers. Although these items were given specifically for LWVI, their sighted peers took them away and gave them the old ones. L4 remarked, *"Unfortunately, our hostel matrons do not do anything to the learners who take our mattresses."*

The three learners also expressed their appreciation of the Oniipa Rehabilitation Centre in Ondangwa, which printed their books.

The two support teachers indicated that **s**ome community members provided support to School B. According to ST1, School B was given an embosser, laptops for LWVI, and other assistive devices by the Millennium Challenge Corporation. The support teachers also highlighted that Oniipa Rehabilitation Centre in Ondangwa supported by printing for

the school. ST2 explained that, even though they did not have books at the time, they believed that Oniipa was busy braillling books for the new curriculum.

## 4.4 Summary

This chapter presented the findings from the interviews conducted with learners and support teachers as well as observations made on both School A and School B. The results revealed major challenges faced by LWVI in inclusive schools, such as those related to teaching and learning facilities and teaching strategies. The chapter further revealed the factors that contribute to the academic challenges of LWVI. Finally, the chapter presented the support systems available to LWVI at the two schools. The next chapter discusses the findings and makes conclusions and recommendations based on these results.

# CHAPTER 5: DISCUSSION OF FINDINGS AND RECOMMENDATIONS

## 5.1 Introduction

This chapter concludes this thesis by summarizing and discussing the findings of this study. The findings are critically interpreted, in comparison with the literature and the theoretical framework that informed the study. The discussion is guided by the findings and the themes that were identified.

## 5.2 Summary of the Study

The aim of this study was to explore the challenges faced by learners with visual impairments (LWVI). The researcher adopted a qualitative approach to achieve the objectives of the study. Unstructured, interviews were conducted with three support teachers and eight LWVI from School A in the Oshana region and School B in the Kavango region. Observations were also made at the selected secondary schools. The respondents were purposively selected, while the schools were conveniently sampled. The interviews were conducted in English and tape-recorded, then transcribed and analyzed. The findings and recommendations discussed are centered on the experiences of the eleven participants, the research questions, and the themes, sub-themes, and categories that emerged from the study.

## 5.3 Academic Challenges Faced by LWVI at the Two Selected Inclusive Schools in Namibia

### 5.3.1 Challenges Related to Choices of Subjects and Fields of Study

With regard to the challenges related to subject choices and fields of study, the findings showed that these aspects were some of the challenges faced by LWVI in the two inclusive secondary schools. The LWVI at both schools were restricted from taking subjects that

require calculations; for example, Mathematics, Geography, Physical Science, and Accounting. Support teachers highlighted that the two schools did not have programs that support braille Mathematics, and the teachers, lack knowledge on using existing information and communication technologies to teach calculations and graphs to LWVI. Instead of addressing these issues, the schools imposed that learners should take subjects from different fields of study and avoid subjects that include mathematical calculations. This finding corresponds with Joshua's (2013) findings that LWVI were not allowed to do Mathematics and other Mathematics-related subjects. Fanu et al. (2018) oppose the belief that the LWVI are unable to do subjects that involve calculations and diagrams. They argue that the LWVI can be taught and learn these subjects, provided that teachers adopt the appropriate instructional approaches.

Findings indicated that LWVI were unable to take ICT as a subject because computers in the schools were not programed to cater for LWVI. Therefore, ICT teachers told LWVI to sit away from computers, while sighted learners sat in front of computers for ICT lessons. Subsequently, the LWVI found it pointless to attend the classes because they were gaining nothing. This finding can be interpreted as the exclusion of LWVI from ICT classes, and the limitations can harm the learners' carrier choices since they are limited to specific subjects. Landsberg et al. (2013) have suggested screen readers, smart glasses for those who are blind, and voice recognition programs that can type for learners and follow commands as learners speak. This program can help LWVI to work easily as their sighted peers do. Landsberg et al. (2013) further recommend the use of attachable screen magnifiers available for stationary computers, as well as braille stickers for the keyboard. Therefore, schools can install these programs that support the learning of LWVI.

The findings of the study indicate that more work needs to be done to meet the aims of the NSPIE. One of the expected outcomes of Strategy 3 of the policy is "Good teaching and learning approach applied and care and support offered to all learners at all schools" (MoE, 2013, p. 8). Meanwhile, Strategy 4 aims to "Review the National Curriculum for Basic Education to reflect the diversity of learning needs of all learners" (MoE, 2013, p. 9). The findings showed that both the specific expected outcomes of Strategy 3 and the aim of Strategy 4 had not yet been met because LWVI were still experiencing serious challenges in mainstream schools due to their special learning needs. These learners were not learning ICT, Mathematics, and other subjects, while other sighted learners were learning them.

It seems that, although research has been done by Haihambo (2011), Hausiku (2017), Josua (2013), and Uusiku (2020), the issues raised in the findings of these studies have not yet been addressed. For example, Josua (2013) conducted a similar study eight years back at the same site as the current study. It emerged from the findings of the current study that the LWVI at these secondary schools were still complaining of not being catered for in all subjects in the inclusive setting.

The findings in this study could be confirmation of Donohue and Bornman's (2014) study, where teachers argued that the needs of learners with severe disabilities were best met in a separate class, not in the mainstream. They argue that this is because the teachers are not able to meet the needs of LWVI learning together with sighted learners. Moreover, the LWVI are unable to take some subjects in the inclusive setting, despite the fact that they used to do these subjects when they were in a special school.

### 5.3.2 Lack of Learning Materials

With regard to whether the lack of learning materials was a challenge to LWVI, the findings revealed that the inadequacy of learning materials for LWVI at both schools was recorded as a challenge to the learning of LWVI. Both learners and support teachers complained about the lack of assistive devices for LWVI such as CCTV monitors, TV readers, talking calculators, compact discs, memory sticks, and voice recorders, embossers. These schools had only a few devices (for example, braille machines, brailon papers), and an embosser machine was only at School B. Their computers were not programed to support LWVI.

Lack of teaching materials was also reported by Wakumbe (2013) and Hausiku (2017) as a challenge. Computers, typewriters, talking calculators and CCTVs, embossers, and thermoforming machines were unavailable to assist LWVI. Mays (2020) and Landsberg et al. (2013) recommend some electronic or technological programmes for use in inclusive schools, such as Jaws for those who are blind, ZoomText for those with low vision, Braille Duxbury, Scientific Notebooks, Kurzweil, and MathType, which support LWVI. The availability of these learning materials is instrumental in assisting LWVI in their learning (Kiomoka 2014). According to Vygotsky's sociocultural theory, learners need to interact with the learning materials to enhance cognitive development (Vygotsky, 1978). Therefore, the LWVI should be provided with the necessary learning materials in the same way their sighted peers are provided.

### 5.3.3 Lack of Textbooks

On the question of whether the lack of textbooks was a challenge to LWVI, findings of the study showed that, although learners who are partially sighted had all the necessary

textbooks, which were the same as those used by sighted learners, the font size in the books was still not favorable to them. All learners that are blind did not have enough textbooks. The learners who are blind said they only relied on their notes, which they usually took after the lessons. Josua's (2013) and Dakwa's (2014) studies also confirmed the issues of learners experiencing problems during lessons because their textbooks and teachers' notes were not in braille or large print. The problem of the lack of textbooks and notes during the lesson may lead to poor learning for LWVI because they have to listen to the teacher first and only take notes after classes. Some people learn better if they read notes first before the teacher explains. In connection with the concept of "more knowledgeable other" (MKO) in Vygotsky's sociocultural theory, it is believed that the textbook is one of the MKOs in the learning process of a child (McLeod, 2018). This is because it provides the information that LWVI need for them to pass. The fact that LWVI did not have textbooks was a challenge because the learning process lacked something. Learners are supposed to learn from the textbook first and then apply what they have learned in answering questions. Therefore, the LWVI might be performing lower than their sighted peers because they do not have textbooks, unlike their sighted peers.

Moreover, the findings showed that the schools do not make any effort to provide books to LWVI. This implies Universal Secondary Education in Namibia. According to Iipinge and Lukas (2016), Universal Primary Education is a system that introduced free basic education in Namibia. In 2016, the MoEAC in Namibia decided that all learners at the secondary school level should attend school for free. All the learning materials are also provided for free (MoEAC, 2016). However, this was not the case with LWVI at these schools, because their books had to be put in braille at their own cost.

The issue of LWVI spending their money on their learning materials could mean that these schools are not using the money that is allocated to LWVI for their benefit. The management of these schools should try to use the money allocated to LWVI to buy their books. It appears that these schools are yet to make concerted efforts to prepare textbooks for LWVI. The irony is that LWVI are only five, but the school managed to buy about 1,000 books for sighted learners in the whole school.

### 5.3.4 Teachers' Failure to Adjust Teaching Strategies to Accommodate LWVI

The researcher investigated whether teachers were able to adjust teaching strategies to accommodate LWVI. Findings from both schools showed that teachers did not adjust their teaching strategies to accommodate LWVI. In both schools, teachers resorted to the lecture method, while some of them taught by drawing on the chalkboard. This is consistent with the findings in Dakwa's (2014) study, where learners complained about the lecture method used by their teachers, which only catered for those who can see. Vygotsky's (1978) "more skilled people" process of learning asserts that, for a child to learn effectively, a foundation needs to be laid by a teacher who has more knowledge than the child. This seems not to be the case in the two schools. In most cases, the LWVI were forced to learn on their own because their teachers did not make an extra effort to include them in the teaching and learning activities. According to Shivute (2018), Namibian teachers do not understand the strategies for helping LWVI; therefore these learners are left to learn on their own. Uusiku (2020) suggests that there is a need for Namibian teachers to be trained in inclusive education because many teachers do not understand how inclusive education works.

Furthermore, the findings of this study revealed that teachers were not flexible with the learning materials because they were not applying the knowledge they had about including learners with diverse needs in the classrooms. It was difficult for some teachers to adjust the normal teaching strategies and materials to accommodate LWVI because they did not have the LWVI learners at heart, so they ignored their needs (Chireshe, 2011).

### 5.3.5 Concerns about Practical Activities

Practical activities are one of the challenges affecting the academic performance of LWVI. Findings from the observations showed that LWVI were not fully involved during practical lessons. This was because they could not see what was happening. This was an indication that perhaps some subjects were not suitable for LWVI. Maindi (2018) posits that subjects such as Physical Science and Agriculture are not suitable for them because learners are expected to do observations from the practical assessment activities. Maindi (2018) also suggests that learners with severe visual impairments cannot observe because they cannot see unless the activities are presented in audio formats, although learners who are partially sighted can do observations with the help of assistive devices.

### 5.3.6 Class Assessments of LWVI

The question of whether the nature of class assessments accommodated LWVI revealed that the types of assessment given contributed to the academic challenges faced by LWVI. All learner-participants felt left out because, many times, they were assessed in components that did not accommodate them. For example, in Biology, they were asked to label the diagrams, yet the teachers knew that they could not see them. Sometimes participants who are partially sighted complained about being asked to observe cells under a microscope, which was strenuous to their eyes. This was revealed by some learners who

are partially-sighted who complained about being asked to observe cells under a microscope, which is strenuous to their eyes. Being asked questions that they were unable to answer was also a challenge that led to the poor performance of LWVI compared to their sighted peers. Therefore, assessment tools need to be designed in a manner that accommodates LWVI.

The findings clearly indicate that the needs of LWVI are not being considered in the two secondary schools when it comes to assessment. With regard to assessment, the support teachers revealed that teachers did not adjust the assessment tools to meet the needs of LWVI. Teachers submitted the question papers for brailling at short notice, after being reminded by a support teacher that some questions were not fit for LWVI and needed to be changed, but it would be too late. Teachers would remove those questions from the paper, which would result in LWVI writing a sub-standard paper compared to the one written by their sighted peers. These findings agree with those of Habulezi and Phasha (2015), whereby the national examination question papers consisted of questions that did not consider LWVI's abilities, and learners were required to use materials that were not available and draw pictures that were beyond their abilities.

Based on the above-stated findings, the researcher believes that these situations hamper the performance of LWVI. The LWVI write sub-standard papers during the year, yet they are expected to write longer papers in the final examinations. This means that they lack proper training to work under pressure. They then encounter pressure during the final examinations, which leads to poor performance. Again, the issue of one type of braille during external examinations was a challenge because it led to panic. They thought that

something was wrong with their papers. Therefore, learners should be exposed to the standard nature and length of the examination papers before the final examinations.

### 5.3.7 Poorly Organized Examination Sessions

The findings from both schools indicate that poorly organized examination sessions are one of the academic challenges faced by LWVI in inclusive education secondary schools. Sometimes LWVI ends up with no examination question papers because the question paper in braille was not prepared.

In addition, LWVI reported that they sometimes ended up without invigilators. These findings contradict those of Habulezi and Phasha (2015), who observed that in Botswana's schools, specialist teachers in braille were the ones who invigilated examinations for LWVI to take care of the braille questions. However, this was not the case in the two secondary schools in Namibia; here, they sometimes wrote without invigilators. This could be one of the major causes of underperformance among the LWVI because they did not write examinations while in a good space.

The findings of the study suggest that LWVI may have the potential to excel, but poorly organized examination sessions as a result of negative attitudes of some teachers toward them can negatively affect their performance. The case of learners without visual impairment having their question papers ready while LWVI's questions were not ready, or the absence of invigilators for LWVI affected the performance of LWVI. It could affect the mood of the LWVI when they finally got their question papers. This is related to the idea of Vygotsky's (1978) sociocultural theory, which posits that culture can influence human development through its cultural products. When learners do not receive support from their environment and continuously have to bargain, they become disillusioned. As

Vygotsky (1978) asserts, cognitive development is triggered by social interaction; therefore, a disadvantageous social interactional environment is likely to cause unfavorable development of cognitive ability (Ramos, 2017).

This study views the two inclusive secondary schools as the social environments of LWVI, and everything happening in these schools constitutes the cultures of those schools. The culture of teachers not paying attention to LWVI's examinations may negatively influence the performance of these learners. For instance, if LWVI start to write late or their examination papers are missing, this can frustrate them and eventually result in underperformance. Even if LWVI came prepared for examinations, they might not be able to concentrate because of the frustration that was created when they found out that their question papers were not ready. It can therefore be construed that, although the teachers in the two schools practice inclusive education, there is no consideration of the various physical discrepancies that are dominant among the learners, which contribute to the academic challenges of LWVI.

## 5.4 What are the Factors Contributing to the Academic Challenges of LWVI in the Two Selected Schools?

### 5.4.1 Challenges Related to Infrastructure

The findings of this study revealed that the physical makeup of School A and School B posed challenges to LWVI's learning. It can be concluded from the findings that the physical makeup of the schools is an academic challenge to LWVI in inclusive secondary schools, which is affecting their performance. A safe environment is needed for successful inclusive education in order to provide the learners with a conducive physical environment that effectively supports and promotes inclusive education.

These findings concur with the MoE (2008), which stresses that the physical facilities in most schools are not accessible to people with disabilities. Lerner and Johns (2012) further discuss the importance of a conducive physical environment for LWVI, because it helps them to move freely. The findings from this study revealed that LWVI were not able to reach the classrooms and the garden on time to attend the practical lessons in Agriculture. This was due to the highly elevated pavement, which was an infrastructural barrier. These findings concur with those of Ambili (2018), Omede (2015), Haihambo (2011), and Josua (2013), who assert that infrastructural barriers are the main obstruction for learners with disabilities in Namibian secondary schools.

The findings show that the NSPIE is not yet implemented, which calls for the identification of barriers to the successful learning of LWVI (MoE, 2013). The school management of the two schools should have identified the physical barriers and addressed them. It appears that the reason these schools were constructed this way was that they were not constructed to cater for LWVI. This echoes Ambili's (2018) observation that in Namibia, many educational buildings were constructed before the time of inclusive education (before the Salamanca Declaration in 1994), which Namibia ratified. Before this, regular schools did not admit learners with disabilities. However, there is now a need to address the physical infrastructure at the two secondary schools so that the education of LWVI is not hindered. The MoEAC should provide the relevant infrastructural support at the schools to facilitate the successful implementation of inclusive learning for LWVI at the schools.

### 5.4.2 Displays on Walls and Noticeboards

On the question of whether displays on walls and noticeboards affected the academic performance of LWVI, the findings revealed that all the displays on the walls and noticeboards at both schools, inside and outside classrooms, were in small fonts, and pictures were not three-dimensional. This indicates that the school displays do not consider LWVI. Josua's (2013) study revealed the same results at School A. This is a clear indication that displays on those schools' walls, whether educational or not, excluded LWVI since they were unable to access these notices. As a result, the learners were both educationally and socially excluded. Schools should therefore display notices in large fonts as well as in braille (Fanu et al., 2018). In addition, Kabeto (2015) suggests that teachers need to know the conditions of all their learners' eyes and enlarge the text of whatever they display to accommodate these learners.

### 5.4.3 Number of Learners in the Class and Sitting Positions of LWVI

With regard to whether the number of learners in a class and the sitting positions of LWVI contributed to the academic challenges of LWVI in the two selected schools, findings revealed that the classrooms at both schools were big enough to accommodate both learners with full vision and LWVI. Kiomoka (2014) argues that inclusive classroom sizes are supposed to be big enough to accommodate all LWVI to learn smoothly, with learners with low-vision seated in the front. The current study further revealed that the classes were overcrowded with numbers of learners ranging from 45 to 55. The support teachers also complained that this number was too big to allow LWVI to adjust their seating positions when necessary. They stressed that overcrowding in an inclusive classroom was not conducive for LWVI to learn. If they did not get a place to sit closer to the chalkboard,

they would not see what was written on the chalkboard. Apart from that, teachers were unable to reach every learner in the class, including those with visual impairments. In line with this, Habulezi and Phasha (2015) allude that a large class size always poses insurmountable challenges to effective teaching. They further point out that large class groups make it difficult for the general classroom teacher to cope with learners daily and to give individual attention to learners with special needs. Lerner and Johns (2012) also emphasize that teachers working with learners with special needs should have a reduced class size to cope with the added responsibilities.

The above findings highlight the societal challenges that LWVI are experiencing. The social model of disability concurs that it is not the disability that is a problem but the problem is caused by society, which is disabling people living with disabilities (Mantey, 2017). In this study, LWVI could not sit in front because their sighted peers had grabbed the front seats. In addition, learners who are partially sighted sometimes needed to stand up to copy notes on the chalkboard; however, they also had to avoid blocking the view of those that can see. Teachers need to ensure that these learners are not bullied by other sighted learners in the classroom. The teachers should set a rule that all LWVI must sit where they have maximum benefit. Giving rules concurs with Mantey (2017), who suggests that, sometimes the teacher needs to modify the learning environment for LWVI to maximize the functional vision for those learners. The findings were parallel to Vygotsky's sociocultural theory, which asserts that child development first occurs through social interaction in the environment. It can, thus, be argued that the setup of the class and the classroom management principles are instrumental in maximizing learning benefits for LWVI in all learning environments.

### 5.4.4 Classroom Arrangement

With regard to classroom management, findings showed that, apart from the class size and sitting positions, unarranged chairs and some broken chairs and table frames were observed in both schools, which is hazardous to LWVI. These findings are consistent with Josua (2013), who found that there were rubbish bins along the walking lines for learners, which could hinder learners from moving from one classroom to the other. The ICT laboratory at School A, for example, had plugs fixed on the floor, which were also hazardous to LWVI. In addition, hazardous points were not demarcated for LWVI to notice them. Contrary to the researcher's findings, Fanu et al. (2018) suggest that hazardous points in inclusive classrooms should be marked for LWVI to notice them. Therefore, there is a need to mark the hazardous points in the entire school, specifically in the classrooms.

### 5.4.5 A Shift from a Special School to an Inclusive Secondary School

The researcher also investigated whether LWVI felt supported by being shifted from a special school to an inclusive secondary school. The findings showed that learners at the Grade 12 level preferred to be in an inclusive classroom. This was because, in inclusive classrooms, they were assisted by their sighted peers when writing notes. These findings also showed how the LWVI relied on the assistance of their sighted peers.

There was, however, an academic challenge resulting from the unfair end of Semester 2 best learners' award ceremony. The LWVI felt that it only benefited learners without visual impairments. They felt that the award benchmark should be reduced from 75% to 65% because the LWVI did not do regular class assessments compared to the sighted counterparts. To address this, the researcher suggests that the award ceremonies should

compare the LWVI among themselves, instead of comparing them with those with no visual disabilities. This concurs with Kiomoka (2014) who indicates that assessment for LWVI should be adjusted to suit them.

### 5.4.6 Lack of Parental Involvement

One of the important stakeholders in learners' education is parents. Hamutenya (2013) explains that parents can play a major role in their children's education, especially those with visual impairments, by providing teachers with information about the learning needs of their children. In the case of special education, parents are the ones to provide information about the disability background of their children. They are also able to give information about their strengths and weaknesses in learning and their behavior (Landsberg, 2013). In addition, Ambili (2018) states that parents can also communicate with teachers about physical and emotional development as well as their children's health.

It was observed at both schools that the parents of LWVI always made sure that their children had stationery. However, none of them took the time to visit their children at school. Buying stationery for learners showed that these parents cared about their children's education. This is in agreement with Mafa and Makumba (2013) who emphasize that parental involvement entails helping learners with homework and providing learning materials for them. However, it is very important for parents to visit schools (Fanu et al., 2018). This was not the case in the two secondary schools. Parents of the learners at the two inclusive schools were expected to visit their children's schools to receive feedback from teachers and provide the necessary information concerning their children's education. The researcher believes that the schools should also consider engaging the parents so that they can also play a role in helping the LWVI. This may help

parents to know how they should assist their children, which may help to improve the performance of LWVI.

It should be noted that some parents might have been willing to visit the schools, but they were unable due to several reasons. Josua (2013) states that many Namibian parents are willing to be part of their learners' education, but they are not able to visit the schools frequently due to lack of transport money, their work schedules, ignorance, and fear of intimidation by teachers. Therefore, schools should try to come up with strategies on how to encourage parents of LWVI, to visit their children's schools and collaborate with their teachers.

## 5.5 What Support Systems are Available to LWVI at the Two Inclusive Schools to Meet Their Academic Needs?

### 5.5.1 Support from Special Schools

The researcher asked whether the LWVI received support from special schools. The findings showed that both schools depended on nearby special schools for support. This was in sync with the NSPIE calls for the development and strengthening of the cycle of collaboration, and support (MoE, 2013). The guidelines urge secondary schools that cater for LWVI to adopt a collaborative culture with resource schools as well as other institutions that may help with the education of LWVI. This is a good idea because special schools are doing their work by providing services to include the two secondary schools. This concurs with Shivute (2018), whose study found out that the resource school was providing support to a nearby inclusive secondary school. The MoEAC needs to avail resources that can be used to support inclusive and resource schools. Teachers need to be

supported through the circuits in collaboration with resource schools by providing them with professional development for them to be capacitated to teach in inclusive classrooms.

### 5.5.2 Support from Support Teachers

The findings revealed that there was a good relationship between support teachers and LWVI. It emerged that support teachers played a major role in the lives of LWVI in inclusive schools. This was because they were equipped to help learners with special needs. The presence of support teachers at the schools showed that the schools had partially responded to the need for inclusive education to be effective.

Landsberg (2013) advises that professional development is needed for educators in terms of instructional and technical skills. Therefore, inclusive schools that are working with LWVI should be equipped with teachers who are specialized in dealing with LWVI. There should be at least one specialist at each school; someone who can read braille and understand the needs of LWVI. This could help the teachers to be able to manage the learning that takes place in classrooms with LWVI.

### 5.5.3 Support from Teachers and Other Institutional Workers

The learners' responses indicated that institutional workers, especially hostel workers, helped them in arranging rooms that were within their reach. The workers made sure that LWVI did not stand in a queue when getting food. This showed that institutional workers tried their best to ease the lives of LWVI in inclusive secondary schools.

The findings further showed that some of the teachers did not provide extra support to LWVI apart from normal teaching; others even forgot to give them activities or to enlarge their text. They only came into the classroom and taught those with sight. Lack of support

from teachers is the biggest academic challenge for the LWVI because teachers are the backbone of learning. The theory of the ZDP is supporting the presence of the teachers' support in this system. The child learns through interacting with the person who has more knowledge and by applying the knowledge he/she has learned (Vygotsky, 1989).

Vygotsky's (1978) sociocultural theory includes mediation. Vygotsky (1978) refers to the role that is played by significant others in a learner's life. The process of mediation is very important because it involves support from a second person, who can be a teacher. Teachers can play their role by adjusting their learning methods to fit LWVI. The LWVI face the serious challenge of being ignored by the teachers who are supposed to help them, and this is one of the main reasons they do not perform well. Teachers are the ones at a higher level, and they are the ones who are supposed to help LWVI to perform well.

### 5.5.4 Support from Sighted Peers

It was observed in this study that sighted peers from both schools helped LWVI. They gave them their notebooks for them to copy summaries and supported them with mobility. They also read them literature books, while LWVI were listening, because they did not have textbooks in braille. This is in sync with Wakumbe (2013), who found that sighted learners provided their notebooks to LWVI to copy notes. It is a good practice when learners work together. Salend (2011) suggests that cooperative group learning can help learners work collaboratively and help others in carrying out different learning tasks.

The findings showed that, among all stakeholders in the two secondary schools, the sighted peers were the most supportive of LWVI. This was a good example, and it has a positive influence on the academic performance of LWVI.

### 5.5.5 Resources and Financial Support from the Regional Directorate of Education

The findings revealed that the schools lacked financial support from the Regional Directorate and the Government. The support teachers complained about the unavailability of special funds allocated to LWVI, and that school management was not careful about the Government grant allocated to every child in basic education through Universal Secondary Education. They said that this fund was being used to buy textbooks for learners with sight, while LWVI remained without books. The findings showed that there were not enough textbooks for LWVI; hence, one responded that she used her own money to braille her own textbook, although this should be funded by the schools.

These observations were consistent with Josua (2013), who noted in her study that the principal of the school he studied complained that their school did not receive enough support from the Government in the form of finances or resources. The findings show that the Government did not respond to the call of the NSPIE (MoE, 2013), which advocates the provision of institutional support. This contradicts Lebona's (2013) claim that the Education Directorate plays a major role in the process of monitoring all special and inclusive schools.

In addition, Westwood (2011) reported that the lack of funds was a barrier to successful inclusive education for LWVI. This current study suggests that the unavailability of funds may be one of the major causes of the poor performance of LWVI in the selected two secondary schools. Therefore, the inclusive schools should request, through their regional finance offices, special budget funds for their inclusive school education sections to enable them to buy sufficient learning materials for LWVI and repair dysfunctional ones.

### 5.5.6 Provision of Support Teachers and Paraprofessionals by the Regional Directorate

The findings showed that these schools had support teachers who could read braille and help other teachers who could not read braille. School A had one teacher, while School B had two teachers, and no paraprofessionals were observed. This number of support teachers per school was very small; therefore, if these teachers failed to come to work one day, it meant that learners who are blind and could only read braille would not complete any school activity that day since there would be no other teacher to read braille in the whole school. Dakwa (2014) also found that the LWVI in mainstream schools lacked expert assistance because the teachers were not adequately trained to meet their needs.

This indicates that there is a need for more teachers to be trained to help LWVI. Lebona (2013) argues that the training of teachers with the necessary instructional skills is the responsibility of educational regions; thus, the two educational regions are challenged to provide schools with enough support teachers, as well as training teachers in the two secondary schools to read braille.

### 5.5.7 Support from Other Community Members

The findings showed that people from the community tried their best to help LWVI. Therefore, schools should be encouraged to ask community members for assistance. They should also ask information technologists to help them in installing talking programs for use by LWVI on their computers. Landsberg et al. (2013) provide suggestions on how to equip computers. They suggest that schools should install programs such as screen reading programs for learners who are partially sighted, smart glasses for the blind, and a voice recognition application that types for the learner and follows commands as the learner

speaks. Eligi and Mwantimwa (2017) add that schools should also provide special keyboards (high contrasting keyboards) or modify the keys on an existing keyboard by covering them with high contrast stickers. Schools should, therefore, consult information technologists to do this for them. It was noted from the findings that, computers at School A cannot be used by LWVI because they do not have special programs that support LWV. Therefore, these schools should build collaboration with community members such as parents and businesspeople for funding, as well as computer technicians to insert programs that support LWVI. There are many programs that are freely available. The MoEAC can also provide these needed materials upon request from schools.

## 5.6 Conclusions

This study aimed to explore and analyze the academic challenges faced by learners with visual impairments (LWVI) in inclusive secondary schools in Namibia. The research problem was derived from the fact that LWVI in secondary schools in Namibia sit for the same examinations as their sighted peers, but only sighted learners perform well, while LWVI generally perform poorly. This prompted the researcher to embark on a study to analyze the academic challenges faced by LWVI in inclusive secondary schools in Namibia. The study adopted a case study research design; hence, the findings may not be generalized to the whole country.

With regard to the question, "What are the academic challenges that LWVI face at the two selected inclusive schools in Namibia?" the study found that LWVI faced many challenges, such as those related to the lack of learning materials. The researcher concluded that the lack of learning materials for LWVI is a result of poor planning by the

school management. It seems that they do not consider the needs of LWVI in their budgeting.

They also faced major academic problems such as being unable to take all the subjects offered in the school curriculum. For example, learners could not take Mathematics or any other subject that involves calculations, graphs, practical work, and drawings. This challenge leads to limited career choices among LWVI. Subsequently, they might be forced to take careers that are not their choices due to a lack of pre-requisite knowledge. Given these findings, in agreement with Josua (2013), the researcher concluded that the courses on inclusive education that are given at teacher training institutions did not deal extensively with the inclusion of LWVI such as in-depth skills in developing braille. All teachers should be trained in braille so that they do not rely on support teachers.

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

With regard to the question, "What are the factors contributing to the academic challenges of LWVI in the two selected schools?," the findings of the study established that physical facilities such as pavements and stairs, the number of learners in a class, sitting positions of LWVI, and lack of parental involvement were the factors contributing to the academic challenges faced by LWVI at the two selected inclusive secondary schools. The study, however, confirms that "disability is not inability." It was observed that LWVI try their best to learn despite the unconducive environment or surroundings that limit them. The findings regarding these research questions have also caused the researcher to conclude that, although these schools (especially School A) were built before the introduction and

implementation of the (Namibian Sector Policy on Inclusive Education) NSPIE, the managements of the two schools have failed to re-design the school structures to accommodate LWVI. The researcher concluded that stakeholders in the education of LWVI are not aware of the measures to take in order to support LWVI in the mainstreaming, for them to feel included.

The third and last research question was, "What support systems are available to LWVI at these two schools to meet their academic needs?" The findings of the study indicated that sighted learners were very supportive to LWVI. It emerged that the LWVI received more help from their peers than from the teachers. It can be concluded that teachers were not very conversant with the inclusive education culture, despite the availability of a few learning and support materials. The LWVI also received support from the special school, their support teachers, and other community members. The study established that the learners received support in the form of resources and financial support from the Regional Directorate of Education through the normal budget funding. However, it was established that the management at the two inclusive secondary schools could seek further support by applying for a special budget fund through the finance office if the need arises.

Therefore, the researcher concludes that LWVI at the two schools that participated in this study do not seem to be benefiting much from inclusive education. The researcher further concludes that solutions to these challenges might take long to be realized unless teachers and school management get professional development in order to be capacitated to respond appropriately to the needs of LWVI. The Ministry of Education Arts and Culture (MoEAC) should widen in-service training for stakeholders in education. The researcher also concluded that stakeholders do not know what the NSPIE is trying to achieve. If

teachers, management, and regional officials knew what the policy is trying to achieve, they could have done more to address the needs of LWVI in inclusive schools. The inclusion of LWVI in mainstream schools as a giant progressive step which is in line with all legislation on disability mainstreaming in the education sector. However, a lot ought to be done to narrow the gap of access to quality education between LWVI and their peers without visual impairments.

## 5.7 Recommendations

Based on the findings of this study, the researcher recommends the following measures:

- The two inclusive secondary schools, one in the Oshana region and the other in the Kavango East region, should acquire all the necessary computer software to ensure that every component of a subject is available to all learners, including LWVI. The schools should approach their regional finance office to request assistance to buy and maintain equipment for their special education sections. The regional office should allocate, apart from the normal budget, a special budget for inclusive schools.

- The inclusive schools should also acquire assistive devices such as the Adobe Design Software, which can help in teaching and learning Mathematics and Physical Science.

- Educational regions should provide professional development for the capacity building of teachers toward inclusion and appropriate response to the needs of LWVI.

- The number of learners in a class where there are LWVI must be kept relatively small. According to the Namibian MoEAC's education policies, the teacher-learner ratio is supposed to be between 30:1 and 35:1. Therefore, this ratio should either be maintained or reduced.

- The school management, with the support of the regional directors, should allocate sufficient funds so that they acquire relevant resources for the inclusion of LWVI.

- The MoEAC should widen in-service training for stakeholders in education.

- The MoEAC should monitor the implementation, practice, and performance of the NSPIE in inclusive schools**.**

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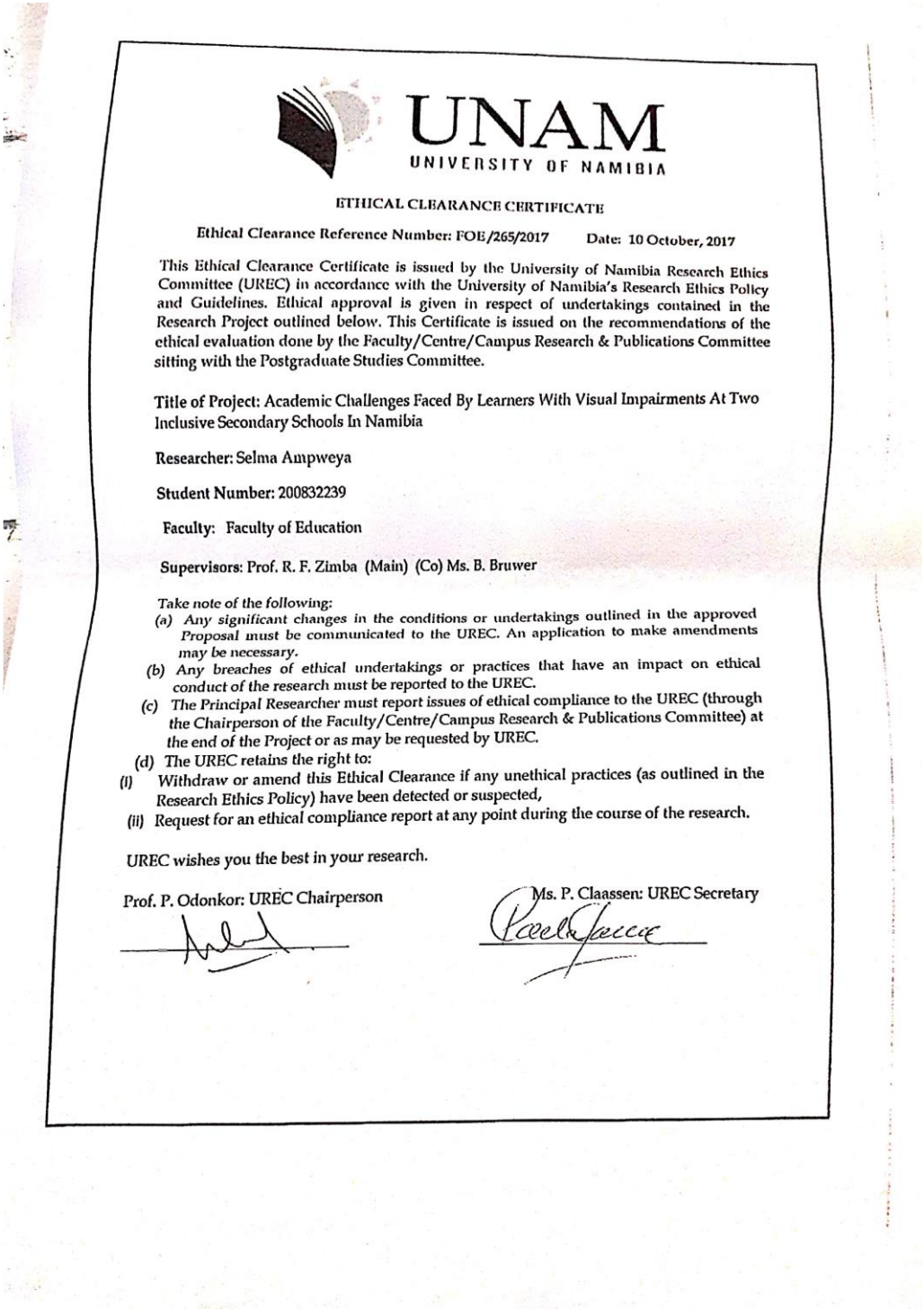
## APPENDIX A: ETHICAL CLEARANCE FROM THE UNIVERSITY OF NAMIBIA



UNAM
UNIVERSITY OF NAMIBIA

ETHICAL CLEARANCE CERTIFICATE

Ethical Clearance Reference Number: FOE/265/2017 Date: 10 October, 2017

This Ethical Clearance Certificate is issued by the University of Namibia Research Ethics Committee (UREC) 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 Faculty/Centre/Campus Research & Publications Committee sitting with the Postgraduate Studies Committee.

Title of Project: Academic Challenges Faced By Learners With Visual Impairments At Two Inclusive Secondary Schools In Namibia

Researcher: Selma Ampweya

Student Number: 200832239

Faculty: Faculty of Education

Supervisors: Prof. R. F. Zimba (Main) (Co) Ms. B. Bruwer

*Take note of the following:*

*(a) Any significant changes in the conditions or undertakings outlined in the approved Proposal must be communicated to the UREC. An application to make amendments may be necessary.*

*(b) Any breaches of ethical undertakings or practices that have an impact on ethical conduct of the research must be reported to the UREC.*

*(c) The Principal Researcher must report issues of ethical compliance to the UREC (through the Chairperson of the Faculty/Centre/Campus Research & Publications Committee) at the end of the Project or as may be requested by UREC.*

*(d) The UREC 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.*

UREC wishes you the best in your research.

Prof. P. Odonkor: UREC Chairperson

Ms. P. Claassen: UREC Secretary

# APPENDIX B: PERMISSION LETTER FROM THE MINISTRY OF EDUCATION, ARTS AND CULTURE

REPUBLIC OF NAMIBIA

**MINISTRY OF EDUCATION, ARTS AND CULTURE**

*Tel: +264 61 -2933200/2*
*Fax: +264 61- 2933922*
*Enquiries: C. Muchila/G Munene*
*Email: Cavin.Muchila@moe.gov.na/gm12munene@yahoo.co.uk*

*Luther Street, Govt. Office Park*
*Private Bag 13186*
*Windhoek*
*Namibia*

*File no: 11/1/1*

Ms Selma Namutenja Ampweya
P. O. Box 20
Tsandi-Uukwaluudhi
Cell: 081 299 2864

Dear Ms Ampweya

**SUBJECT: PERMISSION TO CONDUCT RESEARCH IN OSHANA AND KAVANGO EAST REGIONS**

Kindly be informed that permission to conduct research for your Master's Degree in *"Academic Challenges Faced by Learners with Impairment at two Inclusive Secondary Schools in Namibia"* is herewith granted. You are further requested to present the letter of approval to the Regional Director to ensure that research ethics are adhered to and disruption of curriculum delivery is avoided.

Furthermore, we humbly request you to share your research findings with the ministry. You may contact Mr C. Muchila/ Mr. G. Munene at the Directorate: Programmes and Quality Assurance (PQA) for provision of summary of your research findings.

I wish you the best in conducting your research and I look forward to hearing from you soon.

Sincerely yours

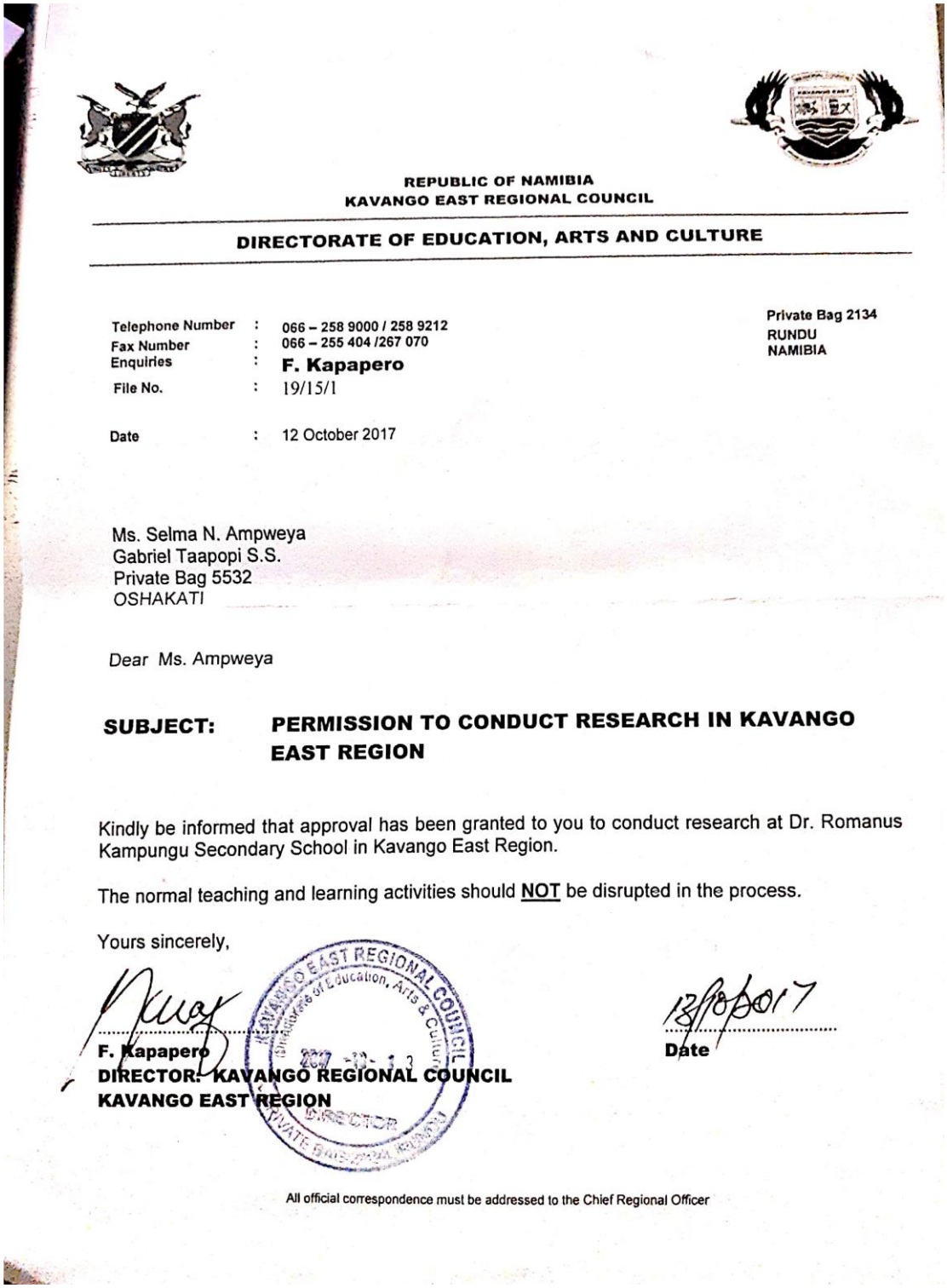
Ministry of Education, Arts and Culture
Office of the Permanent Secretary
2018 -02- 08
Private Bag 13186 Windhoek Namibia

SANET L. STEENKAMP
**PERMANENT SECRETARY**

08-02-18
Date

***All official correspondences must be addressed to the Permanent Secretary***

## APPENDIX C: PERMISSION FROM KAVANGO EAST REGION



REPUBLIC OF NAMIBIA
KAVANGO EAST REGIONAL COUNCIL

DIRECTORATE OF EDUCATION, ARTS AND CULTURE

Telephone Number : 066 – 258 9000 / 258 9212
Fax Number : 066 – 255 404 /267 070
Enquiries : **F. Kapapero**
File No. : 19/15/1

Private Bag 2134
RUNDU
NAMIBIA

Date : 12 October 2017

Ms. Selma N. Ampweya
Gabriel Taapopi S.S.
Private Bag 5532
OSHAKATI

*Dear* Ms. Ampweya

**SUBJECT: PERMISSION TO CONDUCT RESEARCH IN KAVANGO EAST REGION**

Kindly be informed that approval has been granted to you to conduct research at Dr. Romanus Kampungu Secondary School in Kavango East Region.

The normal teaching and learning activities should **NOT** be disrupted in the process.

Yours sincerely,

**F. Kapapero**
**DIRECTOR: KAVANGO REGIONAL COUNCIL**
**KAVANGO EAST REGION**

KAVANGO EAST REGIONAL COUNCIL (Directorate of Education, Arts & Culture) 2017 -10- 13 DIRECTOR PRIVATE BAG 2134 RUNDU

13/10/2017
**Date**

All official correspondence must be addressed to the Chief Regional Officer

## APPENDIX D: PERMISSION FROM OSHANA REGION

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. 12/2/1*

Ms Selma N Ampweya
Private Bag 5532
OSHAKATI

**SUBJECT: REQUEST TO CONDUCT RESEARCH IN ONE SCHOOL (GABRIEL TAAPOPI SECONDARY SCHOOL) IN OSHANA EDUCATION REGION.**

Your letter dated 09 October 2017 on the above caption bears reference.

Kindly be informed that permission is hereby granted to conduct research study at Gabriel Taapopi Secondary School in Ompundja Circuit, 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 and respected and retained throughout this activity i.e. Voluntary participation, and consent from participant and **(iii)** the permission is valid for entire academic year 2017.

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

Furthermore, we humbly request you to share with us your research findings with the Directorate of Education, Arts and Culture Oshana Region. You may contact Mr. GS Ndafenongo, 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,

09/10/2017

**HILENI M. AMUKANA**
**REGIONAL DIRECTOR**

OSHANA REGIONAL COUNCIL
DIRECTORATE OF EDUCATION, ARTS & CULTURE
OFFICE OF THE DIRECTOR
09 OCT 2017
Private Bag 5518
OSHAKATI
REPUBLIC OF NAMIBIA

*Cc: Inspector of Education, Ompundja Circuit*
*The Principal, Gabriel Taapopi Secondary School*

All Official Correspondence must be addressed to the Regional Director

## APPENDIX E: INFORMED CONSENT FORM FOR PARENTS

Dear parents

You are asked to allow your child to be part of a study on academic challenges faced by learners with visual impairments in two inclusive secondary schools in Namibia.

The findings will help the researcher in understanding the academic challenges facing learners with visual impairments. The findings may be used by the Ministry of Education, Arts and Culture in response to the academic challenges that face learners with visual impairments.

Any information provided by your child will be treated with confidentiality. To ensure confidentiality, codes (numbers) will be used instead of their real names. Taking part in this interview is voluntary, and the child can withdraw anytime should he/she find it uncomfortable to proceed.

Please choose the correct answer by circling the applicable answer.

I agree that my child should take part in the study

Yes

No

I agree that my child will be tape-recorded

Yes

No

Thank you very much.

Parent's signature …… Date ……..

Researcher's signature …… Date ……..

## APPENDIX F: RESEARCH PARTICIPANT CONSENT FORM

Dear participant ……..

You are asked to participate in a research study that is aimed at exploring the academic challenges that face learners with visual impairment at two inclusive education secondary schools.

Please note that you will receive no direct benefit for participating in this study.

However, your participation may help the researcher to better understand the challenges of learners with visual impairment in inclusive education secondary schools.

All information obtained about you during this study will be strictly confidential. To ensure confidentiality, the study is not going to use your name, but a code will be assigned to you.

Taking part in this study is voluntary; therefore you are always welcome to withdraw from the study once you feel uncomfortable to continue with the study.

Please circle the appropriate choice below each statement:

1. I agree to participate in the study

Yes

No

2. I agree to have the interview tape-recorded

Yes

No

3. I agree that the researcher may take my pictures as long as they are not showing my face.

Yes

No

I thank you very much for your time.

Participant's signature ……. Date ……

Person obtaining consent ……. Date ……

## APPENDIX G: OBSERVATION CHECKLIST

This checklist will help in finding answers to the research questions.

**Academic challenges**

**How do classroom assessments take place?**

**Factors contributing to academic challenges**

1. Infrastructure, outside and inside the classrooms (e.g., sports fields, hostels, dining hall).
2. Light and ventilation
3. Classroom size (how big or small it is)
4. Class size
5. Classroom arrangements
6. Displays on the walls
7. Noticeboards outside and inside classrooms
8. School surroundings
9. Teaching materials and lesson presentation
10. Number of learners in the class and sitting positions LWVI

**Factors contributing to academic challenges**

11. Participation of learners with visual impairments in the classroom
12. Classroom interactions between teachers and learners with visual impairments
13. Differences in activities in order to accommodate learners with visual impairments.
14. Teachers' adjustment of teaching and assessment methods, to accommodate learners with visual impairments.

**How do they carry out practical activities for:**

15. Agriculture
16. Physical Education

**Support system available**

17. Support from sighted peers (e.g., group work, study groups)
18. Support received from teachers, during classes.

## APPENDIX H: INTERVIEW GUIDE FOR LEARNERS WITH VISUAL IMPAIRMENTS

Dear respondents

You have been chosen to be part of the research on **Academic challenges faced by learners with visual impairments in two inclusive secondary schools in Namibia**. You were chosen because you have a visual impairment and you are attending a mainstream school. The findings will be used for academic purposes only and not for any other purpose. The information will be treated with confidentiality; therefore, feel free to provide answers. Should you find it uncomfortable to take part in the study, you have the right to withdraw.

General information

Age……

Sex……

Grade…….

SCHOOL ENVIRONMENT

1. Do you think the distance from the hostel to the classrooms, corridors, and stairs is conducive for your learning? If not, explain why?
2. Is the infrastructure around the school and classrooms supporting your needs? If not, how bad is it?
3. Which part of the school is more dangerous and unfriendly to people with visual impairments?
4. How are the classrooms supportive to you in terms of lighting and ventilation?
5. Do you think noticeboards are visual impairment-friendly?

SUBJECT CHOICES

6. Which field of study are you taking/doing and why did you choose that field?
7. Are there some subjects that you do not do? Why?

LEARNING PREFERENCES

8. Do you prefer learning at a special school or at an inclusive school? Why?
9. What are your experiences in a mainstream classroom?
10. Can you please tell me any other problems that you encounter in a mainstream classroom?

LEARNING MATERIALS

11. Do you have enough textbooks?
12. What kind of assistive and learning devices do you have at school?
13. Do you think they are helpful?

PARENTAL INVOLVEMENT

14. How do your parents support you in terms of your education?
15. How often do they visit the school concerning your education?
16. In case they did not come to school, how do they contact the school concerning your education?

INVOLVEMENT IN THE LESSONS

17. Apart from normal teaching, do your teachers give extra help?
18. What kind of assistance do you get from your teachers and sighted peers during lessons and outside the classroom?
19. How do you take notes during lessons?
20. In which subject do you encounter a lot of challenges? Why?
21. How often do your teachers give you a chance to participate during lessons?
22. Do you receive activities and examinations at the same time as your sighted counterparts do?
23. How do you carry out practical activities during lessons and assessments?

24. Do you use computers and other modern technologies in the classroom?

25. Do your teachers use computers and other modern activities when teaching? How do they help you when using these ICT materials?

SUPPORT FROM PEERS AND TEACHERS, EDUCATIONAL REGION, AND COMMUNITY MEMBERS

26. Apart from normal teaching, does your teacher give you extra assistance? What kind of assistance does he/she give you?

27. Is there any kind of assistance you received from other community members?

28. What do you want your teachers, or principal to do for you?

## APPENDIX I: INTERVIEW GUIDE FOR THE SUPPORT TEACHER

## INTERVIEW GUIDE FOR INCLUSIVE EDUCATION COORDINATORS (SUPPORT TEACHER)

Dear respondent

You have been chosen to be part of the research on **Academic challenges faced by learners with visual impairments in two inclusive secondary schools in Namibia**. You were chosen because you are a support teacher to these learners and you know what kind of challenges they are facing. The findings will be used for academic purposes only and not for any other purpose. The information will be treated with confidentiality; therefore, feel free to provide answers. Should you find it uncomfortable to take part in the study, you have the right to withdraw.

**PART A:** Circle the correct answer

Age group: 20–30 30–40 40–50 50–60

Gender: Male Female

Teaching qualification: None BETD BEDS

Training in inclusive education received: Yes No

1. How does school environment contribute to the academic challenges that face learners with visual impairment in inclusive schools?

2. Do you think the school environment supports learners with visual impairments?

3. How do you want it to be adjusted? / Why do you say it is supportive?

.....

.....

4. Do the displays on the walls fully support learners with visual impairments?

.....

.....

5. How does the lighting in the classrooms affect learners with visual impairments?

.....

.....

6. Are learners with visual impairments fully included at their hostels?

.....

.....

7. Are there enough learning materials for learners with visual impairments?

.....

.....

8. What kind of learning materials do you have and are they enough for all learners with visual impairments?

.....

.....

.....

FACTORS CONTRIBUTING TO ACADEMIC CHALLENGES

9. Do you think teaching and learning fully support learners with visual impairments?

.....

.....

10. Are learners with visual impairments actively involved in the classrooms?

.....

.....

11. How can you describe teachers' attitudes toward learners with visual impairments?

.....

.....

12. How do teachers give support to learners with visual impairments, in terms of adjusting learning materials, to accommodate them in the lesson?

.....

.....

13. How do learners with visual impairments select their fields of study?

.....

.....

14. How does lack of vision affect their academic performance?

.....

.....

15. Learners with visual impairments seem to perform well when they are in special schools, but it is not the same as when they are in a mainstream school. Why do you think this is the case?

    .....

    .....

    .....

16. Describe how assessment methods of inclusive education affect the performance of learners with visual impairments.

    .....

    .....

17. What can be done for learners with visual impairments to succeed in school?

    .....

    .....

    .....

SUPPORT SYSTEM AVAILABLE

1. Who provides teaching materials for the school?

   .....

   .....

2. How do you maintain the assistive devices for learners with visual impairments?

   .....

   .....

3. Who has the responsibility of guiding learners with visual impairments when it comes to mobility?

.....

.....

.....

4. Does the school get support from the region when it comes to educating learners with visual impairments? How do they support?

.....

.....

.....

5. Do you get support from community members?

.....

.....

6. What kind of support do you get from parents of learners with visual impairment?

.....

.....

.....

.....

7. Any other point you would like to make.

.....

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