

THE PROVISION OF LEARNING SUPPORT FOR LEARNERS WITH VISUAL
IMPAIRMENT AT A SENIOR SECONDARY SCHOOL IN BOTSWANA

By

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APPROVAL

This dissertation has been examined and is approved as meeting the expected standards of scholarship for the fulfilment of the requirements for the degree of Master of Education in the subject Inclusive Education.

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STATEMENT OF ORIGINALITY

I declare that: **“The provision of learning support for learners with visual impairment at a senior secondary school in Botswana”** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Student's signature:  Date: 20th September 2012

DEDICATION

This dissertation is dedicated to the late Ms. Dominique Bell who served as my supervisor before Professor Phasha took over. She sadly passed on before completing the work she had started. May Her Soul Rest in Eternal Peace.

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ABSTRACT

The study sought to investigate on the learning support provision for learners with visual impairment at a senior secondary school in Botswana. The objectives of the study were to describe and explain the learning support provided to the learners with visual impairment at the school and to suggest ways for improving the learning support services to the learners.

The study is qualitative in nature. The target population was the school community and its stakeholders. Data was collected using document study, interviews and observation. Qualitative data analysis was employed extensively through descriptions. The research study findings established that there are a variety of learning support programmes provided to learners with visual impairment at the school to enhance their understanding of the academic material. The learning support programmes range from counselling, guidance, advisory, consultancy, assessment, physical orientation of the environment, the school curriculum, tactile orientation of graphically presented learning materials to mention but a few.

However, these learning support programmes are not adequate and effective enough to help the learners perform better academically. The shortage of human and material resources especially in the recent past has negatively influenced the performance of learners with visual impairment. There are also main areas of weaknesses such as lack of adequate stakeholder consultation and involvement in the planning and implementation of special educational programmes.

The study recommends that partnership between the school and its stakeholders be improved. It is also important that the entire school community and stakeholders be involved in thoughtful, carefully researched learning support programmes. Large class sizes, imbalances in resource provision, counselling services and low production rate of learning and teaching materials at the Resource Centre all need serious attention.

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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 Introduction

This chapter gives the overall overview of the study. It gives the background information of the problem studied. It also presents the problem statement, purpose, objectives, research questions, the rationale and the structure of the study. The chapter concludes by clarifying the key terms of the study.

1.2 Background to the problem

The long-term vision for Botswana, that is, Vision 2016, stipulates that by the year 2016, Botswana shall have a system of quality education that is able to adapt to the changing needs of the country as the world changes and this will result in an educated, passionate and caring nation (Government of Botswana, 1997:5). One of the strategies put in place was to provide basic education to all by making it mandatory that all learners go up to, at least, form three in terms of education. Strategically, the government has gone further to increase the transition rate from junior secondary school to senior secondary school by increasing the number of places at senior secondary school through building additional senior secondary schools.

In addition, the government of Botswana introduced double shift system in some senior secondary schools located in areas with high concentration of people. Double shift entails having two schools sharing the premises. One school starts very early in the morning and the other starts around midday when the first school knocks off (Molebatsi, 2008:2). The aim of these strategies is to enable nearly all Batswana children to have access to education up to at least form five. Unfortunately, the strategies put in place make it difficult to identify poor performing learners. In contrast, efforts to expand access to tertiary education are minimal. It is concerning that places at

tertiary institutions are not as many as the big numbers of learners who complete form five. Additionally, one needs to pass well to gain admission at a university in Botswana or at least to secure external placement. As a result, learners who do not perform well are noticeable at this stage, particularly learners with visual impairment as they are unable to secure places at institutions of higher learning.

The learners with visual impairment in Botswana are largely the responsibility of government. However, non-governmental organizations (NGOs) and the private sector play some limited role. The learners with visual impairment in particular, are mostly under the care of government and the Dutch Reformed Church. At senior secondary school level, the government is responsible for over 90% of visually impaired learners (Tsae 2010:7). The district rehabilitation officers, (social welfare officers), register all the learners with visual impairment in their respective districts. The councils then assess the learner's family background to determine the extent of the support needed.

Kenosi (2008:2) stated that councils provide everything related to school for the learners with visual impairment if the learner's parents are unable to. In addition, they transport learners to schools, buy them all school requirements and cater for their school fees. Accordingly, this is in line with the Draft Revised National Policy on Destitute Persons and Orphans that categorises learners with visual impairment as people who are incapable of engaging in sustainable economic activity due to disability (Government of Botswana, 2000).

When learners complete form five (grade 12), they proceed to a Rehabilitation and Development Trust for the Blind. Monyatsi (2009:11) stipulated that admission for visually impaired learners at the Rehabilitation and Development Trust for the Blind, a Dutch Reformed Church NGO, is automatic. Regardless of one's grades, all visually impaired persons are accepted at this institution either for rehabilitation or for training in secretarial, switchboard operation, Agricultural or business management related courses.

After two years of being at a rehabilitation centre, a visually impaired learner may go to other institutions of higher learning for further training. However, learners who do not perform well at senior secondary school level may go back to their homes or look for work. Disappointingly, many learners with visual impairment end up doing nothing after leaving Rehabilitation and Development Trust. The Division of Special Education (Dart & Seeletso 2004:15; Dart 2004:147; Sello 2006:7 and Chela 2005:4) alluded to the fact that the learners with visual impairment are not performing well. This motivated the researcher to carry out an investigation on learning support services provided to learners with visual impairment.

Botswana has 30 government senior secondary schools that are operational. A few of these schools are mission schools but are government aided. Of all these schools, only the identified secondary school (a mainstream school) admits totally blind learners. The observation that learners with visual impairment are not performing well and that is the reason there are very few such learners at tertiary institutions in Botswana points direct to the school. This justifies why the researcher decided to carry out an investigation of the provision of learning support services to learners with visual impairment at the school.

1.3 Problem statement

The Division of Special Education in Botswana recently observed that learners with visual impairments are showing poor academic performance (Dart & Seeletso 2004:15, Dart 2004:147, Sello, 2006:7).

Table 1.1 Credit passes percentage of VI learners from 2003-2008

Year	Number of students	Credit pass %
2003	3	0
2004	4	25
2005	4	25
2006	6	33
2007	4	0
2008	10	40

NB: VI- Visually impaired learners

Source: Special Education Department, 2009

Due to these academic backlogs, very few learners with visual impairment meet admission requirements in tertiary institutions in Botswana. Currently, there are very few totally blind learners in all colleges and universities in Botswana (Sello, 2006:5).

Table 1.2 Number of form 5 learners with VI enrolled from 2003 to 2008

Year	Number of students	Number of learners admitted at college
2003	3	0
2004	4	1
2005	4	1
2006	6	2
2007	4	0
2008	10	4

Source: Special Education Department, 2008

All these occur in the context in which the Division of Special Education has maximized its efforts to help teachers develop and share knowledge on how to provide learning support programmes to learners with visual impairment. This raises questions about the relevance and effectiveness of such programmes in Botswana.

1.4 Aim and purpose of the study

The purpose of the study was to investigate learning support provision to learners with visual impairment at a school catering for learners with visual impairment in Botswana.

The objectives of the study are twofold:

- a. To describe and explain the learning support provided to learners with visual impairment at the identified secondary school.
- b. To suggest ways for improving the learning support services to learners with visual impairment at the identified school.

1.5 Main research question

The question posed by this study is:

What learning support programmes are offered to learners with visual impairment at a school which caters specifically for them in Botswana?

1.5.1 Sub research questions

- a. What and how are the learning support services provided to learners with visual impairment at the identified secondary school?
- b. What best ways can be suggested for improving the learning support provision for learners presenting with visual impairment?

1.6 Rationale for the study

The Government of Botswana has demonstrated in every respect how much it is willing to provide quality and equitable education for all. Subsequently, infrastructure and human resource development have been among the top priorities of the government. Notably, the funding in the Ministry of Education and Skills Development has

continuously been increasing especially in the Division of Special Education. On the contrary, the academic performance of learners with visual impairment on average is not synonymous with government efforts. The Education Public Expenditure Review Committee (2007) agrees that while Botswana has made remarkable progress against all goals listed in the plans, it is the goal relating to improving the quality in education in the country as a whole which represents the Ministry of Education's greatest challenge.

A few factors have been identified by various scholars as contributing factors towards the state of affairs. At the time of this research, (2009), Botswana did not yet have an inclusive education policy. McBride (2009) concludes that there are therefore no adequate didactic principles and logistics in place to propel special educational programmes. Certainly, the result of the foregoing is the absence of relevant structures in the Ministry of Education and delayed acquisition of material resources which are imported from other countries.

In the wake of the learners with visual impairment, (Abosi 2000:51), Botswana has heavily depended on other countries like United Kingdom, Malawi, Australia, South Africa and Zambia among others for Braille training. Evidently, teachers from local institutions, who are in fact not enough, are inadequately prepared for Braille provision. Furthermore, the government has not implemented the improvement of specialist teachers' salaries and that made most of them relax or teach in ordinary schools. As a result, the gaps in educational provision for all tend to disadvantage learners with visual impairment and further affect their educational performance and progression.

The World Educational Forum (2000) asserts that education is a fundamental human right. This means that every child has the right to quality and equitable education. In the delivery of educational programmes, care should be taken because, every child has unique characteristics, interests, abilities and learning needs (UNESCO 1994:iv). Therefore, it is pivotal that the implemented educational programmes should take into account the wide diversity of these characteristics.

The provision of learning support is central and crucial in this study because the main objective is to investigate the provision of learning support to learners with visual impairment. Learning support is essential for learners with visual impairment because it would enhance and improve their learning and eventually perform better. Better academic performance ensures progression to institutions of higher learning. It is envisaged that the research would help to identify the underlying causes of the poor performance of the learners with visual impairment and make recommendations on how these could be dealt with in order to raise the learners' performance.

1.7 Structure of the study

The study will progress as follows, this study will have five [5] chapters. Chapter 1 is orientation to the study and discusses the background to the problem, problem statement, the aim and purpose of the study, research questions, the rationale for the study and the operational definitions. Chapter 2 is on literature review which covers government's efforts on provision of education for learners with visual impairment, inclusion for learners with visual impairment, assessment, teaching in dual media, efforts to facilitate access to curriculum, educational support, communication and the principles in teaching the learners with visual impairment. Chapter 3 is on research methodology and discusses the research design, research question, research location, sampling, methods of data collection, data analysis procedure and ethical considerations. Chapter 4 presents the research findings and data analysis while chapter five carries a discussion on the research findings, the limitations of the study, future research and the conclusion.

1.8 Operational definitions of key terms

To facilitate an understanding, operational definition of the two key terms is provided.

- a. **Learning support services** refers to the strategies put in place to enhance the acquisition of knowledge (Menzo, 2008:17).

- b. **Learners with visual impairment** are learners with a malformation of any part of the visual system (Division of Special Education, 2006:5).

1.9 Conclusion

The chapter has given the general overview of the study. It addressed the background information of the investigation and the problem statement. It also highlighted the purpose of the study, which is to carry out an in-depth study of the learning support services provided to learners with visual impairment at a school catering for learners with visual impairment in Botswana. The objectives, the research questions, the rationale of the study and the structure of the study were also discussed. Chapter two is on the literature review for this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter covers the literature related to the problem of the study. It covers extensive reading on learning support for learners with visual impairment. The purpose of the literature review was to establish a thorough understanding of relevant work that has been undertaken. This, in turn, helped in the formation of the basis or backbone of this study and avoiding replication of work.

2.2 Government's efforts on the provision of education for learners with visual impairment

The Government of Botswana upholds the ratification of most of the international conventions related to inclusion, and in particular, the Convention on the Rights of Persons with Disabilities adopted in 2006 (McBride, 2009:20). In 1991, the government commissioned a consultancy to review special education provision in Botswana with the intention of meeting its obligation to all Botswana of equalizing education opportunities for all. This was followed by the 1993 National Commission on Education which revealed that there was an acute shortage of specialist teachers and lack of teacher training facilities in the country (Abosi, 2000:48). In addition, Masalela (2008:31) reports that in 1994 government approved the Revised National Policy on Education, which in part stated the government's commitment to the education of all children, including those with disabilities. In line with the recommendations of the consultancy, in 1994, the government upgraded the special education unit in the Ministry of Education to a division.

In response to the acute shortage of specialist teachers, training facilities have been introduced at the University of Botswana to equip teachers with the relevant intellectual

and professional skills for providing specialist services to exceptional learners in secondary schools. In addition, teacher training curricula have been modified to include awareness courses in special education. According to the government of Botswana (1997) all these efforts were aimed at ensuring that all teachers have some element of special education in pre-service or in-service. Furthermore, the New Revised National Policy on Education (1997) recommends that salaries of specialist teachers should include some weighting under parallel progression in recognition of the nature of their work.

The National Policy on Care for People with Disabilities (1996) aimed to strive for a self-sufficient society through the formation of an environment within which all people including those with disabilities can develop their abilities to the fullest possible extent through empowering them with education. Additionally, the policy also ensures that care for people with disabilities is to be effectively coordinated in a spirit of cooperation and beneficial interaction. The government has assigned various agencies, including the NGOs, specific responsibilities (Abosi, 2000:52).

The agencies include the Office of the President, Ministry of Education and Skills Development, the Ministry of Health, Ministry of Labour and Home Affairs and Botswana Council for the Disabled. The government has shown serious commitment in supporting learners with visual impairment through the budget allocation for special educational needs that has significantly been increasing over the years. This, according to the Division of Special Education (2006), is to ensure equal and equitable educational provision for all learners.

Mokalake, former assistant Minister of Education in Botswana, (2008:3) asserts that the government has been supporting learners with visual impairment since the adoption of the Revised National Policy on Education in 1994 by providing adequate qualified specialist teachers to assist the learners. The performance management systems documents in the Ministry of Education and Skills Development rate special education provision a major priority. The Division of Special Education through the Central Resource Centre for Special Education identifies and assesses learners of all age groups

from various places countrywide (Taite, 2007:17). The institution then places learners in various institutions of learning or recommends educational programmes.

The identified learners with visual impairment are also linked to social welfare officers in the district councils. The councils then take over and cater for learners everything that has to do with education if their parents are unable to. This is dependent on the social workers' assessment of the families. Moatshe (2008:23) stipulates that rehabilitation officers cater for both the learners and, to some extent, their families in terms of food if they are destitute. Additionally, the councils transport learners from their various homes to schools countrywide where they have automatic boarding facilities.

The Education Public Expenditure Review Committee, Botswana (2007:23) asserts that while Botswana has made remarkable progress against all goals listed in the plans, it is the goal relating to improving the quality in education in the country as a whole which represents the Ministry of Education's greatest challenge. Similarly, Abosi (2000:51) believes that special education in Botswana, in terms of methods of instruction, is still unfocused. Proper didactic principles and logistics are not in place to foster education for learners with visual impairment. Furthermore, Faith (2005:13) observed that there are no education officers for special education at all the regional offices in the country including at Secondary Department at national level.

The 1997 Revised National policy on Education was a timely document and has served Botswana well and while it was intended to last another ten years, time has caught up with it (McBride, 2009:14). In other ways, at the time of this research, (2009), Botswana had no policy on Inclusive Education although there are well-outlined objectives on the same in the Revised National Policy on Education and in the Performance Based Reward System documents which are used to drive and guide the operations of each government department in Botswana.

2.3 Inclusive Education for Learners with Visual impairment

In the context and national circumstances of Botswana, Inclusive Education is concerned with the development and provision of quality education with a focus on equity (Division of Special Education, 2009:22). Conceptually, Inclusive Education stipulates that every child has unique characteristics and should be treated equitably by teachers and schools. Ideally, inclusive schools serve the needs of all learners, enabling them to reach their potential with the involvement of parents and communities.

There are several definitions of inclusive education in literature. Inclusion is described as the changing of attitudes, behaviour, teaching methodology, curricular and the environment to meet the needs of all learners (Farrell 2000:23; Ainscow and Booth 2003:9; Roe 2008:153). They continue that it is a process by which a school attempts to respond to all learners as individuals by reconsidering its curricular organization and provision. Through this process, the school builds its capacity to accept all learners from the local community who wish to attend school and, in doing so, reduces the need to exclude learners. Inclusion in this case is about increasing participation for all learners in the school curriculum, culture, community or society.

Similarly, Landsberg (1999:3) views inclusive education as the practice of including everyone irrespective of talent, disability, social economic background or cultural origin in supportive mainstream schools and classrooms where all learners' needs are met. It is setting schools in the wider context of education systems both formal and non-formal which are inclusive and which draw on all the resources of their communities to ensure that the needs of the diverse learners are met effectively. In the same way, Landsberg and Gericke (2002:19) deem inclusive education as serving the needs of all children; the poor and the disadvantaged, including working children, remote rural dwellers and nomads, and ethnic and linguistic minorities, children, young people and adults affected by conflict, HIV/AIDS, hunger and poor health; and those with special educational needs.

Furthermore, Joanne (2007:4) and Forest and Pearpoint (2008:5) view the term inclusion as expressing commitment to educate each child, to the maximum extent appropriate, in the school and classroom the child would otherwise attend. They continue that inclusion is about individual ‘abilities’ and gifts. This simply entails enabling schools to serve all children or creating schools that welcome all learners, regardless of their characteristics, disadvantages or difficulties. It also refers to the extent a school or community welcomes all people as full members of the group and values them for the contribution that they make.

The theme of Inclusive Education is quite important in this particular study in the sense that the learners at the school are included in the mainstream school. The understanding of Inclusive Education will help us deduce whether the learners with visual impairment receive appropriate support to the effect that they would perform well academically.

2.4 Inclusion and the learner with visual impairment

Gray (2008:6) defines visual impairment as an impairment or defect of the sense of sight. Their eye conditions have become a significant barrier to scholastic progress and they determine the learning support to be provided to the learners as the learning support programmes differ from learner to learner and from one institution to the other. Similarly, Farrell (2000:9) confirms that policies and practices for educating learners with visual impairment are known to vary widely across the globe and this mostly is determined by the degree of the impairment of the learner.

The Ministry of Education in Botswana (2007:9) advises that inclusion of learners with visual impairment should be understood as a continuing process, not a one-time event. Collaboratively, the participation of all learners, teachers, parents and community members in the work of the school should be strengthened and sustained. Inclusion of learners with visual impairment can be either full inclusion or modalities are made to suit the situation. Farrell (2000:35) states that the term full inclusion implies that all children with visual impairment are educated in the mainstream schools. Moalosi and Molwantwa,

(2008:18) stipulate that in full inclusion learners receive all the support in the classroom. On the other hand, learners are sometimes supported both in the mainstream classrooms as well as at the resource room. Learners with visual impairment go to learn in the mainstream classroom and receive support there. However, when lessons are over, learners stay at the resource room where they receive support from different personnel.

2.5 Assessment

Assessment, as a diagnostic process that informs us how and what learners should be taught, should not just focus on the characteristics and attainment of the learners (UNESCO, 2001:56). It also has to focus on the curriculum, on the form of assessment and on other contextual factors. Certainly, for a particular learner to be referred to a special school or any other institution for inclusion in Botswana, assessment would have taken place. The Ministry of Education, Botswana (2007:15) and the Selly Oak Trust School (2008:8) state that assessment generates and analyses comprehensive information and provides feedback into teaching, administration, supervision, parenting and other educational services.

Assessment is for many reasons. For example, learners are assessed in order to determine the level of support they will need in order to demonstrate their abilities and that they have the correct level of support for each element of assessment. Other purposes of assessing the learners are to enable teachers to tailor their instructional methods and the curriculum to increase the possibilities for successful learning. Westwood (2001:3) advises that it is essential for teachers to find out as much as possible about the learner's strengths and weaknesses, abilities and degree of impairment in order to provide well targeted assistance. In other words, it is worth engaging in the process of assessment of learners with visual impairment as the information obtained leads to taking some useful action.

When assessment is conducted, it is important to communicate the results of the assessment to the learner and all the stakeholders concerned. Every institution must have

an assessment policy which will guide the daily routine of the practice at that institution. However, Mutepfa, Mpofu and Chataika (2007:5) advise that when assessment is carried out, it does not yield final results that will be stuck to forever. The learners need to be constantly reassessed and the programmes should be adjusting along with the assessment recommendations.

2.6 Teaching in dual media

In supporting learners with visual impairment in an inclusive school, it is important to teach in dual media. This practice enables learners with residual sight to use it when reading print and indirectly developing the sight. When learners use the little sight that they have to read, it helps them to see better materials that are graphically presented that they would otherwise not have seen clearly if embossed. Therefore, learners should be encouraged to use both Braille and print if they have some residual sight. Holbrook and Koenig (2001:9) suggest that a skilfully interwoven programme in dual media instruction should be designed, with the input from all stakeholders in an institution, to address the unique aspects of teaching print and Braille.

However, learners without sight will concentrate on Braille as this is their major literacy medium and as such, a specialist teacher must teach it effectively (Erwin, et al 2001:347). The learner with visual impairment requires total immersion in the Braille code so that he\she, too, can become absorbed, enthralled and fascinated by discovering and using the primary literacy medium. Authorities should therefore, ensure Braille access to learners with visual impairment in school settings from a tender age of learners.

It is essential for many learners that they have an aide or support person who is competent, enthusiastic and is highly committed to Braille. This is because of the need for constant immediate Braille provision. Ideally, learning support assistants must have a comprehensive understanding of, and a total commitment to the Braille code to reduce the degree of error (Well-Jensen and Burke, 2008:87). This would enable the learning support

staff identify learners' mistakes in Braille and correct them especially in subjects where there are no specialist teachers.

On the other hand, Chikapa (2009:4) observed that specialist teachers who have not done intensive Braille training struggle with Braille writing and reading. He further elaborates that this situation is common with specialist teachers who go straight from high school to universities. Erratically, the specialist teachers in reference dwell much on theory and administration in special education rather than on Braille. As a result, they tend to lack adequate expertise on Braille. The lack of knowledge in Braille makes their learning support services quite limited.

2.7 Efforts to facilitate access to curriculum

The curriculum offered in an inclusive school should be broad, balanced and accessible to provide the maximum educational opportunity possible for all its learners regardless of the diversity or complexity of their needs. In addition, these aspects would entail the provision of both physical and institutional unqualified opportunity to learning facilities, resources and curricular programmes to all the learners. Reasonably, Nenty (2003:41) advocates for the creation and maintenance of a learning environment that is physically and psychologically conducive for every learner so that opportunities are fair and equitable to all regardless of sex, ethnic group and socio-economic status of the learners.

Learners with visual impairment requiring additional support to access the curriculum should be given the support they require within the available resources. This simply entails that all learners should be given access to the curriculum to the same level as the others by adapting the resources, assessment methods, classroom organisation, learner grouping or teaching methods for learners so that they can take part as fully as possible (Farrell 2002:23). Similarly, Koga and Hall (2008:7) add that modifying existing general curriculum is an effective way to create more accessible learning environments to support all learners and their teachers in various educational contexts.

The Selly Oak Trust School (2008:9) advises that each curriculum area should be sensitively modified to ensure total access. Some of the strategies that lead to achieving accessibility are accelerating academic access, promoting personal and emotional access, increasing language accessibility and training teachers to identify, assess and teach learners with specific learning difficulties. Therefore, this expertise should be carried into each curriculum area.

Accordingly, curriculum modifications and adaptations take place within the context which all other learners access. They usually involve personalised teaching supported by relevant materials or teaching and learning aids like using large print textbooks and materials, working three periods a week with a peer tutor and having a peer note-taker or amanuensis (UNESCO, 2001). Sometimes adaptations may need to be implemented alongside some modification to the curriculum and practice. In addition, the curriculum can be changed by adding or substituting courses or content to meet individual learners' needs (Landsberg & Gericke, 2002:101). For example, a one-year language programme may be covered in two or three years time, as learners with special educational needs are being given a little more time to finish their tasks.

Davis and Hopwood (2001:2) report that current research indicates that reading through Braille imposes significant cognitive demands for blind learners when compared with sighted age peers who read print. As a result, many learners with visual impairment become (visually) fatigued when concentrating on school work for sustained periods of time and so often need not only extended time but also to rest (their eyes) regularly. Furthermore, specific skills, knowledge and behaviour are needed to facilitate learners' access to the main curriculum and to promote social inclusion amongst peers, and more widely in society.

These skills include life skills, Braille, orientation and mobility. As Davis and Hopwood (2001:9) assert, it is commonly held that it is not appropriate to teach some skills such as mobility, life skills and initial stages of Braille in the main classroom. Basic mobility skills are best learnt in a secluded, safe environment other than the main classroom. As a

result, specialised teaching is essential, often personal and appropriate to impart all these skills.

Another aspect that easily propels curriculum access and delivery is the use of access technology. There is little doubt that technology has revolutionised the education of learners with visual impairment in developed countries. Candela (2003:6) states that efficient and effective use of assistive devices helps meet the specific educational and vocational needs of learners with visual impairment. In addition, C. Botswanetse, former senior brailist at a school in Botswana, (personal communication, March 20, 2008) said that by use of information and communication technologies, a learner can listen to recorded information, listen to information being read with the help of JAWS from the computer or scanners that can record and read. Conveniently, information can also be adapted in various ways that include enlarging print with the help of closed circuit televisions, zoom text, photocopying machines and hand held magnifying devices.

Other examples of assistive devices include Dictaphones, electronic Brailers, task lighting, reading stands/sloping desks, Braille translation programs and other highly sophisticated electronic aides. Evidently, the varied assistive technology contributes to the effectiveness of curriculum modification and has offered enormous benefits to learners with visual impairment. Technology should, however, not be regarded as a substitute for hard copy Braille. Gale (2001:15) further advises that teachers must constantly question if necessary and as well ponder the appropriate time to introduce the technology.

All this technology requires a power source and careful positioning in the classroom so that there are no trailing cables that might be hazardous. This can prove a serious limitation to where the child is seated and equipment positioned and, unless addressed, can result in the child being separated in class from his or her peers. Therefore, the class teacher should minimise rearrangements to class seating. The selection and the practice of technology need to follow the learner's individualised educational programme in relation to the general curriculum (Bray, Brown & Green, 2004).

2.8 Educational support

Support is a very important aspect in the practice of Inclusive Education. Learners need to be supported to augment on the impairments that would otherwise disadvantage them. Support is anything which enables the school to respond to diversity (Gray 2008:246, Landsberg & Gericke 2002:71). In other words, support includes everything that enables learners to learn. It particularly includes those resources which supplement what the ordinary class teacher can provide.

Landsberg and Gericke (2002:71) assert that the most important form of support is that which is provided from the resources that are at the disposal of every school. This includes children supporting children, teachers supporting teachers, parents as partners in the education of their children and communities as supporters of schools. It means these support structures range from the learners, teachers, managers, parents, psychologists, social workers, therapists, medical workers, to many more personnel that could be of help in the process. Therefore, support has to be delivered holistically and as such, service agencies have to work together rather than in isolation from each other.

2.8.1 Classroom support

Learning support activities taking place in the classrooms are crucial for improving access to the curriculum and developing the learners' skills of social interaction and independence. Significantly, the learning environment provided for learners is equally a crucial factor in the achievement of productive and effective learning outcomes. As Foreman (2001:17) and Palat (2008) record, teachers face the daily challenge of establishing and supporting a rich learning environment which is both stimulating and efficient.

Although many aspects must be considered, two related themes can be identified. First, issues in classroom management and organization including the development of classroom routines, seating arrangements and rules. Second, the classroom climate,

typically described as the atmosphere experienced by all learners. Clearly, these features are usually related to the types of expectations teachers have of learners, the variety of curricular and instructional approaches used in the promotion of learning and the degree of encouragement provided to learners.

Most importantly, the Ministry of Education and Skills Development supports the ideals of inclusive practices in schools in Botswana. In its guidelines in the staff establishment register for schools, Government of Botswana (2006:6) stipulates that specialist teachers for learners with special educational needs should have fewer classes than mainstream teachers so that they can support other teachers and learners. Ideally, the number of learners in a class where there are learners with visual impairment should be reduced. The Ministry of Education and Skills Development, Botswana (2006:iii) states that one learner with visual impairment is equivalent to four mainstream learners. The aim of the guidelines is to increase the rate of support in classes where there are learners with visual impairment.

Piljl and Van den Bos (2001:248), Tsheko and Okumbe (2004:107) and Eloff and Kgwete (2007:5) identify the following additional features of practice that seem most significant in removing the barriers to the participation and learning of the child with visual impairment:

- a. the learning support assistants working in a number of ways and with other learners other than those with visual impairment.
- b. curriculum delivery via non-visual means in addition to a visually based presentation.
- c. frequent use of participatory teaching methods by focusing on identification and reduction of barriers to learning and participation.
- d. clearly adapted learning and teaching materials that the learner with visual impairment can understand.
- e. the learner with visual impairment positioned within the class to facilitate interaction with others.
- f. provision for audio tape, large print or Braille materials.

- g. changing the setting, e.g. moving to smaller and distraction-free settings.
- h. identifying and providing support for staff as well as learners.
- i. restructuring the cultures, policies and practices in the school
- j. teaching learners to look for ways to help each other
- k. openly dealing with individual differences.
- l. addressing the challenges of perceived lack of skills and competencies in teachers.

Learning support staff needs to be more than just industrious. The support to learners of diverse backgrounds and impairments calls for varied instructional strategies to achieve educational success. Accordingly, learning and teaching materials should be delivered not only through visual means but also via non-visual means and should be clearly adapted and modified so that all learners have equal access. This entails Braille, embossing, transcribing, recording and making necessary changes to the learning material. Notably, the success of every learner is also dependent on instructional strategies. Additionally, Chang and Schaller (2002:558) recommend the use of tactile cues, active learning, cooperative groups, the provision of Braille materials and assistive devices. These would give the learners a variety of opportunities to participate in the learning process.

Teacher capacity building ranks highly on the success of instructional delivery. Therefore, teachers also require support to develop through teamwork, consultations, and research and staff development workshops. This will make them to be more abreast with emerging trends that emanate from the dynamism of knowledge. Characteristically, learning support staff needs to be understanding, willing to listen, helpful, considerate and patient. The consequential result is the learners feeling valued and eventual general success.

2.8.2 Social support

Kef (2002:22) indicates that social contacts and social support have positive effects on psychosocial adjustment, self-esteem and meeting the needs of learners. Social support promotes psychological well being and the amount of satisfaction, with support, may

have an impact on learners' psychological health. Unfortunately, impairments such as visual impairment threaten the quality and maintenance of relationships with family members, friends, teachers and other important persons (Kirk et al, 2009). The impairment poses restrictions in the performance of social roles related to work, schooling, leisure activities, family life and friendships. At the same time, these relationships play an important role in coping with impairments since approval and acceptance by other learners is essential for the development of self-approval and self-acceptance.

Specialist teachers, parents and the guidance and counselling department should collectively work hard to bridge the gap, if any, to socially include the learners and meet their needs. Pringle (1980:33) states that the essential driving force of the will to learn for each of the needs of the learners has its roots in the quality of relationships available to learners from the time they come into the school. The basic and all-pervasive features of parental/teacher's love is that the learner is valued unconditionally and for his/her own sake, irrespective of one's appearance, ability or personality.

The need for security is important for stable relationships both at home and school. Mwamwenda (1995) is of the view that parental/teacher expectations and discipline which are consistent – whether tending to be strict or lenient, enhance the sense of security in the learner, providing a dependable predictable framework. Therefore, parental and teacher enthusiasm and warmth elicit greater response from each learner and they, in addition, create for the whole class a climate of involvement reflected in the attitudes of learners to each other, to the teacher and to learning

2.8.3 Support structures

In an institution where there are learners with visual impairment, there must be committees that organise and coordinate the teaching of learners with visual impairment and ensure that teachers and learners receive the necessary support (Du Toit 1997:155). Structurally, the committees may consist of small groups of teachers who take referrals

from individual teachers, help, advice and act as link to other structures outside the school. In addition, this committee acts as consultants to teachers, facilitators at meetings, involve experts from outside the school in the teaching of learners, encourage good cooperation with the area's educational support services section and promote cooperation with other bodies involved in the process.

Flem and Keller (2000:199) assert that there should be partnerships among parents, teachers, providers of support services and all other stakeholders. This may lead to children supporting children, teachers supporting teachers, parents as partners in the education of their children and communities as supporters of schools. Ideally, this health situation should prevail in inclusive schools. In a given school, there should be a School Based Learning Support Team, which will coordinate all the learning activities in the school.

In Kawengo's (2006:33) view, the team links teachers to the Senior Management Team and to the outside world through the head of the school. There can also be Board of Directors composed of a multi disciplinary team of prominent individuals from health, councils, NGOs, the private sector and parents' representatives. The School Based Learning Support Team normally networks the school to other collaborating institutions including the district, region and the national bodies.

2.9 Principles in teaching learners with visual impairments

Specialist teachers must strive to develop the senses of touch and hearing so that the learners with visual impairment can see with their hands and ears. Seeing with hands and ears can be achieved by means of using three major principles of concreteness, unifying experiences and learning by doing.

2.9.1 Concreteness

Mavundukure (2001:7) asserts that the idea of concreteness is based on the fact that a learner with visual impairment learns primarily through hearing and touch. Touch is the main sense and it is not a distant sense. So, through tactile observation of real things, and of models of objects, the learner with visual impairment can learn about their shape, size, surface qualities, pliability and temperature to mention but a few.

Real things can be manipulated if they are not dangerous and by so doing more information can be obtained. Chang and Schaller (2002:565) carry a narration by Richard, a learner, who asserts that he felt his learning was enhanced when his teacher described a process in detail, when concrete and tangible objects were provided and when learners did hands on projects. As a result, he felt valued when information was presented in a way that suited his learning style.

2.9.2 Unifying experiences

Through the sensory system, information is collected from the exterior of the learner. Coordination of information is of paramount importance so that a learner can have integrated units of information. This integration creates and develops completeness of concepts. By unifying experiences, it means that the verbal information received by a learner with visual impairment through the sense of audition has to be linked to some previously gained practical experiences (Mavundukure, 2001:11). Applications of compensatory senses become imperative.

All related experiences come into play to bring about a rich conceptual experience. It is also important to realize that the need for new experiences is one of the vital aspects (Nasib, 2005). Certainly, new experiences are a prerequisite for mental growth as essential as food is for the body. As a result, learning support staff should give learners

tasks that are appropriate to each particular stage of growth and should always start from the known to the unknown.

2.9.3 Learning by doing

It is necessary to bring stimuli to the learners with visual impairment because they do not see. Visually impaired learners must always be encouraged to initiate self-activity (Mavundukure, 2001:9). They must be taught to react intelligently to objects that evidence their existence and these must be explored using all possible senses. Significantly, learners' involvement with phenomena in the environment allows for sharpening of thinking and reasoning skills. Delors (1996) perceive the skills as leading to the generation of answers and solutions to inquiry tasks assigned and none assigned. The teacher must endeavour to provide tasks that are meant to develop speed and efficiency in exploring things or ideas. Therefore, the teacher must organise materials systematically and provide specific lead questions and instructions that lead to outcomes.

2.10 Communication

In the provision of learning support for learners with visual impairment, sharing of knowledge and developing expertise between staff in terms of opportunities for communication is very important. Diversifying roles and knowledge is crucial to the success of inclusive support services in the school (Matshebe 2005:12). The Senior Management Team, the School Based Learning Support Team, other stakeholders outside the school and teachers need to share knowledge on how best the learners with visual impairment can be supported. Probably, this could be done through workshops and members working together. Tunde and Giambo (2007) stipulate that all the stakeholders must be well abreast with the information on how they can support learners both in school and in natural environments including the home and community settings which children without impairments participate.

Dimigen et al (2001:163) emphasise the importance of communication through the example of Susan, a learner with visual impairment, whose progress was shared in the school by teachers. She excelled in her schoolwork as teachers communicated throughout her being at that school. Even when she went on to another school, there was smooth transition between her former school and the school to which she was going.

2.11 Conclusion

The literature review has explained what Inclusive Education is and the importance of assessment. It has gone further to elaborate on the teaching of both Braille and print in dual media teaching as a way that would benefit learners with visual impairment. The curriculum in its broad terms is discussed especially on how it is manipulated through adaptations and modifications to suit the learning needs of learners with visual impairment.

The delivery of the curriculum can be enhanced by supporting learners in the main classroom, supporting the learners in their socialization and utilizing assistive technology in the learning and teaching of learners with visual impairment. Having learning support structures at a school is one other consideration put forward along with the development of the senses of touch and hearing so that the learners with visual impairment can see with their hands and ears. The propellant of all these themes is communication which is the key to successful implementation of any programme.

Meeting the diverse needs of all learners is a mammoth task that cannot be solved only by the aspects highlighted above. In other words, these aspects are not exhaustive but they, in a broader way, address most of the unique characteristics, interests, abilities and learning needs of learners with visual impairment. The next chapter outlines the research methodology of the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses mainly on the research methods used in data collection and analysis in this study. It also justifies the research methods used. Data was collected using the following methods of data collection, namely: interviews, document study and observation.

3.2 Research design

This case study is descriptive in nature. This form of design was chosen because it is a powerful learning modality that is built into the description in the meaning of the words used (Stake, 1994). It further seeks to describe phenomena in depth and detail, in context and holistically. It was used more so that it employs several methods primarily to avoid or prevent errors and distortions (Yin, 1991). The design therefore would assist in achieving the purpose of gathering in-depth information about learning support provision to learners with visual impairment at an identified school.

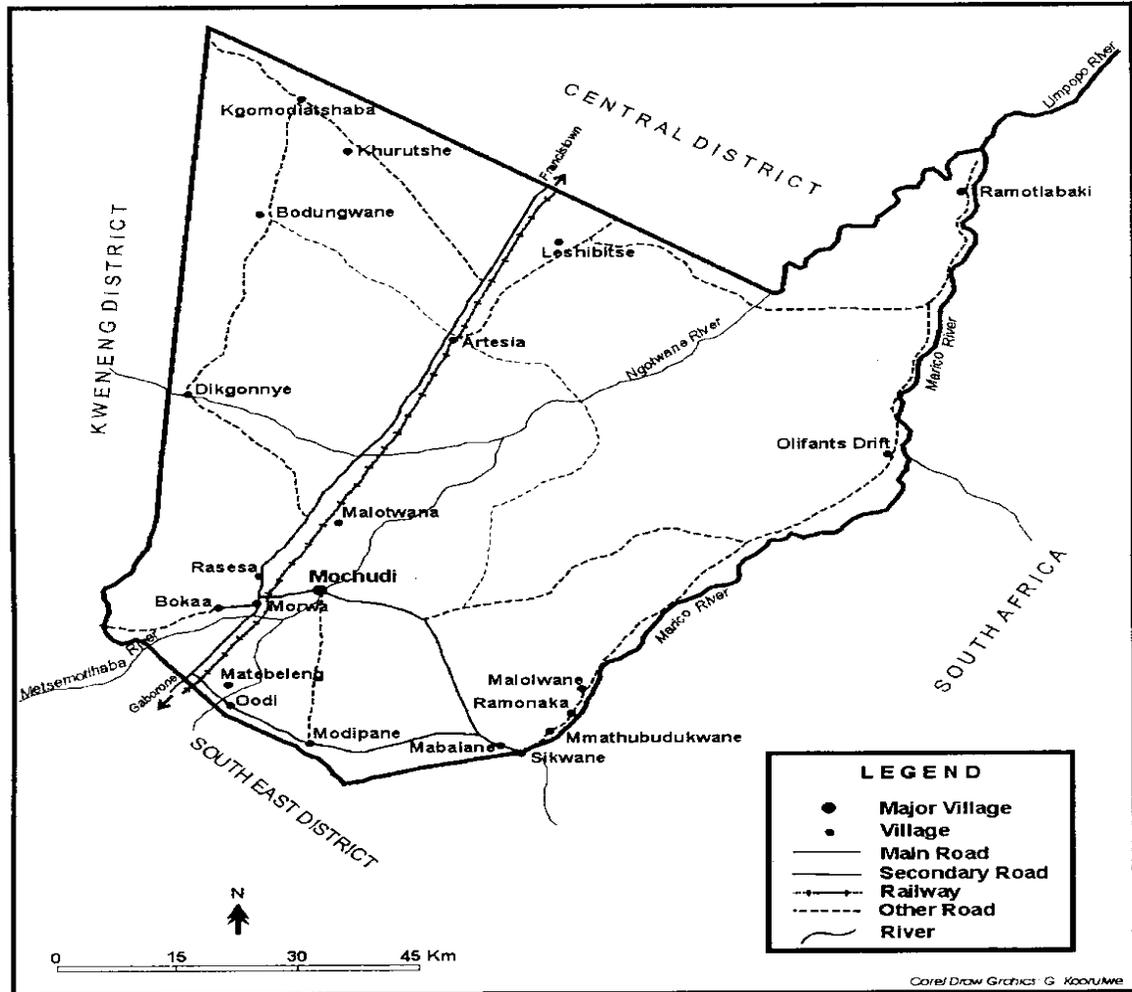
The qualitative approach was used because it has the potential to supplement and reorient our current understanding of the conventionality of learning support programmes provided to learners with visual impairments at the school. The qualitative research methodology was also used because it facilitates an in-depth understanding of the phenomenon and seeks to explore the perceptions, opinions and experiences of key stakeholders (Mouton, 2005:194, McMillan & Schumacher, 2001:429).

3.3 Research location

The study area was the community of the identified senior secondary school and its stakeholders. The school is located in Kgatleng District. The district is located in the South-Eastern region of Botswana on the South African border, north of the South East District, which contains the urban district of Gaborone. The administrative centre of Kgatleng District is Mochudi. Mochudi is a semi urban village 42 kilometres away from Gaborone on the Gaborone Francistown Road.

The school is located in the heart of Mochudi and is the only senior secondary school in Kgatleng District. The school is a co-education one that is half boarding and half day. The learners who come from nearby junior secondary schools are day scholars while those from distant junior secondary schools are conveniently given boarding facilities. The learners with visual impairment are all boarders regardless of the schools they come from. Overleaf is the map of Kgatleng District showing the location of Mochudi where the school is found.

Figure 3.1 Map of Kgatleng District



Source: Mochudi Education Centre, 2008

The school is one of the 30 government senior secondary schools in Botswana. It was chosen because this is the only senior secondary school in Botswana that admits learners with visual impairment especially those that are totally blind. The study also extended to the stakeholders that collaborate with the school in the daily duties of the school's running to weigh their input in the learning support programmes for learners with visual impairment.

3.4 Sample

The target population includes members of the Senior Management Team, specialist teachers for learners with visual impairments, mainstream teachers in the same school, visually impaired learners, former learners with visual impairment, learning support assistants, parents of learners with visual impairment, a member of staff from the Resource Centre and a member of staff from the library and two members of staff from a rehabilitation and development trust for the blind.

Table 3.1 Description of participants

Status of subjects	Number interviewed	females	males
Specialist teachers	5	5	0
Learners with visual impairment	8	3	5
Mainstream teachers	3	2	1
Former learners	4	2	2
Parents of learners	3	2	1
SMT members	2	1	1
Resource Centre staff	1	1	0
Library staff	1	0	1
Brailist	1	1	0
Teacher aide	1	1	0
Staff from rehabilitation centre	2	1	1

Note: *Parents of learners* in the table are parents of learners with visual impairment and *former learners* are learners with visual impairment who completed at the School.

The selection of a rehabilitation and development trust for the blind was on the basis that all the learners with visual impairment who complete form 5 from the school are admitted to the institution even before their form five results are out. Therefore, this institution forms part of the stakeholders. Former learners of the school who are visually impaired were probed about the learning support programmes they used to be offered when they were in the school.

The Resource Centre was chosen because it offers staff development programmes, produces learning and teaching materials for learners with visual impairment and assesses learners with visual impairment before they are placed at various institutions. In addition, the parents were, of course, involved as stakeholders in the learning of their children while the library that caters for people living with visual impairment procures adapted learning and teaching materials for people with visual impairment. The participants were selected for different reasons.

To adhere to ethical considerations, all the names of the participants used in this study are fictitious. Ms. Thabo was chosen because she is Senior Teacher Grade 1 Special Education in the school. On the other hand, Ms. Tembo, Ms. S and the learners with visual impairment were selected based on their interest in participating in the research. Ms. Tembo and Ms. S. have been teaching learners with visual impairment for 17 and 20 years respectively.

As pointed out by Bailey (1995:95), the use of routine sampling procedure is not easy in the study where respondents may not be available or knowledgeable about the subject. At the time of this study, the school had only seven specialist teachers and 29 learners with visual impairment. Besides, most of the teachers do not even know what to do with learners experiencing barriers to learning (Lubinda, 2006:17). Not all of them were willing to take part in the research. Given this obstacle, purposeful, snowball and volunteer sampling were used.

Purposeful sampling was used on the specialist teachers, learners with visual impairment, Resource Centre staff and Rehabilitation and Development Trust. These people were deemed knowledgeable about the subject. Snowball sampling was used on former learners as these were hard to reach. The researcher collected data on the first member of the former learners then requested for information from that member which enabled him to locate other former learners with visual impairment. In contrast, volunteer sampling, where one volunteers to take part in the study because of their interest and familiarity with the subject, was used on the teacher aide and the members of the senior management team. While this process of obtaining a sample undoubtedly presents questions about the

generalisability of the findings, the nature of the investigation demanded the kind of cooperation that seemed only to be available from the methods of sampling used.

3.5 Methods of data collection

Data was collected using documents, interviews and observation. The reason for using different methods was motivated by a desire to ensure rigour, relevance of the data and as a way of corroborating the data.

3.5.1 Observation

A period of 3 months was spent at the school observing how the school and its stakeholders support learners with visual impairments. The observations occurred in different classrooms, laboratories, Special Education Department, Agriculture Science garden and during co-curricular activities. A total of 16 observations were done, and each session lasted for between 40 and 80 minutes. In addition, learners were observed 6 times at the school playgrounds during co-curricular activities. Each observation started at 15:40 hours and ended at 17:30 hours. Data was collected at any time of the school and outside teaching time as learners with visual impairment are attended to at any convenient time in this school. The use of this method of data collection was aimed at observing learning support provision in the school in its real setting. The observation sessions included physical arrangements and curricular adjustments the learning support staff made in supporting learners in the school.

The observations were mostly done by myself. I occasionally involved the research assistant on days when I was not available or my work responsibilities clashed with dates scheduled for observations. To avoid being obtrusive, I was a participant observer, meaning that, I actively participated in some activities at school. Such a role allowed me to not stand out as an outsider who would influence the outcomes. Data were recorded mostly in the form of field notes and it was sometimes video recorded with participants'

permission. These two strategies, which were used interchangeably, facilitated a detailed collection of a comprehensive perspective on the provision of learning support in the school. The involvement of the research assistant enhanced the credibility of data collected as it was possible to compare notes and identified tentative categories.

3.5.2 Interviews

In this study, some attributes of interest could not be directly observed in the area, such as learners' and teachers' opinions, attitudes and experiences of provision of learning support programmes. For that reason, interviews facilitated collection of such form of information. The interview allowed for the probing of information that the participants presumably had but were not conscious of or had not considered important.

A total of 31 participants, of which 19 were females and 12 were males were interviewed. Participants were 8 learners with visual impairment, 5 specialist teachers, 1 Brailist, 1 teacher aide and 2 members of the Senior Management Team. I also interviewed 3 mainstream teachers from the same school, a member of staff at the Resource Centre, 4 former learners with visual impairment, 3 parents of learners with visual impairment, 2 members of staff from a rehabilitation and development trust and a member of staff from the library that caters for people living with visual impairments. (Refer to table 3.1 for the list of participants). The age range of learners was between 17 to 22 years while other participants' age range was between 25 to 49 years.

Interview appointments were scheduled telephonically or verbally with participants who indicated interest to participate in the study following a detailed explanation of the study, research ethics and the benefits of the study. Quiet, conducive and convenient places for the interviews were identified. For example, interviews for learners and former learners were conducted from the Special Education Department. Other interviews were conducted from the offices of the respondents like Senior Management Team members of the school, a staff member from the Resource Centre, the library and a Rehabilitation and Development Trust for the Blind. Conducting face-to-face interviews from offices of

respondents was advantageous as interviewees had the opportunity to consult records and to show proof of their information. It also allowed a more relaxed and conducive atmosphere.

The interviews were conducted in both English and Setswana. Since, I was not fluent in Setswana, I saw it fit to involve the research assistant again during this stage of data collection. The research assistant was also helpful in interpreting some of the difficult words which were expressed in Setswana. Open-ended interviews took between 15 to 20 minutes each. The questions that guided the interview are in the appendices 4, 5 and 6. The interviews were recorded on audio tapes with participants' permission while others were video recorded. Some key informants requested not to be video recorded and the researcher had to take detailed process notes which were clarified and elaborated as soon as the interviews were completed so that the flow of the conversation was smooth. This meant that the interview had to take 10 to 15 minutes more than scheduled.

3.5.3 Documents

Documentary sources provide a wealth of secondary data (De Vos et al, 2005). The importance of these sources for contemporary analysis should not be underestimated. Kitchen and Tate (2000:201) and Terre Blanche et al (2006:316) stress that for researchers interested in studying contemporary society, documentary data can provide valuable insight into the structures and mechanisms of socio-spatial thinking and practice. Significantly, the method was used also because of its relative low cost, non-reactivity and inaccessible subjects in the case of former learners with visual impairment who could not be traced. As a result, this study utilized policy documents, non-personal (official documents) and mass media in investigating the provision of learning support services to learners with visual impairment.

Open published documents consulted include Inclusive Education Draft Policy for Botswana, the Revised National Policy on Education, Vision 2016 and Performance Based Reward System policy frameworks all for the Government of Botswana. Non-

personal documents consulted are the school's Special Education departmental policy, the school's log book, learners' portfolios, Special Education departmental minutes, teachers' schemes and records of work, green books, class registers, marking keys for different subjects, learners' manuscripts-both Braille copies and transcribed ones, learners' notes and final results for former learners with visual impairment of the school.

The consultation of all the documents above was to obtain data on the following:

- a. Policies, strategies, monitoring, reviews and supervision of the implementation of the policies.
- b. To investigate and learn how the policies and programmes on special education provision are being implemented.
- c. How often and which stakeholders visit the school and the purposes of the visits.
- d. Management of learner profiles, information and the Individualised Educational Programmes.
- e. The type of issues discussed in the minutes and how the issues were addressed.
- f. Lesson attendance and frequency of the provision of learner support programmes.
- g. Whether marking keys accommodated the changes that are made to the modified or adapted questions.
- h. Whether the learners' assessment items are checked and if there are errors in the transcription or Braille of the learners' work.
- i. How learners with visual impairment have been performing.

3.6. Data analysis procedure

Marshall and Rossman (1995) in Clark (1999:531) and Kelly et al (2006:321) state that qualitative data analysis involves bringing order, structure and meaning to the words or actions of research participants, gained through interviews, observation, documents or diaries so that conclusions can be made and communicated. In line with the foregoing sentiments, the researcher started to analyse the content of the data collected, eliciting themes related to the learning support provision at the school. The process of coding and categorizing the content assisted in bringing meaning to the data collected.

Data was also analysed using the approach advocated by Rubin and Rubin (1995:226-227), they describe it as follows: “Data analysis begins while the interview is still under way. This preliminary analysis tells you how to redesign your questions to focus in on central themes as you continue interviewing. After the interviewing is complete, you begin a more detailed and fine-grained analysis of what the conversational partners told you. In this formal analysis, you discover additional themes and concepts. Compare material within the categories to look for variations and nuances.”

Description is central to this study due to the vast amount of qualitative data that was generated. Description involves the portrayal of data in a form that can be easily interpreted (Mouton 2005). In this study, the description is a written account of the data and is supplemented by the use of tables where necessary.

3.7 Ethical considerations

The researcher obtained permission to carry out the study from the school administration. Since the researcher had obtained permission when doing the honours degree programme at the same institution, permission was easily granted to carry out the study. Participation in the study was voluntary for all the participants. Accordingly, they were each provided with a letter explaining the research study, requesting for their participation and assuring them of confidentiality, anonymity and avoidance of harm to any of the participants.

Furthermore, permission was also sought to record the interviews and observations. Their consent was sought and for the learners, parental consent was obtained before interview and observations. A consent form was made available for them to sign after they had expressed willingness to participate in the study. It was made clear that they were free to withdraw from the study at any time with or without giving reasons for withdrawal. The respondents were also free to decide to answer some questions or all of the questions without being questioned.

3.8 Conclusion

This chapter on research methodology focused mainly on research methods used in data collection and analysis. The research is descriptive because it allows for an in-depth understanding of the phenomenon and seeks to explore the perceptions, opinions and experiences of key stakeholders. The target population was the community of the identified school in Botswana and its stakeholders. Data was collected through observations, interviews, and documents. The chapter also discussed the ethical considerations. The next chapter outlines the results consistent with the methods outlined in this chapter.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

The chapter on data presentation and analysis presents the findings and analyses them at length. The discussion presents the themes in the form of subheadings. In analyzing the data, the author looked for the emergence of distinctive themes or concepts as described in Chapter 3. The findings are mainly presented under classroom support and curricular adjustments.

4.2 Classroom support

In the context of this study, classroom support refers to the strategies that are aimed at enhancing the learning and teaching of learners with visual impairment during lessons. The theme on classroom support is discussed under the following sub-headings: classroom placement, sitting arrangements, class size, afternoon sessions and orientation.

4.2.1 Classroom placement

Classroom placement for learners with visual impairment follows a series of consultations and assessment procedures. A total of 13 participants, of which 6 were educators and 4 were learners with visual impairment indicated that the school places learners with visual impairment in classes on the basis of the following: performance at junior secondary school in Mathematics and Science; the assessment results, and the overall grade obtained at junior secondary school level as stated by the Senior Teacher Grade 1, Special Education in the extract from field notes below.

“We guide them in choosing classes with the help of their results from junior secondary school leaving examinations. We particularly consider how they performed in Mathematics and Science. Those who obtain grades A and B in these subjects, we place them in triple sciences and

those with grades C and D we place them in either upper or lower double science classes depending on the strengths of the grades in other subjects.”

The chairperson of the academic committee, though indicated that they place learners with visual impairment according to their preferences, he further clarified that they are only allowed to attend in the bands of classes that their results and abilities allow. One of the specialist teachers stated that the school assesses learners with visual impairment in a number of ways.

“We first of all take learner profiles and records to know the learners’ background; next we conduct informal vision assessment to determine whether the learner will need Braille or print media. We then arrange for their medical assessment at the hospital or educational assessment at the Resource Centre.”

The first assessment is informal functional vision assessment. This determines the degree of the learner’s impairment and helps to know the mode in which the learner receives the learning and teaching materials. Consequently, it is from this assessment that teachers know whether the learner uses Braille, large print or both. This helps the teachers make modalities in the accommodation of the learners in the school.

Some learners with visual impairment, especially those with progressive sight are referred to a government facility for further assessment to get recommendations for individual educational provision. From this assessment, the facility recommends educational programmes like how much extra time a learner gets when writing examinations. The facility may even recommend part of the learning support program the school has to implement for the learner. Depending on the learners’ progress in schoolwork, some learners are reassessed. A specialist teacher, however, reported the following:

“... The Resource Centre is always fully booked when we want our learners to be assessed except for a few luck ones. ... I think there is

something wrong, we get recommendations that we should implement on some learners but these things they recommend are beyond our budgets and some of them are not related to the academic work of learners, we are neither rehabilitation officers nor doctors. ... How do we assist learners when some information ends up in wrong hands?"

According to a senior education officer interviewed at the Resource Centre, the centre is understaffed and long lists of children for assessment are the order of the day. This is simply because the Centre is operating on an old staff establishment, which needs urgent revision. When assessment takes place, recommended assistive devices to use are way off the reach of school budgets or parents. Some important information, sometimes, ends up in the administration when the experts to implement the learning support services are in the Special Education Department.

Some specialist teachers assess the learners in their individual subjects and draw up learning support programmes. There are end of topic tests, end of month, midyear and end of year examinations given to all learners as part of the assessment. The Special Education Department keeps progress marks for learners. This helps them know how the learners are progressing in their studies. Expatriate specialist teachers adjust learning support programs according to the learners' performance.

The other assessment is medical, and it is carried out at the nearby hospital. This facilitates early identification of the learners' problem and enables the learners to receive treatment and/or surgical operation to improve their eye sight. Some learners, according to Ms. Pheto, receive spectacles or prescriptions to buy appropriate lenses. In addition, the department makes appointments for reviews for further monitoring. The teacher aide escorts the learners for subsequent hospital visits. She, however, lamented on the shortage of transport as some learners visit the hospital for medical attention quite often and need to visit the library for people living with visual impairment in Gaborone.

4.2.2 Sitting arrangements

In three of the four classes visited during observations, learners with visual impairment sat in the front row near to the teacher so as to maximize reception or utilize some of the residual sight while another sat towards the back of the class because he is long sighted. Learners with albinism sat next to the wall because they need to be protected from any form of light because they are photophobic. The quote below from a learner with visual impairment explains:

“The teachers advise us to request to sit in positions that we are comfortable and that give the opportunity to benefit more from classroom activities. Most of us sit in front except one boy who sits in the middle of the classroom.”

Understandably, sighted learners are aware that learners with visual impairment should sit where they are comfortable and where it is convenient for them to use their assistive devices like electric Perkins braille and scientific talking calculators. Six participants revealed that from time to time, the school organises awareness campaigns on appropriate sitting arrangements for learners with visual impairments. Learners with visual impairment are also informed of any classroom changes well in advance.

4.2.3 Class sizes

A total of 5 participants reported that they reduce the number of learners in the classes which accommodate learners with visual impairment. For example, records show that class 5G which had 4 learners with visual impairment in 2007 had 31 learners while the average number of learners in the other classes was 40. A member of the Senior Management Team said:

“We work hand in hand with the special education department to try and reduce the number of students in classes where there are learners with visual impairment. But this is increasingly becoming difficult because

some times Secondary Department gives us more students with instructions to admit all the students.”

It was further observed that from 2006, the number of learners in most classes had been increasing due to the implementation of double shift in some schools countrywide and the top down instructions from headquarters to admit all learners sent to the school. However, the school did not introduce double shift but instead requested to increase the number of classes from 42 to 50. This meant that there were 25 form 4 classes and 25 form 5 classes respectively. This move was necessary because the school needed time for learning support provision to learners with visual impairment in the afternoons. The avoidance of double shift also led to the increase in the number of learners per class. The trend has continued to the present time as most of the classes have an enrolment of over 40 learners as the table below shows:

Table 4.1 Enrolment per class for 2008

Year	Class	Number of learners with visual impairment	Total number of learners in class
2008	5B	3	43
2008	5C	3	37
2008	5D	2	41
2008	5Q	1	39
2008	5O	1	42
2008	4A	4	37
2008	4F	4	39
2008	4L	2	41
2008	4Q	3	45
2008	4O	1	41

Source: Academic Committee, 2008

4.2.4 Afternoon sessions

Learners with visual impairment learn in the mainstream classrooms with the rest of the learners from 07:20 hours to 13:20 hours. At 14:30 hours, afternoon study begins and ends at 15:40 hours. The learners with visual impairment spend the afternoon study in a separate class in the Special Education Department. This is to enable teachers to easily locate and assist them in learning support programmes. Their fellow learners also help them with notes dictation or any other work. A total of 11 participants, of which four were learners with visual impairment and seven were educators indicated that remediation takes place in the afternoons as in the example from Ms. S. below:

“A remedial lessons schedule is drawn and given to all departments. Teachers come to the special education department or take learners to other rooms to remediate them on the days their subjects are scheduled.”

On the other hand, five of the eight learners with visual impairment interviewed complained that only expatriate specialist teachers were consistent with remedial lessons. Other specialist teachers associated themselves with special education but never assisted visually impaired learners. A learner with visual impairment lamented that:

“We only get assistance in Mathematics, Geography and English Language where we have expatriate specialist teachers. These teachers help us even in the evenings and sometimes on weekends especially when it is examinations period. I wished our... could be as helpful as these teachers.”

4.2.5 Orientation

The school includes learners with visual impairment in the mainstream school in all the academic activities. Records and reports from 5 specialist teachers and 6 learners with visual impairment indicate that on arrival in the school for the first time, the academic Board and the Special Education Department orientate the learners with visual impairment to the curriculum and premises. The orientation to the curriculum is meant to assist learners in choosing the subjects and eventually classroom placement.

Orientation and Mobility instructor orientates the learners to the school as a group then as individuals. He further orientates them to the Special Education Department daily routine and the resources as stated by a learner with visual impairment in the extract below:

“Our teacher for Orientation and Mobility shows us the school, the nearby clinic, church and key places in the school like toilets, dining hall, base rooms and so forth. Even if our school is very big, he wants us to get to these places alone at least after a given period and a lot of us are able to move around although the school is not good due to deep trenches of drainage. At home, I try and sometimes I travel alone on public transport. I want to do all things ... but my parents don't encourage it as they think I can't manage.”

However, Orientation and Mobility instructor lamented on the shortage of assistive devices such as the white canes among others which take a long time to be procured due to the red tape involved in government purchase procedures. The other problem is that of time as learners will sometimes be busy at the time they are scheduled for Orientation and Mobility. He added that when learners come back from holidays some Orientation and Mobility skills have to be re-taught as there is no continuity at home. Attempts had been made to visit parents and educate them on Orientation and Mobility training but parents showed no interest because they perceive the assistance of vulnerable learners as the government's responsibility. Furthermore, the school community and the home environment also tend to be over-protective to the totally blind learners which hinder them from practicing the learnt skills. An example from a parent below elaborates:

“Her father does not allow her to help at home. ...when schools close, she tells us that her teacher wants her to do things on her own, she carries out some light duties but with time, all activities decline sharply. It is just her father who thinks it is ill-treating her.”

On the other hand, one parent explained that his son is one of the leading choir members at church and he was grateful for the Orientation and Mobility skills the learner received at school.

“My son wants to try out most of the things. He wants me to describe every place we pass through. The next time we use the route, he would be telling me what is where. ...he does his own laundry.”

4.3 Curricular adjustments

The school has put a lot of effort to support learners with visual impairment. A summary of these considerations are presented below as obtained from the records, observation results and interviews. These include: assistive technology, pedagogical practices, transcription and Braille, support by other stakeholders, support for educators and parent support.

4.3.1 Assistive technology

The government has spent huge sums of money in procuring information communication technology in the school. When one visits the Special Education Department, the following are some of the assistive devices one would find: the braillo 200 (Braille printer), the view plus (Braille printer), two adapted computers (with JAWS software, open book, zoom text and Duxbury), closed circuit televisions, scanners, Braille labelling machines, a zyfuse machine, two thermoforms, a huge photocopying machine, thirty-eight Perkins brailers, hand flames, styluses, scientific talking calculators, a book binder, tape recorders, head phones, white canes, a few Braille books and equipment for physical exercises training.

A librarian at the library for people living with visual impairment stated that learners with visual impairment access brailled books or recorded books from the library. A learner with visual impairment confirmed the statement in her elaboration below:

“We sometimes go to the library for people living with visual impairment where we borrow recorded and brailled books. When we have no transport, the library personnel bring the books for us.”

Further, there are four adapted computers in the computer laboratory with their scanners among others. As part of its social responsibility programme, in June 2008, a mining company donated equipment to the school library for learners with visual impairment which include seven adapted computers, scanners, two closed circuit televisions, tape recorders, three electric Perkins brailers, headphones and a camera. However, former learners with visual impairment reported that the assistive technology that is in the school now was not there during their time. For example, one former learner said:

“Ah sir, you know these people, when we were complaining about machines and other items to use, they kept on telling us that orders had been rejected at the council tender board. When we completed school, they managed to buy. It is not fair.”

Nearly all of them have just been acquired. At the time of the investigation, learners had not yet accessed the computers in the library and in the computer laboratory, despite their availability.

4.3.2 Pedagogical practices

Pedagogical practices in the context of this study are special concessions made in the school to enhance learning support provision to learners with visual impairment. It was apparent that teachers make particular modifications and adaptations to the learning and teaching materials provided by the department of education in Botswana. This was clearly articulated by Ms S in the following excerpt:

“...the syllabi from Curriculum and Evaluation Department have certain objectives which are not accessible to our learners like Map Reading in Geography or science subjects that require learners to draw complicated diagrams. We do modify the content by omitting some content of the syllabi, give learners alternative work or assess learners in a different manner. We describe

pictures in History for example where learners are expected to use pictures to deduce some information, change some assessment items from a composite or complicated graph to a table or vice versa, shred some information not necessary to answer assessment items, add information on some diagrams for totally blind learners or make diagrams even bigger. There are so many ways we try to adapt the work for our learners including recording test items and responses from a learner, brailing and transcribing materials, using an amanuensis among others ... ’’

In agreement with Ms. S, a brailist interviewed stated that:

“I work with specialist teachers and other subject teachers to modify the work for the learners. If teachers submit work that requires learners with visual impairment to draw complicated diagrams, I request them to modify the questions. Sometimes I just blow and decongest the diagrams I receive. Although I must admit it is difficult to work with local subject teachers.”

From the excerpts above, it was clear that modifications and adaptations applied to subjects other than Additional Mathematics and pure sciences. This was so because, most learners with visual impairment perform poorly in Mathematics and Science subjects, and thus found placement in low performing classes that do not have subjects like pure sciences, Additional Mathematics and Statistics. Four of the eight visually impaired learners expressed fear of the chemicals in subjects that require practical experiments. The dangers associated with some equipment, for example, in Design and Technology have also discouraged learners with visual impairment from choosing those subjects. For example, one learner with visual impairment stated that:

“... but sir, why don’t they remove sciences and Mathematics from our curriculum? These subjects have a lot of diagrams and are very difficult. Experiments like, I hear, the one on titration in Chemistry is very dangerous to us.”

In consequence, there were no totally blind learners found in pure Sciences, Home Economics and Design and Technology. The only practical subjects that totally blind

learners are doing in the school are Art and Agriculture Science. This has created an over-enrolment in Art.

The learners complained of the limited number of option subjects in the classes they are given. One learner with visual impairment complained that:

“Which subject did they want me to choose an option subject from the following subjects: Physical Education, Additional Mathematics, Accounts, Computer Studies and Agriculture? I could not choose P.E because of its practical nature, Additional Mathematics is too difficult for me, most of the tables in accounts neither fit on the 36 cell braille hand frame nor on the perkins brailier, the JAWS software, zoom text and Duxbury on the adapted computers in the school have been corrupted by viruses. Only Agriculture Science was the only option for me even if I didn't want to take many subjects that have projects.”

The classes would have six core subjects and learners have to choose only two more subjects from the ones they would be given. Even then, they need to choose at least one practical subject. One learner appreciated the guidance in choosing classes and subjects. However, she stated the following:

“... lack of Brailled or recorded books. The government buys a lot of books for the sighted learners but nothing for us. ... Some teachers tell us they cannot afford to let us do some subjects because of the problem of visual impairment. ...except in Geography and Mathematics where teachers emboss diagrams and give us time to explore and discuss them, we never have diagrams in other subjects during learning but just see them in tests and examinations.”

Totally blind learners and those with progressive sight are taught Braille although there was little emphasis observed on the teaching of Braille. Some members of staff in the Special Education Department presume that learners with visual impairment are old enough to know Braille thoroughly. Unfortunately, some of them lost sight recently. Nevertheless, some specialist teachers also urge learners with visual impairment who use

both large print and Braille to choose to use either of the two to reduce usage of teaching and learning materials.

During examinations, the school allowed learners with visual impairment 25% of the paper's time as extra time. There are other learners still who need rest breaks and they are given even more time depending on the degree of their impairments. The specialist teachers who are competent in Braille invigilate the learners with visual impairment to take care of Braille queries, provide learners with necessary assistive devices and to start the transcriptions as soon as learners complete assessment tasks. Seldom, mainstream teachers invigilate alongside specialist teachers.

Teachers conduct remedial lessons in the Special Education Department on one to one basis or in small groups. Accordingly, a timetable is drawn and made available to all departments in the school to show when a given subject is slotted. In addition, remedial lessons are also done at any time convenient to the learners and the teachers. Subsequently, learners are provisionally scheduled for one remedial lesson in each subject per week. The teacher aide and some specialist teachers follow visually impaired learners in the classrooms for subjects like Art, Mathematics and sciences to assist mainstream teachers and the learners.

Interestingly, some of the specialist teachers were observed helping learners even after working hours, during weekends and holidays. Only three teachers reported that they support learners with visual impairment in this programme. Observations and both mainstream teachers and learners with visual impairment interviewed confirmed the reports as stated below:

“... We all support learners in this department in one way or the other. Generally, the expatriate colleagues are leading in the provision of learning support services. They are closer to the children and avail themselves even at odd hours.”

A learner with visual impairment confirmed:

“The expatriate specialist teachers assist us as well as the teacher aide and the Brailist. ... Others are just specialist teachers by name.”

In contrast, members of the learning support staff do not support learners well in most of the subjects because there are very few committed specialist teachers. Again, mainstream teachers are reluctant to offer remedial lessons because they think that is the duty of specialist teachers. Appallingly, the timetable for remedial lessons was not followed most of the times as teachers were mostly in meetings and workshops. Learners write weekly, end of month and end of term tests in different subjects during the times they are scheduled for remedial lessons.

4.3.3 Transcription and brailing

The Central Resource Centre’s production department is supposed to be brailing books for learners with visual impairment but is yet to live up to that purpose. As a result, the transcription and Brailing of learners’ transcripts is carried out by four members of staff, namely; the Brailist at the school and three expatriate specialist teachers. This leaves too much pressure to cope with the numbers of learners in the department. As a result, it is common to find errors in some question papers, students’ notes and some transcribed pieces of work. Unpleasantly, one learner felt that he did not perform well in History because the person who transcribed wrote something different from what was brailled.

“... You know sir, our work sometimes has Braille errors and this makes us fail. ... sometimes we write tests and exercises but we receive our papers very late.”

With regards to the final examinations for form fives, Botswana Examinations Council sends the question papers to the United Kingdom for brailing. Unfortunately, due to poor communication between the Division of Special Education and the Botswana Examination Council, some questions tend to be asked in such ways that do not take into

consideration of the learners' abilities. This involves situations where learners with visual impairments are required to use materials that are not available at their school or are asked to draw diagrams that may be beyond their abilities.

4.3.4 Support by other stakeholders

Learners receive support from different stakeholders such as: educators, parents, NGO's and public institutions. The Division of Special Education is principally in charge of all special education provision. There are also other stakeholders like the Botswana Association of the Blind and Partially Sighted, the District Councils, Library for People Living with Disabilities, Rehabilitation and Development Trust for the Blind, hospitals and the Central Resource Centre for Special Education. Most importantly, the stakeholders above do augment in the learning of the learners with visual impairment in one way or the other.

The Senior Teacher 1, Special Education was dissatisfied with the representation of the discipline in education circles. The link between the school and the main body in charge of special education was negligible. There were no special education organs identified other than the Division of Special Education. In some regions like the North, Kgatleng and at Department of Secondary Education (Headquarters), seven of the participants revealed that officers who have no training in special education are coordinating the discipline. Ms Thabo said:

“Our biggest problem is lack of representation at most of the levels of operation in special education. Sometimes there is no one to attend to our issues in the offices we think should help us because they do not know much about special education. Teaching Service Management says they deal with teachers not Brailleists and Orientation and Mobility Instructors. Department of Public Service Management seem to know nothing about some of our personnel. ...it is so frustrating to be tossed from one office to the other without anyone taking the responsibility.”

The interviews conducted and the observations revealed that there is just too much work for the few learning support staff as in the examples below.

“...Our hands are full, the teaching loads are too big and the demand for our services in the Special Education Department is enormous. There is need for a specialist teacher in each subject to assist the learners otherwise; we are unable to meet the learners’ demands in all subjects despite all the efforts we make.”

Only the Brailist and the three expatriate teachers are conversant with Braille writing and reading. The local specialist teachers claim they did not do much of Braille so they can neither read nor write Braille as stated in the field notes below:

“My biggest challenge is that I do not know Braille. I will learn it when scarce skill allowance is introduced. Let the expatriate specialist teachers who were specifically employed to work in Special Education do the job”

Most teachers especially the local specialist teachers are not motivated to support the learners because that attracts no payment. They would rather work like ordinary mainstream teachers.

Socially, these learners are included in the day-to-day running of the school. Both totally blind and partially sighted learners took part in most of the school programmes such as athletics, drama, marimba, scripture union and school choir to mention but only a few. The specialist teachers reported that they give learners counselling sessions as situations avail themselves. The school counsellor did little as the specialist teachers who are close to the learners catered for them.

All the learners with visual impairment have social workers from the district councils of their origin. Social workers provide learners with school requirements including transporting the learners to and from school.

4.3.5 Support for educators

There are internal and external staff development workshops conducted to educate members of staff on teaching methods for learners with visual impairment. A member of the Senior Management Team confirmed that management facilitates where its input is required. It assists the Special Education Department to schedule an induction workshop for new teachers on the teaching methods for learners with visual impairment. A specialist teacher said that:

“We induct new members of staff in the school once every year, but we now want to do it twice a year. We also have what we call teacher collaboration where a specialist teacher and a mainstream one plan the work to be taught to the class that includes learners with visual impairment. They share ideas on how the content of the lesson will be delivered so that the specialist teacher knows when to attend the lesson where assistance will be required. We also engage social workers who are in loco parentis to the learners with special educational needs...”

The Division of Special Education also arranges workshops for teachers and other stakeholders on special education provision. The most recent ones, as Ms. S. stated, are the Braille Awareness Week and the Unified English Braille Codes. Additionally, there is continuous sharing of information between specialist teachers and mainstream teachers on learner support. Reflectively, the Special Education Department in the school meets the learners with visual impairment once a term to share ideas on how best to improve the learning support programmes.

4.3.6 Parent support

Parents are an integral part of the education of their children. Parents' knowledge of their children is vital for the success of any programme about their children. On the contrary, parents have not been well informed about special education provision of their young ones. Moreover, there is no continuity in the education programmes when learners are at home during holidays. In fact, a parent reported that long time ago they used to transport

their learners with visual impairment to schools, that used to give them chance to meet teachers. Now that their children use council transport, they do not communicate with schools.

Generally, there was negligible parental and other stakeholders' involvement in the education of the learners with visual impairment except where there was a serious case of illness of a learner or misconduct. However, some parents of learners with visual impairment interviewed were happy that the councils and schools were taking care of the children. Nonetheless, they indicated nothing on their contributions towards the education of their children.

Most of the learners with visual impairment are from very poor families. They also come from distant places that make it very difficult for the poor parents of these learners to come to school. That is possibly the reason most learners indicated that their parents do not help them with things they learn at school and give them no support whatsoever.

4.4 Conclusion

The section on the findings of the study has revealed interesting information regarding the special education practice in the school. The government efforts, guidance, orientation, adaptations, modifications, consultations, workshops are all worth of the learning support for learners with visual impairment. On the other hand, lack of motivation on the specialist teachers has resulted in the special education department being understaffed and the learners not being offered adequate learning support programmes. The enrolments for the learners per class are increasing and resulted into overcrowded classes.

Communication was also impaired with less stakeholder consultation and involvement. The quality of the transcribed and Brailled work in some instances needs improvement. Though there are plenty of resources with regard to access technology, there is a need for government to buy Brailled or recorded textbooks for learners with visual impairment. The next chapter discusses the findings.

CHAPTER 5

DISCUSSION OF THE RESEARCH FINDINGS

5.1 Introduction

The purpose of this study was to investigate the learning support services provided to learners with visual impairment at a senior secondary school in Botswana. This chapter carries a discussion of the findings which is done following the main and sub research questions identified in the background section. The discussion also suggests ways in which the learning support could be improved basing on the findings of the study.

5.2 Discussion and how learning support could be improved

The school has significantly made major strides in human and material resource development and acquisition in its effort to improve learning support provision. It recognizes and responds to the diverse needs of the learners, accommodating both different styles and rates of learning and ensuring quality of education to all the learners through appropriate curricular, organizational arrangements, teaching strategies, resource use, psychological support and partnerships with other stakeholders. The practice is in line with UNESCO's (1994: 11; 2001:101) recommendations that every child has unique characteristics and should be treated equitably by teachers and schools. The systems should change to suit learner needs not changing the learners to suit the systems.

However, there are no special education organs identified other than the Division of Special Education in the management and administration of special education in the country. For example, in some regions like the Southern, Northern, Kgatleng and at the Department of Secondary Education (Headquarters), officers who have no training in special education are coordinating the discipline. As a result, the officers do not seem to understand special education roles of some of the learning support staff like the Braillist, teacher aide and the Orientation and Mobility instructor. Disturbingly, these posts do not even appear in the staff establishment register for the school. This, in fact, supports the views of Abosi (2001:51) that special education provision in Botswana, in terms of

methods of instruction, is still unfocused. Notably, there is need for review of the administrative structure of special education in Botswana.

Some mainstream teachers plan their lessons in consultation with specialist teachers to share ideas on how best to assist learners when time for the lesson comes. Specialist teachers and the teacher aide assist mainstream teachers in classes to deliver the lesson content. In these lessons, visually impaired learners sit in front, at the back or side of classroom depending on where they are comfortable and mainstream learners understand this.

Considerations above are also expressed that reading through Braille imposes significant cognitive demands for blind learners and as a result, they become fatigued and so often need not only extended time but also rest regularly (Landsberg & Gericke 2002:101; Davis & Hopwood 2001:2). In addition, visually impaired learners write their tests in a separate room due to the noise of Brailleurs and to accommodate the extra time they are awarded. When writing tests, specialist teachers award learners with visual impairment 25% of the paper's time as extra time. Many more modalities are at the disposal of learners with visual impairment.

The curriculum the school offers is broad and inclusive. The learners with visual impairment are taking the same subjects with the rest of the learners. Additionally, visually impaired learners take Orientation and Mobility as well as Braille. The school makes the curriculum accessible through adaptation and modification of different syllabi contents. This is in agreement with UNESCO's (2001:101) recommendations on changing the systems obtained to suit the learners. In addition, the school:

- a. Omits some syllabi content not suitable for learners with visual impairment; e.g. part of Map Reading in Geography.
- b. Gives learners alternative work; e.g. in sciences learners do alternative to practical, in Art they do alternative syllabus component that suits their abilities.
- c. Describes pictures for Braille users.
- d. Records some notes, assessment items or responses from a learner.
- e. Uses an amanuensis to assist some learners to carry out some tasks.

- f. Shreds, omit some information in test items not necessary in answering certain examination items.
- g. Enlarges materials and reduce or add information on them.
- h. Leaves out diagrams if not necessary in answering some questions.
- i. Changes complicated charts to tables or vice versa as situation may require.

The practice above is in concordance with the views of Piljl and Van den Bos (2001:248), Tsheko and Okumbe (2004:107), and Eloff and Kgwete (2007:5). They identify the aspects of the practice as some of the additional features of practice that are most significant in removing the barriers to the participation and learning of children with visual impairment. The adaptations and modifications are in line with the views of Farrell (2002:23) and Koga and Hall (2008:7). They assert that all learners should have access to the same level as the others by adapting the resources, assessment methods, classroom organisation and teaching methods so that they can take part as fully as possible. Furthermore, they suggest that modifying existing general curriculum is an effective way of creating accessible learning environments for all learners. However, there is a limitation of optional subjects in some classes to which learners with visual impairment are allocated.

The limitation refutes Nenty's (2003:41) assertion which advocates educational opportunities that are fair and equitable to all learners. As a result, learners are allocated to classes where there are six core subjects that are compulsory. In addition to the core subjects, learners have to choose two optional subjects so that they have a total number of eight subjects. Optional subjects for totally blind learners are limited in the identified school because they are not encouraged to take some of the practical subjects. The only practical subjects that are accommodative to learners with visual impairment in this school are Art and Agriculture Science. This has made Art to have overcrowded classes.

There are other subjects like Braille and Life skills that learners with visual impairment are taught. In particular, Braille does not receive a lot of attention as learners are perceived to be old enough to know it or due to the shortage of relevant personnel. On the contrary, Erwin et al (2001:347) advise that learners with visual impairment require

total immersion in the Braille code so that they, too, can become absorbed, enthralled and fascinated by discovering and using the primary literacy medium. They further emphasise that authorities should ensure Braille access to learners with visual impairment. Inadvertently, learning support staff does not realize that some visually impaired learners lose sight when already grown up and need to learn Braille at that particular age.

The school welcomes the learners in the school and orientates them to both the school curriculum and the environment. Orientation and Mobility instructor imparts various skills to the learners in the school. He puts skills in practice through encouragement of learners to go to certain areas. Again, this is in line with government efforts and policies of promoting equal access to education for all. The deep trenches of drainage in the school, however, are contrary to the physical and institutional unqualified opportunities expected in such an institution (Nenty, 2003:41). Therefore, infrastructural development needs to take place to make the school friendly to all learners.

Noteworthy, teachers have staff development workshops to increase their knowledge of learning support services. Additionally, learners and Orientation and Mobility instructor give educational talks to always remind the school community to keep classrooms neat, tidy and orderly and to notify visually impaired learners should change occur in the environment. This practice should also extend to the family members so that there is continuity. However, some family members at homes are overprotective of the learners which undermine the efforts of the school services and the independence of the learners. Probably, this is because the school has not actively engaged key stakeholders like parents who are of significant importance in the provision of learning support.

The assessments performed by the school, hospital and the Resource Centre are important and helpful to the learners. In fact, the coordination among the institutions resonates with Landsberg and Gericke's (2002:71) and Flem and Keller's (2000:199) recommendations that support has to be delivered holistically and service agencies have to work together rather than in isolation from each other.

Some learners get help from the hospital through surgical operations or supply of drugs. This helps the learners educationally as other learners' sight improves and the ailing is reduced. Accordingly, learners receive learning materials in the mode that is appropriate following functional vision assessment. To add, learners enjoy other learning support programmes following the recommendations from the Resource Centre and the specialist teachers' assessments. These have a positive effect on the enhancement of the learners' learning.

However, some gaps in the assessment are affecting learners' performance. Most of the times when the school requests for assessment of learners from the Resource Centre, the school would be informed that there is a long waiting list of children who have been booked. Perhaps this situation calls for Piljl and Van den Bos' (2001:248) view of restructuring the cultures, policies and practices in the institutions. However, it has been reported that a few times when the assessments were done, they became ends in themselves as nothing happened to the assessment information once a report was written or the results recorded in the learner's file.

Most of the medical assessments or educational reports never actually resulted in any changes to most of the learners' teaching programmes. This stands in contrast with Westwood's (2001:3) assertion that assessment results should lead to taking some useful action and enable teachers to tailor their instructional methods and the curriculum to increase the possibilities for successful learning.

Failure to act on advice from outside mostly occurred due to the information given in the report not reaching the specialist teachers. The advice, though clear and helpful, could not easily be implemented in a classroom situation where there are fort-five or so other learners. Some of the technology is beyond the school's allocation or the capacity of the learner's parents to buy it.

Specialist teachers and especially the mainstream teachers are not entirely blameless in terms of failing to act on information from their own assessments. Too often, observations are made, anecdotes recorded in the teachers' files, test results carefully

entered in the log, but then no change is made to the teaching practices. The shortage of specialist subject teachers could be the reason for some of the gaps. Beefing up the learning support staff could help the situation hence the learners' improved performance.

The classes for learners with visual impairment are virtually large. Table 4.1 shows that form 5B had a total number of 43 learners that includes three learners with visual impairment. The ratio that one learner with visual impairment is equivalent to four mainstream learners (Ministry of Education, Botswana, 2006: iii) means that form 5B had 52 learners, form 4Q had 54 learners, forms 4F and 4A had 51 and 49 learners each respectively. As a result, class enrolments should adhere to government policy of 35 learners per class for any meaningful learning to take place. The overcrowding in the classrooms limits learning support provision and renders the exercise ineffective thereby disadvantaging the learners with visual impairment further. Efforts, though, have been ongoing to reduce the sizes of classes as evidenced from 5G in 2007, they have been frustrated by the avoidance of double shift in the school, and that has resulted in the increased number of classes and learners in each class.

Remedial lessons are consistently being conducted in Geography, Mathematics and English Language. In all other subjects, there are only isolated incidents when remedial lessons are conducted and learners mostly just learn in classes. Although there are records indicating that remedial lessons are conducted, the lessons are conducted mostly outside the schedule provided due to the busy nature of both learners and the specialist teachers. Consequently, this has an impact on the performance of learners and learning support provided as some teachers miss the remedial lessons and never compensate. Reduction in meetings or rescheduling meetings to school calendar holidays would make a difference in this regard.

The investigation revealed that there is a serious shortage of learning support staff. The few active specialist teachers, the Brailist and the teacher aide admit that they have too much work to do. This situation contradicts former assistant Minister of Education's (Mokalake, 2008:3) statement that the government provides adequate specialist teachers to assist visually impaired learners. It was evident that learners with visual impairment

are not fully assisted in most of the subjects because only a few specialist teachers are active. Their help in the subjects they do not teach is limited. It is mostly materials production, transcriptions, Braille, spelling corrections, tactile orientation and general remediation.

Evidently, most Botswana specialist teachers do not actively support learners with visual impairment academically due to their challenge in Braille and the absence of incentives in the practice of special education. The challenges of perceived lack of skills and competences by some specialist teachers call for attention and action. On the other hand, mainstream teachers are mostly not supporting learners with visual impairment as they think that it is the duty of specialist teachers to do so. Additionally, parents also view it government's responsibility to support and educate their children. The tendencies by both mainstream teachers and parents signify deficiency in information sharing and dissemination.

The participation of all stakeholders could make a difference and promote continuity of the teachers' input. In fact, Government of Botswana (2007) advises that the participation of all learners, teachers, parents and the community members in the work of the school should be strengthened and sustained because this will enable the learners with visual impairment to reach their potential. There could also be shared human and material resources. In fact, authors like Landsberg and Gericke (2002) feel that the most important form of support is that which is provided from the resources that are available at the disposal of every school. This includes children supporting children, teachers supporting teachers, parents as partners in the education of their children and communities as supporters of schools.

Learners with visual impairment lamented that they mostly use diagrams only in the examinations. The few diagrams embossed are mostly in Mathematics and Geography. Only during the course of this study did the learners start receiving some diagrams in the other subjects although there was negligible tactile orientation offered to the learners as the few specialist teachers could not manage to attend to 18 Braille users and 12 low vision learners. Providing learners with diagrams in the examinations only or giving them

diagrams without explaining what these diagrams are, would definitely result in the learners' poor performance.

Further, the concepts of concreteness and learning by doing advocated by Mavundukure (2001:7) are mostly not practiced, yet the concepts are very important in augmenting and improving the learners' understanding of abstract terms and theoretical work. The cause of the scenario is the absence of specialist teachers in subjects like sciences. If efforts can be made to acquire specialist teachers in all subjects, the trend may change.

The Special Education Department has an abundance of adaptive technology that can enhance learning support. Some former learners with visual impairment, however, reported that the assistive devices that are there now in the department were not there during their time. The investigations, further, revealed that most of the assistive devices were bought in the recent years. There had been very little in terms of access technology that could be used to enhance learning support programmes. The lack of adaptive technology and the fact that they were recently acquired explain why the previous learners with visual impairment performed poorly in their academic work.

The Special Education Department has a mini-library, which stocks Braille books. The books found in the mini library are negligible as compared to the books made available to the sighted learners. Chang and Schaller (2002:566) give an example of how Selina and Allison excelled due to the provision of tangible Brailled materials. Provided with the same, learners with visual impairment at this school would academically perform better.

The shortage of brailled materials in this case would compromise the performance of the learners. Besides, findings show that learners are discouraged to use dual media to reduce on usage of learning and teaching materials. Interestingly, the practice is contrary to the views of Holbrook and Koeng (2001:9) who advise that a skilfully interwoven program in dual media instruction should be designed to address the unique aspects of teaching print and Braille. Learners with visual impairment should be allowed to use the media of their choice at any given time.

The Resource Centre's production department is supposed to be Braille books for the schools with learners with visual impairment but it is yet to live up to that purpose. The centre is unable to adequately meet the needs of the learners due to lack of capacity in terms of manpower and equipment (Mokalake, 2008:3). Perhaps this calls for the review of the staff establishment register for the institution. Consequently, the absence of Brailled textbooks seriously disadvantages the learners as their research is limited.

Some learning support staff transcribe learners' transcripts from Braille to print so that other teachers can mark. They also convert teaching and learning materials to Braille. Some Braille errors were detected in a few pieces of work because some learning support staff are not quite proficient in braille. This compromises the learning support provision and is against Well-Jenson and Burke's (2008) assertion that learning support personnel should be competent, enthusiastic and highly committed to Braille to reduce the degree of error. This would continue affecting the learners' performance if the services of a proof-reader are not acquired. Upgrading the education standards of Braillists would improve their proficiency and efficiency in their execution of duties as all of them had been teacher aides and rose to posts of Braillist after obtaining braille competency certificates.

5.3 Limitations of the research

Every project has its uniqueness in terms of demands and challenges. This study on the learning support provision for learners with visual impairment at an identified school in Botswana is not an exception. It was therefore found prudent to discuss limitations related to undertaking a project of this nature.

Shortage of time was the most significant limitation in this study. As a contractual worker, the researcher had to work tooth and nail so that the studies did not compromise with work commitments as it was anticipated in the work place. Even time to collect data and to carry out the research in general was hard to come by. The other limitation was some parent's refusal to take part in the research. Of course, not all of them turned down the requests but this had a significant effect on the time spent, resources and the delays in the acquisition and processing of information. Furthermore, the parents of learners with

visual impairment who stay near the school community and nearby towns were the main targets but most of them were not willing to be interviewed. So was the case with colleagues in the Special Education Department. Most of them were involved indirectly through observations and perusal of their records.

Another hiccup was long distances to areas where parents for learners with visual impairment live and the Resource Centre for Special Education which had monetary and time effects. Some of the places were not even accessible such that permission had to be sort to interview a relative who had a part to play in the learners' education. Some parents gave information they thought would help their children have medical assistance that would cure the ailments or impairment of the learners.

Information provided was also directed at the government and school authorities to do something about their children. While learners sounded desperate for learning support as the situation in certain subjects was very bad and the help they received from teachers transferred to the school in the name of special education was far from what a specialist teacher would be expected of. Respondent-researcher relations affected the accuracy, quality and truthfulness of data collected. The respondents, like parents, thought that the information would be used in a manner that would expose their dignity and as a result they provided censored and biased information.

It can be deduced that sensitivity of the area of study scared participants to the extent that they did not give truthful information. In addition, employees, especially expatriate and junior officers, feared to reveal the truth about colleagues or senior officers or the inadequacies in the operations of the Department of Special Education in the school (and the school management as a whole), Division of Special Education, the Resource Centre for Special Education in case word reaches management on what they would have reported.

Financial limitations forced the research to be limited to nearby stakeholders and reduced the number of distant interviewees. This was done so that effort and resources could be concentrated to get the best possible results. However, effort was made to minimise the

negative impact of these limitations. Respondents were being assured that maximum confidentiality would be practiced on any supplied information. The fact that their information would be used purely for academic and professional purposes was also emphasized to them, so that their courage could be instilled. These cautionary measures assisted the researcher to get the best possible information on the topic of the study.

5.4 Future research

The world is always changing and as a consequence knowledge is ever growing. The field of Inclusive Education needs to keep abreast with every change and more research is required to fully understand the practice of this field. The role of the specialist teacher in an inclusive school equally demands for more attention. There is also need to research on how severely impaired learners should be managed in the work of inclusive schools stealing the show at the expense of special schools.

5.5 Conclusion

The government of Botswana has invested heavily in the education of learners with visual impairment through human resource development and material acquisition and provision. Similarly, the school provides learners with visual impairment with a wide range of learning support services. It orientates learners in the school operations and the curriculum to which learners are exposed. Learners also get guidance in choosing the classes and subjects. In these classes, learners sit in strategic positions to maximize the utilization of their senses of audition and sight. The classes learners with visual impairment choose have the number of learners reduced but generally, all the classes to which the learners with visual impairment are allocated are over enrolled in this school. This makes it difficult for teachers to adequately and effectively support the learners. In these classes though, the teacher aide and specialist teachers visit during lesson time to support learners and teachers.

In terms of their health condition, the visually impaired learners are assessed at the hospital, Central Resource Centre for Special Education and in the school (for informal functional vision) so that they can be monitored and have their learning support

programmes recommended and drawn. However, most of the assessment results, except for those the expatriate teachers perform; do not lead to fruitful action. The expatriate specialist teachers mostly conduct learning support programmes for learners with visual impairment at a time convenient to both the learners and teachers. It is during these programmes that learners are tactually orientated into Mathematics and Geography mostly while little in the other subjects. The timetable for learning support programmes is most of the times not followed because the curriculum for the learners is packed.

Every year, new teaching staff in the school is orientated in the learning and teaching methodology of learners with visual impairment. Teachers work with special education staff to modify learning and teaching materials, though external examinations and some assessment items are not properly modified to suit the needs and abilities of the learners. The school has a wide range of assistive devices for use by the learners with visual impairment and production of learning and teaching materials. The access technology has however just been procured in the department and its absence may have had a negative effect on the performance of the learners.

The Special Education Department has a critical shortage of specialist teachers and learning support assistants. The little knowledge in Braille of some learning support staff and the over involvement of expatriate specialist teachers in the mainstream have worsened the shortage of staff. The local specialist teachers are not motivated to take part in learning support programmes since the government gives no incentives in the special education practice.

The learners normally have no diagrams in most of the subjects. Surprisingly, they are provided with diagrams in internal and external examinations. As if that is not enough, the Brailled work learners receive has isolated errors and as a consequence, this tends to demoralise some learners. Furthermore, there are negligible Brailled or recorded books in stock because the Central Resource Centre has not been regularly producing Brailled books due to shortage of human resources.

The parents of learners with visual impairment and most of the stakeholders are not involved in the planning and implementation of nearly all the programs for the learners with visual impairment. Communication regarding the activities that involve learners with visual impairment to the stakeholders is not good. The cause of this is the absence of the necessary structures for learning support not only in the school but also in most of the arms of the Ministry of Education and Skills Development country wide. There is also notable ineffective communication regarding feedback to learners in most of the subjects due to the delay in transcriptions and marking of learners' transcripts. Seemingly, the challenges in this school are a microcosm of what is happening in the entire Ministry of Education and Skills Development.

Learners with visual impairment in the school are not provided with adequate and effective learning support services to help them perform like the sighted learners. The shortage of human and material resources has negatively influenced the performance of learners with visual impairment over the years. Nonetheless, the expatriate specialist teachers provide impressive and exciting learning support programs in the school but are too few to meet the demands of the mainstream teachers and learners with visual impairment in all the subjects. In contrast, the local specialist teachers feel government is not being sincere by denying them special education allowance or paying them scarce skill allowance and have since been not doing much in the special education department using having little knowledge in Braille as a scapegoat. The efforts of the special education staff are not good enough to help the learners with visual impairment to perform academically well

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APPENDICES

Appendix 1

THE SCHOOL'S BALANCED SCORE CARD

Objective	Increase inclusive support for Special Educational Needs (SEN)
Objective Definition	The school shall increase inclusive support for SEN by <ul style="list-style-type: none"> -Reviewing existing structures -Developing and implementing relevant policies -Monitoring, evaluating and providing feedback to stakeholders -Facilitating staff development
Proposed Measure(s) (KPI)	<ul style="list-style-type: none"> -Number of effective guidelines -Frequency of feedback -Number of workshops -Number of improved facilities/equipment
Proposed Target(s)	<ul style="list-style-type: none"> -Intermediate -Intermediate -Major
Associated Initiates	<ul style="list-style-type: none"> -Facilitate the maintenance of existing facilities to accommodate SEN -Facilitate the procurement and modification of teaching and learning materials to suit learners with special educational needs -Facilitate the in-service training of staff in SEN
Champion	Deputy School Head
Measure Lead	Senior Teacher 1 – Special Education

Appendix 2

Participant information sheet

April 2008

Dear Participant

Thank you for your willingness to hear about this research. What follows is an explanation of the research project and outline of your potential involvement. The research is being conducted for a dissertation of limited scope. This is a requirement for the Degree of Masters in Inclusive Education (Special Education) which I am completing at the University of South Africa. If there is anything you do not understand or are unclear about, please ask me. My contact details and those of my supervisor are recorded at the end of this memo.

Title of research

The provision of learning support for learners with visual impairment at a senior secondary school in Botswana

Purpose of the study

The purpose of the study is to carry out an in-depth study on the learning support services provided to learners with visual impairments at a senior secondary school in Botswana. It is hoped that with your participation, a better understanding will be gained of the learning support services provided to learners with visual impairment. The results of this study would be helpful in determining whether the learners with visual impairment show poor performance due to inadequate learning support programmes at school. The research may also help know whether there are other extenuating factors contributing to the poor performance by learners with visual impairment. The result of the research will help the school management, policy makers and other curriculum implementers improve on their service delivery for the betterment of learners with visual impairment.

Description of the study and your involvement

The study will involve you on the interviews with the researcher or assistant researcher. Questions about learning support services provided to learners with visual impairment/you will guide the interview that the research assistant or I will have with you.

Confidentiality

Your name will be kept confidential at all times. I shall keep all records of your participation, including signed consent form which I will need from you should you agree to participate in this study, locked away at all times and will destroy them after the research is completed.

Voluntary participation and withdrawal

Your participation in this study is entirely voluntary. If you choose to participate, you may stop at any time. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say so.

Benefits and costs

You may not get any direct benefit from this study. However, the information we learn from participants in this study help in guiding curriculum implementers, policy makers and stakeholders on how best to support learners with visual impairment in the future. There are no costs for participating in this study other than the time you will spend in an interview.

Informed consent

Your signed consent to participate in this research study is required before I proceed to interview you. I have included the consent form with this information sheet so that you

will be able to review the consent form and then decide whether you would like to participate in this study or not.

Questions

Should you have further questions or wish to know more, I can be contacted as follows:

Joseph Habulezi

Student number: 35492554

Cell phone: +26771575523

E~mail: habulezi@hotmail.com

I am accountable to Professor Phasha, my supervisor at UNISA in the Department of Higher Teacher Education

Appendix 3

INFORMED CONSENT

Title of research

The provision of learning support for learners with visual impairment at a senior secondary school in Botswana

As was mentioned in the Participant information sheet: your participation in this research is entirely voluntary. Refusal to participate or withdrawal from the study will not result in penalty or any loss of benefit to which you are otherwise entitled.

If you choose to participate, you may stop at any time. You may also choose not to answer particular questions that are asked in the study. If there is anything that you would prefer not to discuss, please feel free to say no.

The information collected in the interview will be kept strictly confidential.

If you choose to participate in this research study, your signed consent is required before I proceed with the interview with you.

I have read the information about this research study on the participant information sheet, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to be a participant in this project and understand that I have the right to end the interview at any time, and to choose not to answer particular questions that are asked in the study.

My signature says that I am willing to participate in the research.

Participant name (Printed)

Participant signature

Consent date

Name of researcher conducting informed consent

Signature of researcher

Date

Appendix 4

Structured interview questions for specialist teachers/teachers.

- a. Would you elaborate on the learning support services you provide to learners with visual impairment?
- b. How are learning support programmes organized and determined?
- c. Who provides learning support services to learners with visual impairment in this school?
- d. How often do you conduct the learning support programs for the learners?
- e. Who are the main collaborators in the provision of learning support to learners?
- f. How is the general academic performance of learners with visual impairment in this school?
- g. Would you comment on what the learners with visual impairment engage in after their senior secondary school education?
- h. What would be your comment on the parents' contribution in the running of educational programs in the school?
- i. What are some of the challenges that you face in providing learning support to learners with visual impairment?

Appendix 5

Structured interview questions for learners/former learners

- a. Would you elaborate on the learning support services you are/were offered at this school?
- b. Who provides/provided learning support services to you?
- c. Do your parents help you with the things you learn at school?
- d. What support do/were you specifically get/getting from home towards your learning?
- e. How much chance do you get to be involved in every day life at school and at home?
- f. What advice would you give to your teachers and parents with regard to your education and life?

Appendix 6

Structured interview questions for parents

- a. How do you feel about the education that your child is getting at the school?
- b. Do you keep in contact with the school?
- c. Do you get the chance to help your child with the things that he is learning at school?
- d. How are you involved in the planning of the education of your child?
- e. Is your child able to take part in community life when he /she is at home with you? If not what holds him/her?
- f. How is your son or daughter supported at school?

APPENDIX 7

Documents reviewed

School's Academic Policy. (Draft) 2007 version

School's Class Registers

BGCSE Result Analysis 2003-2008

School Prospectus, 2008

Special Education Departmental Policy, Mochudi

Special Education Departmental Minutes

National Policy on the Care for People with Disabilities, Botswana.

Policy for the Introduction of Inclusive Education to Improve the Quality of Education in Botswana. (Draft) 2009 version.

Revised National Policy on Destitute Persons and Orphans, Botswana.

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