GRADE TWELVE NATIONAL EXAMINATION ASSESSMENTS PRACTICES FOR LEARNERS WITH VISUAL IMPAIRMENTS IN SELECTED SCHOOLS IN MWENSE AND LUSAKA DISTRICTS, ZAMBIA

BY

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DECLARATION

I, **Ndume Muyoma Sarah**, declare that this dissertation represents my own work; that it has not previously been submitted by any other person for a degree at the University of Zambia or any other University and it does not incorporate any published work or material from another dissertation without being acknowledged.

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APPROVAL

This dissertation of **Ndume Muyoma Sarah** has been approved as a partial fulfilment of the requirements for the award of the Degree of Master of Education in Special Education by the University of Zambia.

Examiner 1

Name.....

Signature…..... Date: …….....

Examiner 2

Name.,.....

Signature..... Date: …….....

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Signature.……..…..... Date: …….....

Chairperson, Board of Examiner

Name.....

Signature..... Date.....

Supervisor

Name.....

Signature..... Date.....

ABSTRACT

The study aimed at examining the practices at grade twelve level with respect to learners with visual impairments. The sample was drawn from Mwense and Lusaka districts of Zambia. The study was guided by the following objectives: to establish the current practices of the grade twelve national examination assessment for learners with visual impairments in selected schools of Mwense and Lusaka districts, Zambia, to ascertain the factors that affected the current practices in the grade twelve national examination assessment for learners with visual impairments and to determine the measures which should be taken to improve the grade twelve national examination assessment for learners with visual impairments. The study was qualitative and a case study design was used. The study comprised twenty-two respondents consisting of four pupils, six school leavers, and six school specialist teachers, two school head teachers, two ESO in charge of special education and two officials from the Examination Council of Zambia (ECZ). Semi- structured interviews were used to collect data. Thematic analysis was used to analyse data based on the themes that emerged in the study.

The study findings revealed that learners who were totally blind wrote their examinations using braille format and enlarged print was used for those learners who were partially sighted. The findings of study also showed that the examination questions were modified into a descriptive form and by doing so learners were able to access the examinations. The study further revealed that learners were given extra time during the examinations, although this was not adequate. It was equally revealed that there were no special provisions that were considered when marking examination scripts for the visually impaired learners meaning that their scripts were marked just like other scripts for learners without sight challenges. Additionally, the study found out that at times the visually impaired learners did not benefit from the way the examinations were administered because the modified papers were sometimes not distributed to the schools; hence the learners were subjected to write examinations that were designed for the sighted learners after the invigilators read loudly the questions for them.

On the measures which should be taken to improve the grade twelve national examination assessments, the respondents suggested that the visually impaired learners should be allowed to use computers during the final examinations and that equipment such as Perkins brailler should be fixed in time before the commencement of the examinations. On the whole, the study revealed that there were a lot of inconsistencies in the way the examinations for visually impaired were handled. Based on the findings, it was recommended that the Examination Council of Zambia should come up with a marking centre where the scripts for the visually impaired could be marked to solve the problem of missing results among others.

Keywords: *Visual Impairment, Assessment, National Examination, practices*

DEDICATION

I dedicate this work to the Ndume's family, especially Kambole Grace and Shambaka Mumba for all the support they rendered to me during my stay at the University of Zambia.

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ACRONYMS

CDC	Curriculum Development Centre
CRPD	Convention on the Rights of Persons with Disabilities
ECZ	Examination Council of Zambia
ESOS	Education Standard Officer Special
FGD	Focus Group Discussion
GCE	General Certificates of Education
HT	Head Teacher
IDEA	Individuals with Disabilities Education Act
IEP	Individualised Education Programme
L	Learner
MoGE	Ministry of General Education
PEO	Provincial Educational Officer
SEN	Special Educational Needs
SL	School Leaver
TR	Teacher
UNESCO	United Nations Educational, Scientific and Cultural Organization
VI	Visual Impairments
ZAMISE	Zambia Institute of Special Education

CHAPTER ONE: INTRODUCTION

1.1 Overview

This chapter presents the background, statement of the problem, purpose, research questions, research objectives, significance of the study, delimitation and limitation, theoretical frame work and an explanation of key concepts associated with this study.

1.2 Background to the Study

Educational assessment can be formative or summative. The purpose of educational assessment includes; selection, placement, certification, rehabilitations, and obtaining scholarships (Mcloughlins and Lewis, 2008). It basically helps to show the levels of understanding among the learners. It also reveals the weaknesses of pedagogical approaches. Besides, assessments can be used to transform curriculum through the outcomes from the learners. According to the Examinations Council of Zambia (2014) the grade 12 examination is a high stake school exit examination and the gateway to the world of tertiary education and employment. On the other hand, it is not only used for selection but certification of learners who successfully complete twelve years of schooling and are awarded a School Certificate or General Certificate of Education (GCE).

However, for the visually impaired learners to fully excel from examinations, the test items should be adapted to make it accessible. Therefore, the appropriateness of the examinations given to the visually impaired learners is dependent on the ability to be adapted by simply adapting written examinations into enlarge print or braille format (Willings, 2017). Additionally, appropriate educational assessment methods also need to be adopted for the learners with visual impairments (Ndhlovu, *et al*., 2018). The examinations should be in a format that the learners use and are familiar with. For example, if a student who is blind has not yet learned contracted braille, a reading test for the student needs to be in uncontracted braille and a student who has never taken a test using an audio format would be at a disadvantage if the test was provided only in an audio format. Hence, it is important to understand each student's visual diagnosis and the implications with regard to functional vision to make the appropriate adaptations in order to maximize the student's use of vision and access to the same examinations as their sighted peers (Betsy *et al*., 2005).

In developed countries, the formats in which educational assessments are provided to the students with visual impairments vary widely depending on the unique nature of his or her disability. In accordance with IDEA 2004, an IEP must also detail how the student will be included in the state assessments in which all students must participate by clearly stating the accommodations which should be made to the examination item (Alden, 2016). By compensating for challenges in the accessibility of an assessment, accommodations can help a student with a disability demonstrate knowledge and skills on an equal footing with regular students. Ultimately, accommodations enable a student with a disability to accurately and fairly demonstrate knowledge and skills in a subject area. Therefore, for students who are blind or have significant visual impairments, braille is considered the most efficient code used for reading and is widely accepted as an accommodation that can preserve the validity of an assessment (Carmen, 2017). However, with regards to examinations for the visually impaired at grade twelve in Zambia, very little is known.

It is important to note that modified educational assessment in braille and other formats is clearly an intense and challenging task. One of the challenges is that some assessment content may be difficult to modify into braille format. For example, certain mathematical items and types of charts, graphs and diagrams require special consideration during the brailing process (Bowen and Ferrel, 2003). In addition, some tactile graphics can be used to make this content accessible to students with visual impairments, but some items may not be reproducible in braille. In most developing countries, the students with visual impairments take examinations which are not modified (Jaroshav, 2012). They are mostly allowed to take examinations which are meant for the sighted students. However for the visually impaired learners to fully benefit from examinations they should be allowed to take examinations through audio recording, braille, enlarged print and laptops which are fitted with screen reader software should be provided (Alden, 2016). Additionally, a comprehensive policy regarding taking examinations in various modes for the visually impaired should be formulated (Hewett and Graene, 2015).

In Zambia, out of a total number of one thousand four hundred and four (1,404) visually impaired pupils who sat for the grade 12 school certificate examinations

between 1994 and 2004, only 0.008 per cent obtained full school certificates (Examination Council of Zambia, 2004). Nevertheless, the aforementioned benefits of assessments can only be realized when there are deliberate efforts to analyse assessment results and take special measures to prevent the national exams from becoming a barrier to progression of learners with visual impairment. However, with time, it has become evident that learners with visual impairments have continually been disadvantaged in the application of national assessments. It appears that national assessments have unconsciously and systematically been used as a barrier to the progression and excellence of persons with disabilities, especially those with visual impairments.

UNESCO (2015) argues that if assessment is discriminatory, persons with visual impairments would be at a disadvantage and the purpose of special education would be defeated. This essentially refers to prejudice against or disregard for the learners with visual impairments' needs and their rights. According to the UN Convention on the Rights of Persons with Disabilities article 5 sub-sections 3, it is stated that;

> *In order to promote equality and eliminate discrimination, states parties shall take all appropriate steps to ensure that reasonable accommodation is provided*

However, this is not a case in Zambia; because despite Zambia having domesticated the UN Convention on the Rights of Persons with Disabilities (CRPD) by formulating the Disability Act of 2012, the performance of the visually impaired learners has continued to be poor in the national examinations. This thereby opposes article 24 sub-section 2 of the Convention on the Rights of Persons with Disabilities which states;

> *Reasonable accommodation of the individual's requirement is provided*

This has caused a much larger number of people with visual impairments to be found in the street begging. Therefore, it becomes inevitable, to carry out this study in order to provide evidence to the barriers that affect the progression of learners with visual impairments in the national assessment.

1.3 Statement of the Problem

Although the Zambian government has made progress in the area of Special Education as evidence by the adoption of the 2012 Disability Act, 2011 Education Act and Policy Educational documents, the national examination assessment of learners with visual impairments seems to have received unfair treatment (Muzata, 2015). Even if several studies have been done on the education of the learners with visual impairment, challenges have persisted in the current national examination assessment (Mutonga *et al*., 2016). In Zambia, the current practices in the educational assessment of learners with visual impairments have not been researched on. Therefore, the study seeks to examine the existing grade twelve national examination assessment practices for learners with visual impairments in Zambia.

1.4 The Purpose of the Study

The purpose of the study was to examine the current practices in the grade twelve national examination assessments for learners with visual impairments in selected schools of Mwense and Lusaka districts, Zambia.

1.5 Objectives of the Study

The study was guided by the following objectives;

1) To establish the current practices of grade twelve national examination assessments for learners with visual impairments.
2) To ascertain the factors affecting the current practices in the grade twelve national examination assessments for learners with visual impairments.
3) To determine the measures that should be taken to improve the grade twelve national examination assessments for learners with visual impairments.

1.6 Research Questions

The study was guided by the following research questions;

1) What were the current practices of grade twelve national examination assessments for learners with visual impairments?
2) What were the factors affecting the grade twelve national examination assessment practices for learners with visual impairments?

3) What measures were suggested to be taken to improve the existing practices in the grade twelve national assessments for learners with visual impairments?

1.7 Significance of the Study

It was hoped that the study would contribute to the existing literature on assessment practices for learners with visual impairments. Furthermore, the results of this study sort to implore government and other stake holders to design policies that should address the inequalities and inequities that exist between able bodied learners and those experienced by visually impaired learners during the national examination assessment. It was also hoped that Disabled People's Organisations would use the findings to advocate for the welfare of learners with visual impairments before, during and after the assessment periods. Students with visual impairments can benefit from the study in that all the parties involved in running the national examination assessment can put more effort and develop a positive response that would ensure that the needs of the students are met in the national examination assessment.

1.8 Delimitation of the Study

The study examined the current practices of grade twelve national examination assessments for learners with visual impairments in Mwense and Lusaka districts, Zambia. The participants were selected from Mwense Secondary School and Munali Girls Secondary School because they enrol pupils with visual impairments. The learners with visual impairments were the researchers concern, because they are the ones who are disadvantaged.

1.9 Limitation of the Study

The study only dealt with one category of disability of learners with Visual Impairments, hence the findings were not generalised to all pupils with other types of disability. The study was also limited by financial constraints. There was also a risk of eliciting false information from the Examination Council of Zambia officials because they might have been reluctant to reveal their true opinions.

1.10 Theoretical Framework

This study, was guided by the theory of assessment of learning which involves assessing the students' performance at the end of a given period through achievement testing or public examine (Baku, 2008). Shirlee (2011) concurred that assessment of learning is used for accountability rather than improvement of the quality of teaching and learning. Therefore, assessment methods should be chosen that enable all pupils to demonstrate their learning achievements. Assessment of learning monitors the quality of the school system and evaluates educational policies. It is also used for placement of students, certification and measuring accountability. It advocates for the summative assessments such as the national examinations which should be provided in a format that suits the needs of the learners. Additionally, it is equally used to ascertain whether the money spent on education is yielding desired results. Assessment of learning is used to determine the fate of the students rather than improve their performance. It is a tool that is used to monitor learning, assess attainment and provide feedback to staff, pupils and parents.

The applicability of this theory is that it advocates that summative assessments such as national examinations should be provided in a format that suits the real needs of the learners. Thus, this theory was used to analyze the current practices on the grade twelve national examination assessments for learners with visual impairments. The theory of assessment of learning was found relevant for this study because for a long time the pupils with visual impairments have been disadvantaged when it comes to national examination assessments. Therefore, the theory of assessment of learning could be used to improve the current practices in the grade twelve national examination assessments for learners with visual impairments.

1.11 Operational Terms

Some words may be used to denote other things by different people depending on a situation or context. In this study, the following words have been used as they are defined to suit the study

1) **Visual Impairment**: An overall term that includes all levels of vision loss, that is, persons with low vision or who are blind.

2) **Assessment**: refers to a wide variety of methods or tools that educators use to evaluate measure and document the readiness, learning progress, skill acquisition, or educational needs of students.
3) **National Examination**: is defined as a test in formal education which leads to a qualification. It is externally set and marked by an awarding body.
4) **Modifications**: Alterations or changes to the test that affect the intent or level of the test question.
5) **Accommodations**: Appropriate adjustment in the way a test is administered without altering the content of the test...to maximize a student's performance so that one can obtain an accurate picture of the students' true capabilities

1.12 Summary

This chapter discussed the background on the current practices of grade twelve national examination assessments for learners with visual impairment in Zambia. The chapter discussed the statement of the problem, purpose, objectives and research questions which guided the present study. The chapter also provided the significance, delimitations, limitations, theoretical frame work and the key operational terms used in the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview

This chapter presents relevant literature on the practices of the grade twelve national examination assessments for learners with visual impairments. The review of literature was presented according to the following subheadings; historical overview for the national examination assessment in Zambia and educational assessment. In addition, literature was also presented according to the following objectives of the study;

1) To establish the current practices of grade twelve national examination assessments for learners with visual impairments.
2) To ascertain the factors affecting the current practices in the grade twelve national examination assessments for learners with visual impairments.
3) To determine the measures that should be taken to improve the grade twelve national examination assessments for learners with visual impairments.

A summary at the end of the chapter has been provided.

2.2 Historical Overview for the National Examination Assessment in Zambia

According to Wilshurt and Brue (2005) children with special needs have always been part of the society. Therefore, in Zambia the education of people with special needs started from long back in the early 20th century when a school for the blind was opened at Magwero in 1905 under the Dutch Reformed Church (Snelson, 1974). After that many other missionaries became interested in the education for the children with special needs. This went on until 1971, when the Zambian government then decided to nationalize all schools which included those for children with visual impairments.

From independence, the Zambian government relied on examinations prepared by Cambridge University in the United Kingdom which proved to be expensive. However, in order to provide quality assessment, the Zambian government subscribed to the idea of using an agency or council to prepare and administer examinations. Consequently, the board is called the Examination Council of Zambia

(ECZ) which was established by an Act of Parliament number 15 of 1983 (ECZ, 2009). According to the Laws of Zambia (1983) the Examination Council of Zambia (ECZ) is a government statutory board tasked with the responsibility of preparing examinations for grade seven, nine, and twelve respectively throughout the country (ECZ, 2004). The main purpose of this board is to assess pupil's performance after completing each level including the visually impaired learners.

2.3 Educational Assessment

Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand and can do with their knowledge as a result of their educational experiences and the process culminates when assessment results are used to improve subsequent learning (Polomba and Banta, 1999). In line with this, Jonathan (2010) defines assessment as the systematic collection, review and use of information about educational programs undertaken for the purpose of improving learning and development. Hence, the assessment of learners can be defined as the systematic procedures of gathering and identifying relevant educational information about a student.

Therefore, it can be argued that assessment provides much needed information about the student learning as it provides evidence whether they are getting the intended outcomes. In addition to that, information gathered can guide in making educational and institutional improvement. However, it is worth noting that Assessment can be done at various times throughout a program and a comprehensive assessment plan will include formative and summative assessment and the point at which the assessment occurs in a program distinguishes these two categories of assessment. According to Farrant (1980) formative assessment is the assessment that takes place during the a course or a programme of study as it is an integral part of the learning process and done by the teachers whilst, summative assessment is usually carried out at the end of the course and it leads to an award of certificates in order to progress to higher educational provisions. Additionally, the certificates also act as a form of currency in employment market.

In the last decade, summative assessment has drawn much attention, especially after comparative studies conducted by Black and William (1998) on the impact of formative and summative assessment on the quality of learning effect on pupils. However, the studies revealed that classroom based formative assessment improved the quality of learning and raised student achievement standards in summative assessment (Harlen, 2006). Summative assessment is an important tool in the provision of quality higher education to pupils with visual impairments. However, the current practices of the national examination for learners with visual impairments in Zambia are unknown.

2.4 Current Practices of the Grade Twelve National Examination Assessment for Learners with Visual Impairments

2.4.1 Assessment of the Visually Impaired Learners

Cecil *et al.,* (2007) highlighted that learners with visual impairments cannot be assessed in exactly the same manner as learners without visual impairments and the availability and quality of national examinational assessment for these pupils varied greatly from region to region. Thus, the exams should be modified in order to make them accessible to learners with visual impairments. In addition, (Jonathan, 2010 and Alden, 2016) noted that different examination bodies operate a variety of procedures relating to candidates with certain requirements and the guidelines may be included within the documentation or hand book for a specific course or programme of study aimed at addressing the major needs of the visually impaired candidates with regards to assessment. It can be argued that the examination bodies have a responsibility to ensure that disabled students are not treated less favourably than non-disabled peers and that reasonable adjustments are made so that they can demonstrate their abilities and this applies to all aspects of learning, teaching and assessment.

In some instances, formal assessment methods may not be appropriate for pupils with visual impairments (Salisbury, 2008). For example, pupils with visual impairments may find it difficult to read for long periods of time or may be unable to access some parts of the curriculum. Therefore, examining bodies should consider using non-formal methods of assessment when assessing the students such as specifically tailored assessment.

In most developed countries, awarding Examination Board offer a range of assessment formats for students with visual impairments by modifying the examination papers into accessible formats (Gebreslassie and Menggistu, 2016). However, many developing countries are striving with the provision of assessment to the visually impaired students. According to Jaroslav (2012) in some rural parts of South Africa, the visually impaired learners were subjected to write exams through auditory channels because the department of education did not provide assessment in the appropriate format and the questions had to be dictated to the candidates. It is therefore, important to check which format is best suited to a learner's needs and not to prepare examinations in a format with which the visually impaired candidates are not familiar with. In some instances, it may be appropriate to ask for papers in an electronic format to be accessed by the learner on a laptop, tablet or braille device. However, care needs to be taken to ensure that an electronic version of the paper will be fully accessible to the visually impaired candidates.

Therefore, it must be noted that the deadline for modified papers should be earlier than for the others in order to give adequate time for the awarding bodies to produce the papers in the formats requested (Cecil *et al.,* 2007). It is also, important to keep to these deadlines to guarantee that the papers can be produced in time. The governments in developed countries provide more targeted support to Examination Bodies and other staffs dealing with students with visual impairments in exam centres across the country in order to enhance the performance of learners with visual impairments in national exams (McCall, 2000 and Mbulaheni, 2015). However, in Zambia the current practices in the national examination of learners with visual impairments are unknown.

2.4.2 Modification of Assessments for the Visually Impaired Learners

The definition of approved examination accommodations varies across states as well as across authors. Accommodations, collectively defined, "provides a change in the way an exam is administered without altering the content of exam...to maximize a student's performance so that one can obtain an accurate picture of the students' true capabilities" (Maxwell, 2004 and Alden, 2016). In essence, accommodations are tools or techniques used to level the playing field for students with disabilities in order to provide access to the content without changing the intent of the exam

question. In line with this, Nesbit (2009) pointed out that alterations or changes to the exam that affect the intent or level of the exam questions are considered to be biased modifications and are not allowed on national examinations.

Therefore, it is important that these adaptations are made to prevent assessment from becoming an extrinsic barrier to the progression of the learners with visual impairments. Not only that, accommodations and various technologies exist to provide learners with visual impairments access to academic instruction and exams and mainly the types and numbers of accommodations that are approved on national examinational assessments are determined by individual state policies (Jonathan, 2010). Modification of assessments for pupils with visual impairments should follow the same principles as modification of classroom materials (Salisbury, 2008). Modifications should enable pupils to access the assessment without causing unfair advantage or disadvantage. However, in Zambia, the current practices of the national examination for learners with visual impairments are unknown. It is not known whether there is a deliberate policy to guide the national exams for learners with visual impairments or not.

It is therefore, worth noting that appropriate accommodations reduce error in exam scores due to poor access and they do not change or replace the skills that the exam is designed to measure. Vaughn and Schum (2000) and Willings (2017) point out that accommodations used during the final exams should generally match those used by the students for classroom instruction, assuming they are familiar and effective for the students. In line with this, Cara (2004) states that exam accommodations should be documented in a prescribed section of the individualised education program (IEP) and not provided as a favour. Hence; an evaluation of IEP effectiveness for an individual student should be highly recommended and the students should be thoroughly trained on how to use accommodations. For example, providing a test orally by a qualified person or on computer might actually penalize a student who has not been trained to listen to orally presented material or trained to use a computer for assessment. Therefore, in order for the exams to be accessible by the visually impaired students the following modifications should be considered;

2.4.2.1 Provision of Extra Time

According to Salisbury (2008) pupils with visual impairments often require additional time to process visual information and complete written and practical tasks. Many external examinations recognise this requirement and many allow up to 100 per cent additional time for pupils with visual impairments. Therefore, teachers should consider the nature of the assessment and the purpose of time restrictions. In most developed countries, learners with visual impairments are given extra time to complete the exams since learners who read braille need twice as much time as other learners. It is estimated that learners who read enlarged print need time and a half to complete an exam (Vaughn *et al.,* 2000). Research investigating the use of extended time has reviewed that it is more beneficial to the individuals with visual impairments (Purcell *et al.,* 2009). It can be said that students with visual impairments usually require extended time during the exams because using braille, print and audio formats require more time than it does to reading print with an acceptable visual acuity. A study by Wetzel and Knowlton (2000) suggests that experienced adult braille readers may need no more than 50 percent more time than the stated duration, with additional time allowed for the manipulation of an audio device or the marking of an answer sheet. In contrast, an earlier researcher found that braille readers with far less braille reading experience than the subjects mentioned in the Wetzel and Knowlton study may need between 2 and 3 times as much time as their sighted peers to read the same material (Poncillia and Susan, 1996). Traditionally, extended time for examining readers who are visually impaired has been 1½ times and for braille readers, time allocated has been 2 times the amount allowed for regular print readers (Maxwell, 2004).

Regardless of the time allowed, the students with visual impairments should be carefully monitored to ensure that time is been used appropriately. If students need an excessive amount of time, educators may need to investigate the efficiency of the chosen reading mode or initiate remediation to improve speed. Generally, timing accommodations should be individualized according to the test taker's reading rate and examining situation (Wetzel & Knowlton, 2000 and khochen, 2011). It has been observed that braille (tactile reading) consumes more time than does visual reading, as students who read braille typically read at fewer words per minute than do

students who read print (Trent & Truan, 1997). In addition, more time is also given to visually impaired learners who use specialist information technology (IT) because they also have difficulties in writing quickly because of a disability and thereby need more time to complete task. It has been observed that the use of extended time when the candidates with visual impairments sit for the exams has received considerable attention across the global and it has proved to be more effective. However, with regards to the current practices in the national assessment of learners with visual impairments in Zambia, the situation is unknown.

It appears that extra time to complete examinations is available in most countries although the formula for calculating this extra time varies considerably. For example, the Netherlands and Czech Republic appear to have options for 100 percent extra time (double time), while other countries have less (Ireland and France report 33 percent extra) (Graeme *et al.,* 2009). A number of countries appear to base extra time calculation on the level of need (linked to level of vision or reading format – braille versus print). In line with this, Nesbit (2009) states that in some countries additional time requirements appear to be negotiated on a case-by-case basis if needed (e.g. Canada, Germany, and Scotland). The standard allowance in England and Wales is 25 percent but more can be requested up to 100 percent on the basis of individual evidence of need (Wetzel & Knowlton, 2000). According to ECZ (2011) the candidates with SEN should be given up to 25 percent extra time and in exceptional cases such as braille and multiple disabilities the Examination Council of Zambia shall approve additional time on request by the centre. However, it is not clear whether the invigilators adhere to ECZ guidelines by giving the required added time to the visually impaired students when writing national examinations.

2.4.2.2 Provisions of Specialist Support Staff and Materials

The assessment of the learners with visual impairments is critical without the involvement of the specialist support staff. Hence, candidates with visual impairments should be provided with specific support assistant that may give specific advice if the exams involve technical procedures that may be new to the candidates (Ponchillia and Susan, 1996). Rawlins (2006) argues that learners with visual impairments require a provision of specialist support. For example, a learner who is partially sighted may require special computer software that will allow the screen to

be magnified, a Dictaphone or talking calculator. However, it is important to remember that the visually impaired learners may require practice in using the special equipment so that the equipment does not become a hindrance during the examinations.

Therefore, assistance should be provided for students with visual impairments who require audio versions of an exam, for instance accessing the exams through a cassette tape, video, CD, computer-based or spoken (read aloud) test versions. Learners with visual impairments may require adult support for activities they are unable to take part in independently. Readers should be considered for pupils who have difficulty reading or writing for sustained periods of time (Salisbury, 2008). Learners with visual impairments may also require assistance with practical activities, such as using equipment, locating materials, drawing and measuring. When an audio version of an exam is administered, it should be accompanied by a print, enlarge print, or braille version of the test, or tactile graphic supplement at the very least. In this multi-media approach, a student can as well access illustrations or other visual material through CCTV; hence, there is a great demand for specialist support to eliminate all the barriers that may make the exams inaccessible (Jonathan, 2010).

According to the ECZ guidelines (2011) the principal or the head teacher shall propose names of personnel to the DEBS to be appointed as transcribers, tape recording assistant and to be a reader (a person who takes reading for a candidate with SEN or writes for him or her during examinations). Despite, the Examination Council of Zambia putting in place guidelines on how examinations generally should be conducted, it does not clearly specify how the examinations for the visually impaired learners should be conducted. For instance the guideline lacks information on how examinations for the learners with visual impairments should be modified to suit the individual needs of the learners. However, the current practices of the national assessment for learners with visual impairments regarding involvement of specialist teachers in Zambia are not very clear.

2.4.2.3 Provision of an Alternative Location

Tindal and Funchas (1999) argue that if the examination room that has been allocated for the visually impaired is not accessible, an alternative room will need to be found and if another candidate is receiving support from support assistant, the noise or movements generated may cause distractions that will be detrimental to the other candidates present. Therefore, the provision of an alternative location or room is imperative because some locations are inaccessible and may prove to be a hindrance in the assessment of learners with visual impairments. Nesbit (2009) points out that the room must be arranged to suit the needs of the learners with visual impairments in order to eliminate all forms of hindrances towards accessibility to the assessment of the visually impaired learners. For instance, some learners with visual impairments require too much light while others require less light. In Zambia, the current practices regarding the provision of an alternative location for examination rooms during the national examination assessment of the learners with visual impairments are unknown.

2.4.2.4 Enlarge Print

According to Nesbit (2009) for learners with low vision, there should be some provision of enlarged print examination papers in order for them to have full access to the exam papers. According to Jonathan (2010) there are a wide range of large print options even though some countries like Sweden appears to provide no enlarged print examinations at all. In addition, Vaughn and Schum (2000) and Alden (2016) points out that the preparation of large print versions of an examination paper after the original paper has been designed, is a clear example of 'access arrangements'. In itself, this is not problematic except that the greater the range of large print options which are provided, the more complex, time consuming and costly the process becomes. However, even if many countries provide enlarge print for some of the visually impaired students it is not known whether adaptations are made differently to suit the severity or the extent to which a learner is able to perceive light.

However, most developed countries especially in the USA and Europe also have the option to provide examinations electronically which allows an on-screen presentation

of examinations and this has proved to be cheaper compared to printed large print. If the systems are in place for examinations to be provided in this way, then this could take pressure off the preparation of enlarge print hardcopy versions without compromising the students' access. Nevertheless, it should be noted that in order to make exams accessible for pupils with low vision, both large print and electronic versions of the paper should be provided (Obi, 2010 and Mbulaheni, 2015). It must be pointed out that in order to achieve inclusiveness with regards to making examinations accessible to learners with visual impairments, the learners should not adapt to suit the requirement of an assessment, but the exam should be adapted to suit the needs of the learners. Similarly, it may be that students prefer the security of having different formats, or in practice it may be that students choose to temper their requests for hardcopy examinations in very enlarge print sizes knowing that they can use the electronic versions of exam papers to enlarge text when needed. It must be emphasized that this can be more effective for learners who are conversant with using a computer and it should be provided as stated in the Individualised Education Program. This should be done in order to prevent such adaptations from becoming a hindrance of full accessibility to an exam by the visually impaired learners.

When providing enlarge print papers, safety measures must be taken because problems arise when limited hard copy large print sizes are available, and there is no available electronic version of the examination. Nevertheless, the examination bodies should be able to provide a wide range of hard copy large print sizes. With regards to the provision of exams in both hardcopy and electronic formats to learners with low vision in Zambia, the situation is unknown.

2.4.2.5 Braille Transcription

According to Allan (2009) test developers and publishers must ensure that contracts for braille materials specify the use of braille transcribers who are certified at transcribing tests, and are knowledgeable of braille formats. In line with this, Maxwell (2004) states that braille formats must be modelled in simple and clear contractions which can be accessed by the visually impaired candidates. Therefore, as the exam papers are edited for braille transcription, necessary changes should be made to make the materials accessible to braille readers. In addition, simplification and labelling of some graphic material is necessary. Simplification entails the

elimination of some artistic features, removal of some superfluous material (without eliminating distracters and other text material that is necessary to maintain the validity of the test item), or movement on the braille page of some text or graphic components for more efficient readability by the braille reader (moving a scale, legend, or compass rose on a map to a different location) (Jonathan, 2010 and Allan, 2009).

It must be noted that most countries worldwide provide examinations presented in braille. However, some countries do not provide hard copy braille versions of examinations, but rather allow braille readers to use computer-based braille displays to access electronic examinations (Graene *et al.,* 2009). Even so, hard copy braille versions of examinations are available if the student wants them. (Nesbit, 2007) argues that several students who read braille may be provided with a hard copy braille paper and an electronic version to access via a computer with screen reader. The combination provided by both formats for the same examination may well be attractive to students, but it would be interesting to know how many request for both formats in actuality. In Zambia, it is unknown whether the visually impaired learners are provided with brailed examination papers or not.

2.4.2.6 Assistive Technology for Assessment

When writing exams, students with visual impairments should have access to technology that will enable them to overcome their difficulties. Some students may choose to use a regular print test and enlarge it manually with a magnification device with which they are familiar with. (Jonathan, 2010 and Nesbit, 2009) state that magnification devices include eyeglass-mounted magnifiers, free standing or handheld magnifiers, and electronic equipment such as the closed circuit television (CCTV) or a computer that has text enlargement software installed. These devices do not provide a student with an unfair advantage. Rather, they are devices that the student requires to access print, and they should be allowed as standard accommodations for the visually impaired learners to fully access the exams (Allan, 2009 and Connell, 2008). In principle, this availability of electronic format examinations should give the reader access to any font size. Hence the teachers of learners with visual impairments should conduct the initial portion of the assessment, by looking at the student strengths and needs and identifying areas of concern and

this information should be made available to the examining bodies well in advance for the exam to be modified according to the needs of the visually impaired candidates. However, the current practices in the national examination for learners with visual impairments in Zambia are not clear.

2.4.2.7 Content Modification

Nesbit (2009) argues that most developed countries such as the US has a mechanism for the modification of examination content to make it more appropriate for the visually impaired students compared to the developing countries who are still struggling. In terms of the distinction between 'access arrangements' and 'universal design', it would appear that content modifications are almost unavoidably carried out after the original examination has been designed. This way of viewing modification appears to be the norm across the countries in that most developed countries has a proper mechanisms and procedure for approaching examiners to change content of questions for learners with visual impairments. However, in developing countries it is difficult to find expert modifiers, as it requires large amounts of lead-in time required for modifications to be implemented. Maxwell (2004) points out that the examining bodies should ensure that the examination question does not discriminate against the student who uses braille. While this is a costly and time consuming process it has without a doubt a vital playing field for braille learners. With regards to content modification, the extent to which the contents of exam papers are modified to suit the needs of learners with visual impairments in Zambia is unknown.

For students with visual impairments to demonstrate their content knowledge, simply converting the examination papers into either large print or braille does not make the materials or tests fully accessible (Jonathan, 2010). Specific attention needs to be paid to the item construct, to eliminate test item bias towards persons with visual impairments. An example of item bias identifies questions such as 'draw the results of the following' or 'write a story based on the picture' as being non accessible to braille readers. Additionally, some examination items may contain maps and graphs that are currently being deleted or substituted when the braille, tactile graphic, enlarge print, or audio format changes the item content (Allman, 2009). Therefore, there is a great need to prevent the introduction of

pictures that contain information necessary for selection of the correct answer, but which cannot be adequately brailed, presented in large print or tactile graphics, or described in audio format. With regards to content modification the extent to which the content of exam papers is modified to suit the needs of learners with visual impairments in Zambia is unknown.

2.5 Factors challenging the Grade Twelve National Examination Assessment for Learners with Visual Impairments

2.5.1 Inappropriate Accommodations

The use of accommodations during testing is intended to level the playing field for any student with a disability (Pilson, 2016). However, some accommodations needed by learners with visual impairments may not be presented for them to excel in the national exams. Similarly, accommodations and various technologies may not exist to provide learners with visual impairments access to academic instruction and tests. In most developing countries the need for one or more accommodations is not the decision of the Individualized Education Program (IEP) team (Obi, 2010). Therefore, mainly the accommodations used during the exam do not generally match those used by the student for classroom instruction, thereby affecting the extent to which the students with visual impairments access the examinations.

Further, learners with visual impairments are not trained to use accommodations. For example, providing a test orally by a qualified person or on computer might actually penalize a student who has not been trained to listen to orally presented material or trained to use a computer for assessment. Mainly accommodations are not periodically evaluated to ensure that they are still effective for the learners with visual impairments (Eye way, 2017). Some may need to be eliminated or revised when and if the student arrives at a point where he or she either does not need the accommodation, it is ineffective, or it is not the most effective option available. If an accommodation is needed by a student and is not on the list of those approved for state use, the local test administrator should contact the state assessment office to request a review of its use (Pilson, 2016). With regards to the challenges the learners with visual impairments face concerning the modifications made to the examinations in Zambia the situation is unknown.

2.5.2 Item Development and Review

Educators with specialization in the field of visual impairments in some examining bodies are not included in the test item development process (Obi, 2017). This shows that in such examining bodies test items are not reviewed by persons familiar with visual disability issues to ensure that no exam item is biased or discriminatory toward persons with visual impairments (Pilson, 2016). It is recommended that educators with specialization in the field of visual impairments should be included in test item development as this will help prevent the introduction of pictures that contain information necessary for selection of the correct answer, but which cannot be adequately brailed, presented in large print or tactile graphics, or described in audio format (Eye way, 2017). In addition, a representative sample of persons with visual impairments must be included in test item development process. However, in Zambia it is unknown whether persons with visual impairments and expertises in the field of visual impairments are involved in exam item development process or not.

2.5.3 Exam Administration

Computers and adaptive technology, electronic note takers, cassette player/recorders, the cassettes and CDs must be inspected for proper functioning prior to their use during an exam (Obi, 2010). It appears that the exam administrators are not well instructed on how to proceed if equipments fails or malfunctions during administration of the examinations which causes panic. The learners with visual impairments using an alternate medium test or a combination of media are usually not assigned a testing packet that includes a list of materials needed (approved technology or other manipulative such as a talking calculator, braille or large print ruler, braille paper, bold line writing paper and raised line graph paper) (Gebreslassie and Menggistu, 2016). Therefore, the exam administrators must ensure that special tools and materials noted on the student's IEP and used for instructional purposes as accommodations are available as needed to students in the exam-taking environment. For example, if a visually impaired learner’s routinely uses an abacus in the classroom when sighted students are allowed to use a pencil and paper for computational purposes, then an abacus must be available during an exam. With

regards the challenges which the learners with visual impairments face regarding exam administration when writing the exams in Zambia it is not known.

2.5.4 Braille Translating (Transcription) Process

Braille Translating (Transcription) Process requires that test developers and publishers ensure that contracts for braille materials specify the use of braille transcribers who are certified by transcribers, experienced at transcribing tests and knowledgeable of braille formats (Konstantinos, *et al.*, 2015). Therefore, challenges arise when test developers and publishers lack skills in braille which affect the braille transcription process before and after the examinations in readiness for marking. However, in Zambia, with regards to challenges faced in braille translating (transcription) process, it is not known.

2.5.5 Marking of the Exam Papers for the Visually Impaired learners

Among the nine functions of the Examinations Council of Zambia, the Council organises training courses for, or arranges for training of examiners, markers, supervisors, invigilators and other persons' connected with examinations (Sakala and Nkoya, 2009). Until now, the examiners are trained at council expense, as the training is considered a quality assurance issue in the setting and marking of examinations. Despite all these efforts by the Examination Council of Zambia, the marking of scripts for the visually impaired students has remained a big challenge.

However, according to Waterfield and West (2008) students with visual impairments may present their work poorly if they are unable to re-read their own work and marks should not be deducted for this. They may also miss errors when re-reading their work as a result of their visual impairments and consideration should be given to this when marking. Students who use braille may make grammatical errors when producing written English as the structure of braille is different from the structure of written English (Cara, 2004). Therefore, Marks should not be deducted for poor grammar in written exams. With regards to marking of the examination papers for the visually impaired learners in Zambia, the practices are not clear.

2.5.6 Reporting Test Results of Learners with Visual Impairments

Following the requirements of federal law, the scores of students who take assessments in accessible format must be reported for accountability purposes (Eye way, 2017). When reporting the results of students with visual impairments, care must be taken to protect the student's privacy while appropriately representing the exam score in consideration of the accommodations used. Reporting of scores should be a consideration during the exam development phase so that all parties understand the purpose of the examining and how the results will be reported and used. However, in the developing countries reporting of exam results for most assessments is a challenge for learners with visual impairments. The examination results are reported late. Mtonga, *et al.,* (2016) highlighted that the results for learners with visual impairments at various levels go missing. Therefore, the scores of the visually impaired learners should be reported on time to enhance the progression of these learners to higher education. However, the effectiveness on how feedback is reported to the visually impaired learners in Zambia with regards to the exams is still not very clear.

2.6 Measures that can improve the existing practices in the grade twelve National Examination Assessment for Learners with Visual Impairments

2.6.1 Universal Design

In the construction and administration of exams, the process of universal design helps to ensure accessibility for a multitude of students. Universal design provides the widest range of students the ability to demonstrate adequately their skills and knowledge (Konstantinos, *et al.,* 2015). This process should retain the validity of inferences drawn from the exam results. During assessment, universal design becomes the process of ensuring that the majority of students can demonstrate their knowledge and skills. Hence; to ensure that an assessment system is fair and accessible to all learners, states are required to document how they include the principles of universal design in the item review process (Sahacrabudhe and Prashant, 2013). Generally the principles of universal design include accessible exam items, as determined by item writers and review teams that include personnel

familiar with various media (braille, tactile graphics, large print, regular print, and audio) (Thompson and Thurlow, 2002). In order to achieve universal design to item development, examining bodies should ensure that exam item writers are trained in concepts of universal design that is examining each test item for universal design principles (bias issues; modalities of braille, large print, and audio; and response formats to be allowed). However, on universal design with regards to the exams for the visually impaired learners in Zambia, it is not known.

2.6.2 Accessible Exam Formats

Learners with visual impairments may require examining materials in regular print, large print, braille, tactile graphics, audio formats, or some combination of these formats. Hence, the provision of an exam and related materials in braille, large print, or audio provided to an individual student with visual impairments should be based on the medium used by the student, as identified in the Individualized Education Program (IEP) document (Sutton, 2002). Additionally, students with visual impairments can be, and must be, made part of the state's assessment program through use of accommodations that allow them to demonstrate their knowledge and skill acquisition, as outlined in each state's standards and assessment system specifications (Pilson, 2016). Regardless of the media chosen, students may need access to special materials such as braille paper, bold line writing paper, talking calculators, abacuses, raised or bold line rulers, braille writers, slates and styluses, word processors, or other materials and devices. Regarding making the examinations accessible for the visually impaired learners in Zambia it is not clear.

2.6.3 Tactile Graphics

For the visually impaired learners to access the exams; maps, charts, graphs, and diagrams should be translated into tactile form. In addition, editing could involve eliminating the shading used only for visual effect, reducing the number of distracters, providing two or three charts to present the same information as one complex print chart, using text based descriptions to supplement or replace graphics, or using symbols and words with a key to provide information (Eye way, 2017 and Obi, 2010). Therefore, edits needed to convert print graphics to tactile graphics need

to be approved by exam item developers or publishers. Because graphics are common in text, training in reading graphic material and interpreting a written description of a graphic are important skills for the learners with visual impairments to access the exams. In Zambia it is not known whether some information in the examination papers is translated into tactile graphics or not.

2.6.4 Fonts

For the partially sighted learners to fully access the examinations, the exams should be enlarged to suit their visual acuity. Pilson (2017) highlights that print measuring 18 points or larger is considered large print while point sizes between 12 and 16 points are considered enlarged print. For the learners with visual impairments, an exam in a print size larger than 18 point should be requested. In such cases, the publisher must determine if material can be adequately presented in a larger font size. Additionally, decisions about the size of print and font style must be made by the test publisher and discussed with a person who has knowledge of large print use and the intended exam takers (Konstantinos, *et al.*, 2015). With regards to the fonts in which the exams for the visually impaired are provided in Zambia very little is known.

2.6.5 Audio Examinations

Regarding the exams for the visually impaired learners some illustrations can be described orally in an accurate manner, while other graphic material cannot be described without revealing the answer or providing an unfair advantage to the audio user (Sutton, 2002 and Pilson, 2016). Not only that, a complete script for audio versions should be written with the assistance of a content expert and provided to test administrators. Audio versions of an exam serve to standardize oral delivery of the exam content and may reduce the number of school staff needed for proctoring or administering exams orally. Therefore, the learners with visual impairments using audio versions of an exam should have had an adequate amount of experience using the specific audio medium and audio equipment independently before the testing situation. However, in Zambia, it is not clear whether the visually impaired learners write exams through audio media or not.

2.6.6 Alternative Assessments

According to Salisbury (2008) Students who meet the criteria for alternate assessment, by definition of the federal law, are those students who have significant cognitive disabilities (often referred to as the 1 percent population assessment). As allowed by federal law, some states have chosen to provide a second alternate assessment for those students who are not expected to meet the state standards as demonstrated on the general state assessment within the same time frame as students taking the general state assessment. In addition, these students are to be working toward the state standards using modified achievement standards as identified by each state. In some states, this alternate assessment (generally referred to as the 2 percent population assessment) mirrors the general state assessment with the exceptions of having fewer answer choices and in some cases using simpler language in the exam items (Eye way, 2017). Since alternate assessments are very similar to the general state assessment in most cases, the same requirements for accessibility are applicable for the alternate assessment as are outlined for the general assessment. The needs of learners, who are visually impaired and have additional disabilities that may qualify them for these alternate assessments, must be considered in the planning and developing of alternate assessment formats and items. However, in Zambia it is not clear whether the visually impaired learners are given alternative examination papers or not.

2.7 Summary

This chapter has reviewed relevant literature in the practices of the grade twelve national examination assessments for learners with visual impairments. Literature also reviewed the historical overview for the national examination assessment in Zambia, educational assessment, current practices of the grade twelve national examination assessments for learners with visual impairments and factors challenging the grade twelve national examination assessments for learners with visual impairments. The chapter also reviewed relevant literature on the measures that can improve the existing practices in the grade twelve national examination assessments for learners with visual impairments.

CHAPTER THREE: METHODOLOGY

3. 1 Overview

This chapter discusses the research methodology the researcher employed to investigate the current practices of grade twelve national examination assessments for learners with visual impairments in Mwense and Lusaka Districts, Zambia. The chapter also discusses the type of research design used; target population, sample, sampling techniques and data collection instruments employed in the study. Additionally, the chapter also discusses the data collection procedure, data processing methods employed as well as ethical consideration.

3.2 Research Design

Kombo and Tromp (2006) define a research design as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. A research design can be thought of as the structure of research, or the "glue" that holds all of the elements in a research, to show how all the major parts of the research project work together to try and address the central research questions (Kombo and Tromp, 2006). Additionally, according to Sidhu (2014), a research design on a practical level is one that connects the research questions to data. Therefore, a research design sits between research questions and data, showing how research questions will be connected to data and what tools and procedures to use in answering them. This is exactly what this research design here tried to achieve. In choosing the research design, the researcher was informed by the principle that the selection of a research design is based on the nature of the research problem or issues being addressed and the audience for the study (Creswell, 2009).

A case study research design using the qualitative approach was used to allow the researcher to interact with the research participants in order to collect in-depth data. According to Ghosh (2004) a research design, is regarded as an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose. The design helped to have an in-depth understanding of the current practices of the grade twelve national examination assessments for learners with visual impairments in Mwense and Lusaka Districts, Zambia.

3.3 Location of the Study

The study was conducted in special education units in the mainstream in Lusaka and Mwense Districts. Two special education units in the mainstream were selected, because they enrol pupils with visual impairments.

3.4 Target Population

The target population for this study was made up of all the pupils with visual impairments in the grade twelve (12^{th}) levels, visually impaired school leavers, special education teachers, head teachers and ESO in charge of special education in Mwense and Lusaka Districts. The population also included the Examination Council of Zambia (ECZ) officials in charge of special education. The specialist teachers, headmasters, ESOs and officials from the Examination Council of Zambia were selected simply because; they know exactly what is involved with the examination processes for pupils with visual impairments.

3.5 Sample Size

In this study, the sample comprised of 22 respondents of which 4 were pupils, 6 were school leavers, 6 were school specialist teachers, 2 were Education Standard Officers Special and 2 officials from ECZ as shown in Table 3.1;

Category Of Respondents	**School A**	**School B**	**Total**
Pupils	2	2	4
School Leavers	3	3	6
Specialist Teachers	3	3	6
ESO Special	1	1	2
School Managers	1	1	2
(ECZ) Officials	2	-	2
Grand total	**14**	**12**	**22**

Table 3.1

3.6 Sampling Techniques

The study employed purposive sampling procedure to select the participants in this study. Purposive sampling is a type of sampling which enables a researcher to

purposively target the people believed to be reliable for the study (Kombo and Tromp, 2006). This sampling technique helps to increase usefulness of the findings. The selection of a sample under this procedure was based on the judgement of a researcher regarding the characteristics of a representative sample. The logic in the use of a purposive sampling procedure in a study of this kind lied in the selection of information that allows in-depth study (Borg and Gall, 1993). In this study, purposive sampling procedure was used to select two (2) School head teachers, two (2) ESO Special officials, (6) Specialist Teachers, two (2) Examination Council of Zambia officials and four (4) pupils to participate in the study. When selecting the visually impaired school levers, snowball or chain sampling procedure was used.

3.7 Data Collection Instruments

In this study, one instrument was used in the collection of data from twenty two (22) respondents that is semi-structured interviews. To collect data from the respondents, Semi-structured interview guides was used to collect primary data from the pupils, school leavers, specialist teachers, school head teachers, ESO Special and Examination Council of Zambia (ECZ) officials. The researcher used this instrument in the data collection because of the several advantages it brought to this kind of study. Such ranged from explanatory powers, representativeness, appropriateness to ability to ensure reliability and validity in the data generated to support this kind of study (Cohen *et al*., 2000).

3.7.1 Semi - Structured Interview Schedule

A semi-structured interview schedule was used to gather information from the visually impaired pupils, school leavers, specialist teachers, school head teachers, ESO Special officials and the Examination Council of Zambia (ECZ) officials on the practices of grade twelve national examination assessments for learners with visual impairments. This was considered appropriate because data collection is flexible and can be adapted to a variety of situations (Kasonde- Ng'andu, 2013). In line with this, Semi - structured interview guide was used because it is the most appropriate tool

when interviewing a single respondent. Additionally, a detailed amount of information was collected from the respondents using semi- structured interviews.

3.8 Trust Worthiness of the Research

This study used the following alternative criteria to confer trustworthiness of the study;

3.8.1 Authenticity

The authenticity of the study is about convincing readers and the interpretations drawn from the data. In this study, authenticity has been achieved by conveying clearly depicting the processes of data collection and analysis together with demonstrating the researcher's thoroughness in these processes and qualifying anything that might compromise this like the personal biases.

3.8.2 Confirmability

Confirmability is based on the perspective that the integrity of the findings lies in the data and that the researcher must adequately tie together the data, analytic processes and findings in such a way that the reader is able to confirm the adequacy of the findings (Geertz, 1973). The researcher achieved this by, returning to some of the respondents in order to verify the information which they had given earlier. This was done in order to request for agreement and checking for gaps in the collected data.

3.8.3 Transferability

Transferability refers to the extent to which the reader is able to transfer the findings of the study to her or his own context or another setting (Geertz, 1973). Transferability was achieved by, providing sufficient information on the current practices in the grade twelve national examination assessments for learners with visual impairment to enable the consumers of this study research (readers and researchers) decide how the current findings could depict a similar picture to a completely different setting.

3.9 Data Collection Procedure and Time line

Before commencing the exercise of data collection in the field, permission was sought from the Research Ethics Committee from the University of Zambia. The researcher also obtained an introductory letter from the Assistant Dean (Postgraduate) of the School of Education, University of Zambia (UNZA). The DEBSs also wrote a letter of introduction to introduce the researcher to all the institutions where the data on the topic was collected. Finally, before administering any instruments, the researcher also asked all participants to fill in the consent form. Semi- structured interviews for the specialist teachers, school head teachers and the visually impaired learners were administered during school time because this was the only appropriate time to get hold of these types of participants. On the part of the visually impaired school leavers, ESO special officers and Examination Council of Zambia (ECZ) officials, a detailed one-to-one interview approach was used to solicit for responses. With the consent of the respondents data was recorded using a recorder.

3.10 Data Analysis and Procedures

Thematic analysis was used to analyse the data in this study. Thematic analysis is one model of narrative analysis. According to Sidhu (2014) thematic analysis, helps to summarise several data collected about the research questions. Bryman (2004) state that thematic analysis gives an emphasis on what is said rather than how it is said. Qualitative data collected from semi-structured interview guide was analysed through thematic analysis by coding, grouping and meaningfully interpreting emerging themes reflecting both the specific research questions and objectives of the study.

Creswell (2009) observes that analysing qualitative data requires an understanding on how to make sense of the text and images so that answers to the research questions are formed. Qualitative analysis involved description, explanation and interpretation of the responses collected from the interviews. In this study therefore, groups of questions that were interconnected and related were identified as themes

for the purpose of analysing the views of the respondents on the grade twelve national examination assessments for learners with visual impairments in Mwense and Lusaka Districts, Zambia.

When analysing data thematically, the researcher was guided by a six-phase guide propounded by Braun and Clarke (2006) which is a very useful framework for conducting qualitative analysis as shown below;

3.10.1 Become Familiar with the Data.

The first step in any qualitative analysis is reading and re-reading the transcripts (Bruan and Clarke, 2006). The researcher made herself familiar with the entire body of data (all the data generated through interviews) before going any further. At this stage, the researcher made notes and jot down early impressions.

3.10.2 Generating Initial Codes

At this stage, data should be organised in a systematic and meaningful way. The researcher worked through each transcript coding every segment of text that seemed to be relevant to or specifically addressed the research questions. As the researcher worked through them, new codes were generated and sometimes modified the existing ones. This was done by hand initially, working through hardcopies of the transcripts with pens and highlighters.

3.10.3 Searching for Themes

According to Braun & Clarke (2006) a theme is a pattern that captures something significant or interesting about the data and or research question. In this case, the researcher examined the codes and some of them clearly fitted together into a theme. However, at the end of this step the codes were organised into broader themes that seemed to communicate something specific about the research objective and the themes were predominately descriptive.

3.10.4 Reviewing Themes

At this stage, the researcher made sure that data within the themes cohered together meaningfully. The researcher also ensured that there was a clear and identifiable distinction between the themes. Additionally, the researcher checked the themes in relation to the coded extracts and then for the overall data set.

3.10.5 Defining and Naming Themes

This step involves refining and defining the themes and potential sub-themes within the data (Bruan and Clarke, 2006). At this stage, the researcher provided theme names and clear working distinctions that captured the essence of each theme to the point and effective manner.

3.10.6 Producing the Report

At this stage, the researcher had to transform the analysis into an interpretable piece of writing by compiling extract examples that relates to the themes, research objectives and literature. In addition, the researcher ensured that the report relayed the results of the analysis in a way that convinces the reader of the merit and valid analysis. The themes went beyond a mere description, but portrayed an analysis supported with empirical evidence that addresses the research objectives and questions.

3.10.7 Codes for the Respondents

The codes were given to the respondents for confidentiality purposes. The schools were presented as; school A and B. The teachers were indicated as; TR1, TR2, TR3, TR4, TR5 and TR 6 and head teachers were coded as HT1 and HT2. Similarly, the learners were coded as L1, L2, L3 and L4 and the school leavers were indicted as SL1, SL2, SL3, SL4, SL5 and SL6. Additionally, the Education Standard Officers Special were indicated as; ESOS1 and ESOS2 and the Examination Council of Zambia officials were coded as ECZ1 and ECZ2.

3.11 Ethical Consideration

With regards to ethical considerations, clearance was sought from the University of Zambia Ethics Committee. Permission was also sought from the District Education Board Secretary's Office and the Examination Council of Zambia before research began. According to Creswell (2009) and Kombo and Tromp (2006) it is a mandatory that research participants get informed before they are approached for data collection. To comply with this, the researcher ensured that consent was obtained from the respondents and thoroughly explained the purpose of the research to ensure that the respondents participated voluntarily. The respondents were as well treated with respect. Creswell (2009) insist on anonymity and confidentiality in research study. Therefore, the names of the participants in the entire study were kept anonymous. Confidentially for all the information gathered was highly safeguarded.

3.12 Summary

The chapter discussed the research methodology the researcher employed to investigate the current practices of grade twelve national examination assessments for learners with visual impairments in selected schools in Mwense and Lusaka Districts, Zambia. The chapter has also provided the type of research design used; target population, sample, sampling techniques and data collection instruments which the researcher employed in the study. The chapter also discussed data collection procedure as well as data processing methods. The chapter ended with the discussion on ethical consideration.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.1 Overview

This chapter presents the findings on the current practices of the grade twelve national examination assessments practices for learners with visual impairments in selected schools in Mwense and Lusaka Districts, Zambia. The chapter comprises the views of respondents in the in-depth interviews.

Basically the findings have been portioned according to the diverse categories the respondents participated in. For this reason, the chapter unveils the findings of this study with regards to the issues expressed by 4 pupils, 6 school leavers, 6 teachers, 2 head teachers, 2 ESO Special officers and 2 ECZ officials. A total of 22 respondents were available for the study.

The presentation of findings was guided by the following research objectives;

1) To establish the current practices of grade twelve national examinations assessment for learners with visual impairments.
2) To ascertain the challenges that affected the current practices in the grade twelve national examination assessments for learners with visual impairments.
3) To determine the measures that should be taken to improve the grade twelve national examination assessments for learners with visual impairments.

And so the aforementioned research findings were used systematically in answering of the research questions.

4.2 Current Practices of the Grade Twelve National Examination Assessment for Learners with Visual Impairments in Zambia

The first objective was to establish the current practices of the grade twelve national examination assessments for learners with visual impairments in Mwense and Lusaka Districts, Zambia. The study established the following themes on the current practices of the grade twelve national examination assessments for learners with visual impairments;

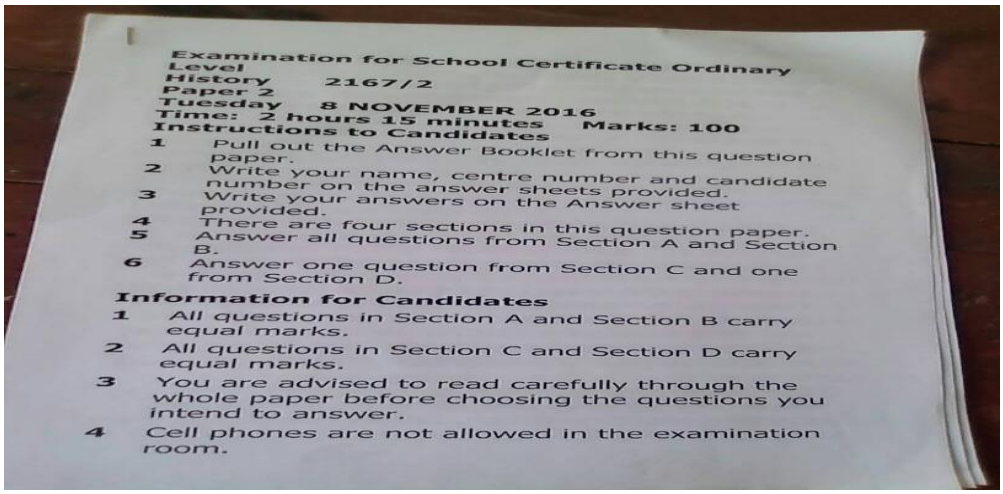
4.2.1 General Practice for the Grade Twelve National Examinations for the Visually Impaired Learners

When ECZ officials were asked on the general practice for the grade twelve national examinations for the visually impaired learners, they said; these learners write their exams at a same time with the sighted learners despite that their examination papers are set to suit their needs as shown in figure 1 and 2 below;

Braille Format Sample of an Exam ination Paper

(Figure 1) ***Source: ECZ***

Enlarged Print Format Sample of an Examination Paper



Examination for School Certificate Ordinary Level
History 2167/2
Paper 2
Tuesday 8 NOVEMBER 2016
Time: 2 hours 15 minutes Marks: 100
Instructions to Candidates
1 Pull out the Answer Booklet from this question paper.
2 Write your name, centre number and candidate number on the answer sheets provided.
3 Write your answers on the Answer sheet provided.
4 There are four sections in this question paper.
5 Answer all questions from Section A and Section B.
6 Answer one question from Section C and one from Section D.
Information for Candidates
1 All questions in Section A and Section B carry equal marks.
2 All questions in Section C and Section D carry equal marks.
3 You are advised to read carefully through the whole paper before choosing the questions you intend to answer.
4 Cell phones are not allowed in the examination room.

(Figure 2) ***Source: ECZ***

ECZ1 said the following in her own words;

> *We are using two practices; braille and enlarge print, they have a paper that we call a parallel paper which is different from the one that the mainstreams write. This paper is basically different to enhance it for them because it is first of all adapted where all the visual information is removed and made suitable for them in every way. This is the same paper that is printed in two versions; Braille for the totally blind and enlarge print for the partially sighted learners*

In his own words ECZ2 said;

> *Learners with visual impairment write their exams at the same time with the sighted ones, despite that their exams are modified to suit the needs of these learners and that their exams usually come in braille or enlarged print depending on what the learners entered for during registration of exams*

In line with this, the teacher respondents stated that the general practice is that the visually impaired learners write their exams at the same time with the sighted learners and their exams are modified into braille for the totally blind and enlarged print for the partially sighted learners. The teachers added that at times the papers were not modified and the learners were subjected to write the question papers which were prepared for the main stream learners.

TR3 in his own words said;

> *Their papers are prepared in enlarged print and also Braille for the totally blind although it is not up to the required standard in the sense that our learners are sometimes disadvantaged by subjecting them to write papers meant for mainstream*

In addition, TR4 in his own words said;

> *The general practice is that the examinations for the visually impaired are set in two ways; enlarge print for the partially blind and Braille for the totally blind and after writing exams the scripts for the visually impaired learners are put together and taken to ECZ for transcription and marking*

In support of this view, the head teachers stated that for the visually impaired learners, their examination papers were transcribed or modified into braille for the totally blind learners and enlarged print for the partially sighted learners. They said at times, the schools did not receive the modified question papers and the visually

impaired learners were subjected to write examination question papers for the ordinary learners.

HT2 in his own words said;

> *At times very little attention is paid to the preparation of exams by ECZ and thus we end up not receiving the modified papers and so because the examination is in the process and we cannot tell ECZ to prepare the papers just there and then we end up giving them the papers meant for the ordinary students for them to write and then we engage teachers to read for them*

The Education Standard Officers Special added that examination papers for the visually impaired learners were transcribed into braille for the totally blind and enlarged print for the partially sighted learners.

In his own words the ESOS2 said;

> *When conducting the exams, the visually impaired learners are given the modified papers and at times they are given just the ordinary papers if we have not received some transcribed papers for them*

Additionally, the pupils pointed out that the exams for the visually impaired learners were prepared in braille for the totally blind and enlarged print for the partially sighted learners. They added that these are exams where visually impaired can obtain a certificate which can assist them to further their studies and probably get a job.

L1 said the following in her own words:

> *These are exams which can help you to get a certificate, further your studies and probably get a job if you pass well as a visually impaired learner*

In support of this view, the school leavers said that they wrote exams which were moderated and easy to understand in braille or enlarge print, although at times they were subjected to write the papers which were prepared for the ordinary learners that is, when ECZ failed to send the modified papers.

4.2.2 Modifications which are made to make the Examinations for the Visually Impaired Learners Accessible.

Responding to the question on the modifications which were made to make the examinations for the visually impaired learners accessible, the ECZ officials said that the examinations for the visually impaired learners were adapted to suit their needs. In addition, the respondents reported that their examination questions were prepared in a descriptive nature and all the barriers that hinder them from accessing the exams were removed. They said all the visual information like charts, maps, pictures and diagrams were removed from the examination question papers.

ECZ1 commented that;

> *When modifying the examination papers for the VI we use friendly language and not the language which is humiliating so that the final exam is not discriminative in any way to the visually impaired learners*

In support of this view, the teachers added that the examination question papers were modified into braille for the totally blind and for the partially sighted learners; the examination papers were modified into enlarged print. They said that the diagrams, pictures, maps and tables were removed from the examination question papers since the visually impaired learners could not see them and the questions were prepared in a descriptive form for the visually impaired learners to easily access them. In addition, the teachers said, the visually impaired learners did not do practical subjects instead they were given an alternative paper. For example, instead of writing biology paper 3, the learners with visual impairments were given biology paper 6 an alternative paper which is modified to suit their needs (inability to use sight to do practical).

The teachers added that at a school level the visually impaired learners wrote their exams in separate rooms from the mainstream to avoid disturbances and the examination rooms were organised to suit the needs for the visually impaired learners that is, the tables and chairs were positioned to suit the needs of the learners because some learner's eyes were sensitive to light and some needed more light.

In support of this view, the head teachers added that the examination papers for the visually impaired learners were enlarged for the partially sighted learners and

modified into braille for the totally blind learners. In addition, he said that the Examination Council of Zambia uses descriptive form of questioning in all the subjects to help the VI learners to access the exams without challenges.

HT1 in her own words said;

> *For the visually impaired learners, the maps, diagrams and pictures are removed to suit the needs of the visually impaired learners*

Additionally, the ESO Special officials said that the examination papers for the visually impaired were specifically modified to suit their needs in that; the diagrams, tables and maps were removed from the question papers. In addition, they said that ECZ use a descriptive form of questioning so that the learners can easily read and understand the questions. In line with this, the school leavers and the pupils added that the diagrammatic questions were removed and replaced with descriptive form of questions and the exams were transcribed into braille for the totally blind and prepared in enlarged print for the partially sighted.

SL2 commented;

> *The exam room should be quiet, have enough light for the partially sighted learners and another privilege is that the seating position can be changed for those that are sensitive to light*

4.2.3 Added Time for the Visually Impaired Learners during the Final Exams

Responding to the question on added time, all the participants to this study said that when the learners with visual impairments are writing their exams, there is an allowance of added time. In addition, the first ECZ official pointed out that the visually impaired learners with multiple disabilities are given more extra time compared to those with a single disability. She highlighted that the schools are required to make a claim for more added time to suit the needs of the learners.

In her own words ECZ1 said;

> *Yes we give them 25 percent of the total time for all learners with special needs. We also give extra time for learners with extra need for time and the requirement is that schools should make observations that if the candidate will not be able to finish writing an exam in the 25 percent added time, the school should write a report to ECZ and attach a medical report demanding for more time and based on that we as ECZ will do our*

own assessments. In provinces that we as ECZ are unable to go, we will contact the SESO Exams and ESO Special officials to visit the school and write to us so that such a learner can write the exams without challenges".

Additionally, ECZ2 said the following in his own words;

Yes we give them 30 percent of the total time allocated in an examination paper and schools can demand for more added time if they have assessed that a visually impaired learner needs more than 30 percent of the added time for them to fully benefit from the examinations

All the teachers who participated in the study stated that a certain percentage of time is added to the normal time of each paper during the exams. Out of the 6 teachers that participated in the study, TR1, TR2 and TR6 stated that the visually impaired learners were given 20 percent of extra time during exams per paper. However, TR4 and TR5 stated that the visually impaired learners were given 25 percent of the total time. In addition, TR3 said that they are given 30 percent extra time of the total duration during the final exams. Similar to this view, the HTs and ESO Special officials added that the visually impaired learners were given 20 percent or 30 percent of normal duration.

4.2.4 Responses on whether Added Time is adequate for the Visually Impaired Learners to write Examinations.

All the respondents who participated in this study said that added time was not enough because most of the visually impaired learners fail to finish writing the examinations within the given time.

TR1 in his own words indicated;

Time is not adequate because it does not help them much because the instructions given take a lot of time to read and they fail to finish writing the exams within the duration

In addition, TR2 said the following in his own words;

Added time is not enough because reading and writing braille requires more time and not only that the visually impaired learners easily get tired and when it's cold it becomes hard for the learners to use their fingers to read and write in braille thereby consuming lot of time during the exam

TR3 in his own words commented;

> *I would say time is not adequate in the sense that some visually impaired learners do not finish writing within the given time and on the other hand I would say yes because some visually impaired learners especially those with mild and moderate cases finish writing their exams within time so it depends on the pace at which each learner is writing at*

TR5 commented;

> *I must say time is not added to suit the individual needs of each learner and those with severe and profound cases are always disadvantaged*

TR6 in his own words said;

> *Added time is not enough because at times, some machines like Perkins braillier stops working in the middle of an exam and when that happens it consumes a lot of time for the learner to settle and continue writing an exam using other means*

In support of this view, the head teachers, ESO Special officials, pupils and school leavers stated that time was not adequate because reading and writing in braille consumes a lot of time and mostly the VI learners did not finish writing their exams within the 25 percent- 30 percent of added time.

4.2.5 Format in which the Visually Impaired Learners write their Exams and how they are categorised for the Format

With regards to the format in which the learners with visual impairment write their exams, the respondents from ECZ pointed out that these learners use two formats which are braille for the totally blind and enlarged prints for the partially sighted learners.

ECZ1 commented;

> *When categorising the visually impaired learners for the two formats, the trend is that when registering for the exams at a school level, the visually impaired learners choose if they want their exams to come in braille or enlarged print and the same information is forwarded to ECZ*

In addition, ECZ2 added;

> *When preparing the examination question papers as ECZ we follow the same specifications forwarded by the school*

4.2.6 Marking of Examination Scripts for the learners with Visual Impairments

The ECZ officials indicated that when identifying the markers, the teachers are encouraged to apply and attach their credentials. Then the shortlisted successful candidates are trained on how to mark scripts for the various subjects. In addition to this, ECZ officials pointed out that there are no specialised markers for the scripts of the visually impaired learners. In support of this view, the teachers, head teachers and ESO Special officers added that there is no special training that is given to the markers concerning how to mark scripts for the visually impaired learners

ECZ1 said in her words;

> *Marking is done in the various marking centres according to the subjects and a belt system is used where the markers are put in groups and each script handled has to pass through the hands of the members of a belt*

In addition, HT2 said the following in his words;

> *The brailed scripts are transcribed at ECZ and then marked by the general markers in various centres after which the scripts for the visually impaired learners in all the subjects are processed using computers and from various centres the scripts are taken to ECZ for safe keeping*

With regards to making special modifications in the marking of scripts for the visually impaired learners, the ECZ officials stated that there are no special provisions when it comes to marking of scripts for the visually impaired.

ECZ2 said in his words;

> *I must confess that there are no special provisions when it comes to the marking of scripts for the visually impaired learners; their scripts are marked just like any other scripts*

In addition, TR1 in his words said;

> *However no special attention is given to the scripts for the visually impaired learners as they are marked just like ordinary papers for the sighted learners*

TR2 said the following in his words;

> *The markers are not oriented on how to mark the scripts for the visually impaired learners no wonder the results for the visually impaired learners go missing*

TR3 in his words said;

> *When the visually impaired learners write their examinations, their scripts are distributed in various marking centres and are marked by the ordinary teachers after transcription*

In addition, TR5 indicated the following in his words;

> *He said it's a pity that markers are not trained to specifically mark scripts for the visually impaired learners and the scripts for the visually impaired learners are marked in various centres after they are transcribed by the transcribers at the Examination Council of Zambia*

TR6 in his words commented;

> *Marking is normally done in conveyer belts using marking keys and thereafter, the scores are recorded in computers*

Additionally, the head teachers, ESO Special officers and ECZ officials indicated that after the scripts had been marked; the total marks were entered into the data system (computers) and the scores for all the scripts were then compiled and released. The respondents added that the marked scripts are then kept for six months to give room for mending any short falls that may arise.

HT1 said in her words;

> *After the scripts for the visually impaired learners are marked, they are kept for six months to give allowances from any short falls that come our way that is if the results go missing*

In addition, in his words ESOS1 said;

> *After the scripts for the visually impaired learners have been marked, they are then taken to ECZ for safe keeping and after the certificates are printed out, the scripts are destroyed*

4.2.7 Responses on the Extent to which the Visually Impaired Learners benefit from the way Examinations are Handled

Out of the six teachers that participated in this study; TR2 and TR6 stated that the visually impaired learners do benefit from the way the exams are handled because their examinations are modified into braille and enlarged print.

TR2 indicated that;

> *The visually impaired learners benefit from the way the exams are handled because they are given added time and their questions are asked in a descriptive form*

Additionally, TR6 said that;

> *The visually impaired learners do benefit from the way the exams are handled because their papers have no diagrams, maps and pictures and instead they are told to explain*

On the other hand; TR1, TR3, TR4 and TR5 pointed out that at times the learners with visual impairments did not benefit from the way the exams were handled because their examination papers were not always distributed to the centres and in such a case they were given papers for the sighted learners for them to write an exam. They added that the invigilator read for them which affected their pace of writing as it took time for them to understand the questions which consumes a lot of time.

TR5 in his own words said;

> *The visually impaired learners do not benefit from the way the exams are handled because they are pressurised to finish writing when the partially sighted learners are done writing the exams and there is lack of specialist teachers with expertise in braille to handle their exams*

In support of this view, HT1 in her own words said;

> *No; the learners with visual impairment do not benefit from the way the exams are handled because time allocated is not enough for them to finish writing their exams*

In addition, HT2 in his own words said;

> *For me it's not properly done because the setting of the questions is not tailored to meet the individual needs of the pupils and when it comes to results, in most cases the results or the visually impaired are missing and because of this, most of the VI learners are discouraged because they are aware that even if they write four to five subjects only the results for one or two subjects will come out*

ESOS1 official added;

> *The visually impaired learners do not 100% benefit from the way the exams are handled because there is less professionalism in the setting of exams and the way the exams for visually impaired are handled and that the coverage of the syllabus is mainly concentrated on the ordinary learners and materials like text books are not provided in favour of the visually impaired learners*

In addition, ESOS2 added;

> *The learners with visual impairment do not benefit from the way the examinations are handled because their results go missing and their performance in the grade 12 national exams is poor*

Similarly, L2 said;

> *We have challenges especially if the exams are embossed into grade two braille because some of the visually impaired learners can only read braille grade one*

In support of this view, the school leavers added that the examinations for the visually impaired learners were not friendly especially when the papers were not modified and learners were forced to write the exams for the ordinary pupils.

SL1 added in his own words;

> *We lacked materials to use like text books in braille and also in enlarged print and we lacked Perkins machines and special education teachers with the knowledge in braille to assist us and at times we wrote the papers for the ordinary learners because ECZ did not send the modified examination papers*

In addition, SL2 said;

> *To start with we are inadequately prepared for the exams which make it more difficult for us to seat for the exams. Secondly, we lack materials to use like text books in braille and also in enlarged print*

Additionally, SL5 said;

> *When we were writing science what happened was that they brought 3 question papers for 9 candidates and it took time for us to start writing the exam because the school had to emboss the question papers into braille ... madam it wasn't easy*

Similarly, SL6 commented that;

> *Madam, when writing mathematics the learners are not given equipments like cubes and types to help them to solve mathematics and this greatly affect the performance of the learners with visual impairment*

4.2.8 Type of Training received by the Teachers with regards to the Management of Examinations for the Visually Impaired Learners

Responding to the question on the type of training received by the teachers with regards to the management of examinations for the visually impaired learners, out of the six (6) teachers that participated in this study, two (2) teachers had received some form of training with regards to examinations for the visually impaired learners and four (4) had not received any form of training. TR1 was trained in the modifications of questions in English at grade 12 for all disabilities including the VI. In addition, TR3 said;

> *I did a short course on how to manage exams for the visually impaired*

On the other hand, HT1 pointed out the following;

> *I have done training in modifications of exams for the visually impaired learners from ZAMISE which qualify me to modify examination papers to braille and enlarged print.*

However, HT2 said that he has done no training with regards to the management of examinations for the visually impaired learners. In support of this view, the ESO Special officials indicated that they had not been trained on how to manage the grade twelve examinations for the visually impaired learners.

4.2.9 Responses on whether there are Specialised Teachers at Examination Centres with Expertise in Braille during the Grade Twelve Final Examinations for the Visually Impaired

With regards to the question on whether there were specialised teachers with expertise in braille at examination centres during the final exam, all teachers that participated in this study stated that the expertise in braille were not enough to assist all the visually impaired learners. In addition, they said that there were no specialised teachers with expertise in braille which negatively affected the performance of the visually impaired learners. The head teachers also added that the specialised teachers at the examination centres with expertise in braille were not adequate.

HT1 said;

> *The expertise in braille are not adequate and for instance at times learners with visual impairment are invigilated by the ordinary teachers and it's difficult for them to assist the visually impaired learners because they cannot read braille and instead of packing the answer scripts for the learners they make a mistake of packing question papers because they cannot read braille*

Additionally, the ESO Special officials, visually impaired learners and school leavers indicated that Specialist teachers with expertise in braille were not enough.

L3 said in his own words;

> *Madam we are given specialist teachers with expertise in braille, only that they are not enough and at times we are just given ordinary teachers who do not have a skill in braille to invigilate*

Additionally, SL2, SL3, SL4, and SL6 said that specialist teachers with expertise in braille were not enough and at times there was only one person to assist those who could not read braille grade two.

4.2.10 Assistive Devices which are given to the Visually Impaired Learners to assist them when writing the Grade Twelve Examinations

With regards to the assistive devices which are given to the visually impaired learners to assist them when writing the grade twelve examinations, the participants

to this study indicated that the visually impaired learners were given devices such as braille slate, styluses and Perkins braillers.

In addition, to this, TR4 said the following;

> *The visually impaired learners are only given* braille *slate, styluses and Perkins braillers*

Additionally, HT2 pointed out that;

> *The visually impaired learners are not allowed to write their exams using computers meanwhile at a school level those that are conversant using computers are allowed*

In support of this view, the pupils, school leavers and ESOS indicated that it depended with the school and availability of these devices but mostly they were given just hand frames and styluses.

SL3 said the following;

> *Madam the time we wrote our exams, we were just given braille slates, Perkins and type writers and the equipment were not enough to cater for every one especially the Perkins and type writers*

The findings above can be summarised as shown in the Table 4.1. The findings below revealed that examinations for the visually impaired learners were modified into braille and enlarged print formats. It was also revealed that the marking of scripts for the visually impaired learners was done by ordinary teachers in various examination centres according to the subjects.

ITEM	FINDINGS
Format of examinations for the VI	Braille and enlarged print format
Modifications made to the exams	Charts, maps, tables and pictures are removed
Added time	Learners are given 20-30% of added time
Marking of scripts for the VI	There are no special provisions regarding the marking of scripts for the VI
Training on exams for the VI	Only 3 out of 12 respondents received training
Braille expertises	Braille expertises are not enough
Assistive devices given	Braille slates, styluses and Perkins braillers

Table 4.1

4.3 Factors challenging the Grade Twelve National Examination Assessment for Learners with Visual Impairments in Zambia

The second objective was to; ascertain the factors challenging the grade twelve national examination assessments for learners with visual impairment in Zambia. The study established the following themes as some of the challenges affecting the grade twelve national assessments for learners with visual impairment in Zambia.

4.3.1 Challenges faced when identifying the Brailed Scripts for Transcription at ECZ

The ECZ officials stated that there were a lot of irregularities in the transcription of brailed scripts for the visually impaired learners. Additionally, they said that there were a lot of challenges in identifying the brailed scripts for transcription in readiness for marking at the Examination Council of Zambia. They stated that even after introducing the colour of envelopes which were different for the packaging of scripts for the visually impaired learners, some schools were not adhering to using the blue envelopes and ECZ failed to depict them and as a result, some scripts were not transcribed thereby causing missing results.

ECZ1 said;

> *We as ECZ find it hard to identify the scripts for the visually impaired learners simply because schools do not use the blue envelopes which are meant for answer scripts for the visually impaired learners, hence; they pack them in the grey envelopes which are meant for the mainstream learners. However this delays the process of transcription, marking and release of results for the visually impaired learners*

In addition ECZ2 said in his own words;

> *In as much as the packaging of scripts for visually impaired learners is separated from the mainstream, untranscribed scripts still find themselves in the marking centres and it takes too long to locate the same scripts which contribute to missing results for the visually impaired*

In addition, the ECZ officials also indicated that in the various marking centres, there were no transcribers to transcribe scripts for the visually impaired learners.

ECZ1 said in her own words:

> *In marking centres we do not have transcribers and if some brailed scripts are identified in the marking centres they have to be sent back to ECZ and that prolongs the process for the transcription of scripts from braille to ink, marking, processing and the release of scripts for the VI*

4.3.2 Challenges faced when Transcribing Brailed Work to Ink

When asked on the challenges associated with the transcription of brailed papers for the learners with visual impairment, the following were the responses given by ECZ officials;

They said that there were a lot of irregularities in the way the brailed scripts were transcribed because ECZ did not have transcribers that were employed by the council on a permanent basis. Additionally, they said some visually impaired learners had poor braille skills which made it hard for the transcribers to transcribe the examination scripts and they made their own braille contractions which did not even exist, hence; it made it hard for the transcribers to read and transcribe the brailed scripts with accuracy. They indicated that some transcribers had poor brailed skills which affected their accuracy when transcribing work for the visually impaired learners.

In her own words ECZ1 said;

> *Transcribers find it hard to sort out transcribed work more especially when the candidates forgot to include the subject and paper code which in turn contributes to missing results for the visually impaired learners and at times some transcribed scripts are forgotten in the transcribing room (not taken to the marking centres) which results in missing results for the visually impaired learners*

In addition, ECZ2 said the following words;

> *Most of the visually impaired learners write wrong spellings in braille and it is hard to figure out mistakes in braille. Not only that transcription of brailed work is tiresome and after sometime you start seeing a brailed paper as if it's blank*

Similarly, the teachers, head teachers and education standard officers stated that the scripts for the visually impaired learners were transcribed at ECZ which might have contributed to missing results and they assumed that it took long for the scripts to be distributed to the marking centres causing a delay in the release of results for the visually impaired learners.

4.3.3 Challenges which Learners with Visual Impairments face when accessing the Grade Twelve Examination Papers with regards to the Modifications

With regards to the challenges faced when making adaptations or modifications to the national examination papers of the visually impaired learners, the respondents stated that; some subjects like mathematics and sciences were too abstract in nature, hence they were difficult to modify into a descriptive form, hence this made it difficult for the visually impaired learners to understand the examination questions.

ECZ2 said in his words;

> *Some symbols in sciences and mathematics cannot be modified and some schools forward wrong information about the VI learners; for instance they'll indicate that the learner will write braille instead of enlarge print which causes ECZ to make wrong modifications as they follow the inputs from the schools*

In line with this, TR1 and TR6 said that at times the modifications made in the question papers did not suit the real needs of the visually impaired learners (for

instance some learners could only access the examinations through braille or enlarged print) and sometimes the modifications were not up to the required standard. In addition, TR2 said that the questions were sometimes not clear for the students to understand and in certain instances some multiple choice questions were typed without answers. In addition, TR3 stated that some papers were sometimes modified into braille when the learners requested for enlarged print format of an exam and such kind of a paper was difficult for the learners because it was not set according to the learner's individual needs.

TR4 in his own words said;

> *During the learning period the visually impaired learners are not exposed to modified examination papers and yet when writing the final exams the papers are modified hence the learners get confused and puzzled*

Additionally, TR5 in his own words said;

> *The brailed papers are embossed in grade two braille without even considering grade one braille readers who can't read grade two braille as you know the age of onset differs and most of the visually impaired learners are only conversant with grade one braille*

Additionally, HT1 in her own words commented;

> *It is hard to modify scientific and mathematics symbols... actually the visually impaired learners do not understand scientific and mathematic braille codes used in sciences and mathematics examination papers which affects their performance in the final exams*

In addition, HT2 commented the following in his own words;

> *The pupils are prepared for the ordinary papers because during the mock exams the papers are not modified and when writing the final exams the modifications are strange to the VI learners*

Furthermore, ESOS1 indicated that;

> *The visually impaired learners are not adequately prepared for the modifications which they meet in the examination papers because some formative assessments such as the tests and class exercises are not modified to suit the real needs of the learners hence pupils always find the modifications made to be very strange during the grade twelve final examinations*

In addition, ESOS2 added that;

> *Most teachers do not have a skill in braille hence; it becomes a challenge to modify the test papers during the tests and exercises which contributes to lack of exposure of the visually impaired learners to modifications*

In support of this view, SL3 added;

> *In schools when writing the tests and mock exams, madam ... the questions are not modified into braille and enlarged print so we are not prepared for the modifications which are made in the final examinations and this affects our performance*

Additionally, L2 commented that;

> *The question papers are modified using grade two braille which is hard to understand for some students especially those who became blind in the upper grades*

Additionally, SL3 said the following in his own words;

> *Madam it's like the teachers do not prepare us for the modified papers and it becomes a challenge to write a modified paper*

4.3.4 Challenges which learners with Visual Impairments face with regards to Time when writing the grade twelve National Exams

Asking on the challenges which learners with visual impairments face with regards to time when writing the grade twelve national exams, the teachers indicated that time was not enough for the visually impaired learners to finish writing their exams within the given time.

TR5 in his own words said;

> *Added time is not enough for the visually impaired learners, because writing in braille is hectic and it appears they easily get tired hence they need enough time*

In addition, TR6 commented that;

> *They fail to finish writing the exams on time because braille is bulky and it requires a lot of time*

Additionally, the head teachers added that time was not enough because if the ordinary learners failed to finish writing their exams within time, this means that it was more difficult for the visually impaired learners to finish writing their exams within the added time and writing in braille required more time. In support of this view, ESO Special officials indicated that the severity of the disability differs from pupil to pupil and others had multiple disabilities hence 25 percent of added time was not enough for them to write their exams. In addition, the pupils and school leavers added that the visually impaired learners did not finish writing exams because time was not enough.

SL1 in his own words said;

> *Madam ... we the visually impaired have different challenges, some have multiple disabilities and others have eyes that are sensitive to bright light and white paper which makes each one of us to write at a different pace and yet we are all given the same duration so time is too little*

4.3.5 Challenges which Learners with Visual Impairments face when using Devices during the grade twelve National Examinations

With regards to the challenges which learners with visual impairment face when using technologies during the grade twelve national examinations; the teachers, head teachers, pupils and school leavers contributed by saying that the devices such as Perkins braillers were not available in most of the schools and a few which were there were not in good shape. The teachers added that certain equipment like Perkins was not easily handled and they could stop operating in the middle of exams.

HT1 in her own words said;

> *We lack of equipment for the visually impaired learners to use like Perkins and hand frame*

Additionally, ESOS1 added that;

> *When the pins on the hand frame are not working it fails to hold some braille papers which cause the visually impaired learners not to write in a straight line*

ESOS2 also commented;

> *When embossing using a hand frame, a lot of energy and effort is applied; such that the visually impaired learners get tired and stop writing the exam*

In support of this view, SL1 added;

> *Perkins braillers and type writers can break down during the exam thereby disturbing the learner to finish writing the exam on time or might not even finish writing the exam*

In addition, L4 added;

> *Most braille frames have broken pins which fail to hold the Braille paper and it greatly reduces the quality of braille been embossed*

SL4 commented;

> *Madam when writing the final exams in one of the papers I used a hand frame which had some broken pins and it couldn't hold braille paper in its position, and so when I wanted to check what I wrote I was disappointed to find that I had embossed on what I had already written and I could not read my own work ... I failed to re-write my work because time was almost up*

4.3.6 Difficulties faced when managing exams for Learners with Visual Impairments

On the difficulties faced when managing the exams for the visually impaired learners, teachers indicated that the difficulties came in when trying to make the ordinary teachers and administrators understand how their examinations were supposed to be administered and managed.

In his own words TR1 said;

> *When you try to implement things like extra time, others tend to show ignorant like you are just favouring the visually impaired learners*

In support of this view, TR2 and TR5 contributed by saying, managing exams for the visually impaired learners became a challenge when the invigilators for the ordinary

learners demanded that the VI learners should stop writing the exams just because the sighted learners were done writing their exams. In addition, TR3 added that it became a challenge when the examination question papers for the visually impaired learners were not set according to the needs of the visually impaired learners.

In line with this, the TR6 said in his own words;

> *Managing exams for the visually impaired becomes a challenge mostly when the equipments are not available and this brings pressure on the invigilators*

Additionally, the HTs indicated that the biggest challenge was lack of specialist teachers with expertise in braille to prepare and handle the exams for the visually impaired learners. In support of this view, the ESOS officials said at times they did not have transport to assist them in monitoring the exams for the visually impaired learners.

In his own words the ESOS1 official indicated;

> *Also the learners with impairments are not considered to be a priority which affects my work as an ESO in charge of special education in the district....simply because it takes a lot of time to release transport for monitoring of exams for the visually impaired learners*

4.3.7 How giving Examinations in such a way affect the Performance of the Visually Impaired Learners

The teachers stated that administering exams in a way they were conducted affected the performance of the visually impaired learners.

In support of this view, TR1 agreed by saying;

> *Yes it does affect learner performance, since they write at the same time with the sighted learners and when the sighted learners are done writing their examinations, the visually impaired are pressurised to finish writing their exams and they mostly do not finish writing their exams*

Additionally, TR2 said;

> *Yes it does because it appears, the learners fail to understand questions which are brought in a descriptive way especially mathematics and sciences*

In line with this, TR3 commented;

> *The performance of learners with visual impairment is affected because these learners are not adequately prepared for the modifications made*

In support of this view, TR4 said,

> *The way examinations for the visually impaired learners are handled at grade twelve, affect their performance because the people who mark the scripts for these learners have no idea about braille codes hence, they cannot read Braille*

In addition, TR5 said;

> *When the untranscribed brailed scripts are identified in the marking centres, it is impossible for the ordinary markers to mark their scripts thereby contributing to the problem of missing exams*

In his own words, TR6 said;

> *Some transcribers only know a bit of braille transcription which reduces accuracy in the way the brailed scripts are transcribed and it in tern affects the performance of the visually impaired learners*

In support of this view, HT1 added by saying;

> *Managing exams in such a manner affects learner performance for the visually impaired learners because some invigilators who do not know braille codes make some mistakes of packing some question papers leaving out some answer scripts in schools and some scripts are wrongly packed in ordinary envelops for the mainstream which contributes to missing results*

Additionally, HT2 in his own words said;

> *Yes because at times we do not receive the modified papers and we have to engage someone to read for them and as you know ... some words may be pronounced differently which may affect the understanding of the learners with visual impairment during the exams*

In line with this, ESOS1 said in his own words;

> *Yes it does affect the performance of the visually impaired learners, because from preparation, writing of exams, marking and up to the time the results are published much concentration is given to ordinary learners and this negatively affects the results of the visually impaired learners*

In line with this, ESOS2 said in his own words;

> *Yes, they are affected because they do not finish writing their exams on time and therefore their performance is affected*

4.3.8 Challenges faced when marking the Scripts for the Visually Impaired Learners

On the challenges associated with marking of scripts for the visually impaired learners, the first ECZ official said, at times scripts for the visually impaired learners were not transcribed which made it hard for the markers to mark their scripts. In addition, the second ECZ official said if brailed work was poorly done, transcription was difficult and so was marking.

ECZ1 in her words said;

> *The markers have a negative attitude towards marking of scripts for the VI learners and if brailed work is poorly done it becomes even difficult for them to mark*

Additionally, ECZ2 said the following in his own in words;

> *Some scripts for the visually impaired learner are marked in various centres and mostly they are marked towards the end of the marking exercise when the markers are tired hence; affecting the results and at times markers do not follow the marking keys for the modified papers for the VI learners thereby causing these learners to perform badly*

In addition, the pupils and school leavers indicated that there were a lot of marking centres where the scripts for the visually impaired learners were marked, which contributed to missing results for the visually impaired learners.

The findings above show that there are a lot inconsistencies and irregularities in the examination practices for the visually impaired learners as summarised in Table 4.2;

ITEM	FINDINGS
Transcription of brailed scripts	ECZ did not employ transcribers on a permanent basis.
Modifications	Symbols in maths and natural sciences could not be modified.
Added time	20-30% of the total duration added time was not enough
Devices	Perkins braillers were not enough in schools.
Marking of scripts	Too many marking centres leading to missing results for the VI

Table 4.2

4.4 Measures that can improve the existing practices in the grade twelve National Examination Assessment for Learners with Visual Impairments

The third objective was to; determine the measures which should be put in place to improve the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka districts, Zambia. The study established the following themes as some of the measures that can improve the existing practices in the grade twelve national examination assessments for learners with visual impairment in Zambia;

4.4.1 Strategies that were suggested to solve the challenges faced when identifying the Brailed Scripts for Transcription at ECZ in Readiness for Marking.

In responding to the questions on the strategies that should be employed to deal with the challenges affecting the identification of the brailed examination scripts for transcription at ECZ in readiness for marking; the first ECZ official said that packaging should be appropriately done at a school level for easy identification of brailed papers for transcription.

In her own words, ECZ1 said;

> *It all goes back to packaging ... packing should be appropriately done by the schools for easy identifications of braille scripts at the right time when they reach ECZ as this will speed up the process of transcribing, marking, processing and release of the results for the visually impaired learners*

In his own words, ECZ2 said;

> *ECZ should orient the invigilators when it comes to packaging of the scripts for the visually impaired learners and in addition, the Examination Council of Zambia should employ more human resource to handle exams for the visually impaired so that their examination can run smoothly*

Additionally, ECZ officials added that the Examination Council of Zambia should organise workshops in all the provinces to sensitise teachers on how to handle the exams for the visually impaired learners at school, DEBS and PEO level. They also suggested that the schools through the guidance officers should request for the correct exam papers for the visually impaired learners during registration of exams and the Examination Council of Zambia should train teachers on how to pack the scripts for the visually impaired learners after the exams.

4.4.2 Strategies that were suggested to solve the challenges experienced when making Modifications or Adaptations to the Visually Impaired Examination Papers.

ECZ officials pointed out that to solve the challenges experienced when making modifications to the visually impaired examination papers, the Examination Council of Zambia should look for the benefiting ways of modifying subjects like sciences and mathematics. In addition, they said the guidance personnel in schools should make sure that they enter the correct specifications for the visually impaired learners in the system during registration so that the Examination Council of Zambia is able to modify the exams according to the requested formats by the visually impaired learners.

ECZ1 in her own words said;

> *ECZ should as well as consider modifying brailed exams using braille grade one to cater for the many visually impaired learners who cannot read grade two braille*

ECZ2 said in his own words;

> *Since it is hard to modify certain subjects like mathematics and sciences because they are too abstract in nature, the learners with visual impairment should be exempted from certain subjects like mathematics because whether we like it or not they are quite challenging for them and that is why you find that on their own they run away from such subjects because they really do not understand them and those that persevere still end up getting very low marks....my suggestion is that the policy makers should just exempt them from certain subjects*

Additionally, TR1 suggested that there must be a smooth flow of information among the principle partners who take part in the running of examinations for the visually impaired learners and these include the schools, the DEBs, the PEO and ECZ so that the right modifications are made to suit the individual needs of the learners.

In his own words, TR1 said;

> *When the teachers discover the issues affecting learner performance because of the modifications made to the papers they should always contact ECZ to electrify the problems*

TR2 and TR3 contributed by saying that the modifications should be made according to the individual needs of each visually impaired learner. In addition, TR5 and TR6 said the Examination Council of Zambia should ensure that the right question papers or subjects are packed as indicated on the envelopes and the P.E.O and DEBS officers should do an excellent job in making sure that the question papers for the visually impaired learners are taken to the schools at the right time and not forgotten in their offices.

TR4 also said;

> *When making modifications at ECZ, they should not use the ordinary teachers but use specialist teachers who practise the modifications during the time when they are giving the visually impaired learners test and even when it comes to the final exam the same modifications should be used*

In support of this view, HT1 suggested that the schools should make a demand from ECZ that for the visually impaired learners who cannot read braille grade two, their papers should be prepared in braille grade one so that they could access the examinations with less difficulties. In addition to this view, HT2 added that when making modifications, the Examination Council of Zambia should follow the specifications which are given by the schools when modifying the examination question papers so that the modifications are made to suit the real needs of learners.

Additionally, ESOS1 suggested that;

> *The schools should make sure that the visually impaired learners are exposed to the modifications which are made to the exams and also the teachers in various subjects should adequately prepare the learners for the modified papers so that the exams should not be discriminative in any way*

In support of this view, ESOS2 added that;

> *The visually impaired learners should be taught scientific and mathematical symbols in braille and the schools should make sure that they adequately prepare the learners for the modifications which are made during the final exams*

In line with this, the school leavers added that the teachers should adequately prepare the learners on how to answer modified questions and also braille grade one should be used when modifying the papers to accommodate those who do not know braille contractions. In support of this view, the pupils suggested that since some visually impaired learners do not understand contractions in braille grade two due to the age of onset of their disability, the Examination Council of Zambia should use braille grade one when modifying the examination question papers to accommodate those who cannot read braille grade two.

Additionally, SL1 also commented;

> *For the visually impaired learners with eyes that are sensitive to white paper, ECZ should use a colour of braille paper that is not sensitive to their eyes*

4.4.3 Strategies that were suggested to solve the challenges faced when Transcribing Brailed Work to Ink

The first ECZ official stated that the Examination Council of Zambia should come up with a standard way of engaging transcribers. She suggested that the other way of

doing this is by placing braille transcribers in all the marking centres so that whenever a script which is not transcribed is discovered in the making centres, it should be transcribed right away and marked to solve the problems of missing results for the visually impaired learners. Additionally, the second ECZ official stated that with regards to the transcription of brailed scripts, there must be a forum where special education teachers country wide, should be meeting and agree on the braille codes to be used by the visually impaired learners. Additionally, ECZ officials added that one of the measures is to emphasize that the visually impaired learners in all the schools are taught standard braille codes so that the transcribers do not misrepresent them when transcribing their work.

ECZ1 commented;

> *My suggestion is that only teachers with a developed skill of braille transcription should transcribe the examination scripts for the visually impaired learners at ECZ so that the visually impaired learners are well represented*

In his own words, ECZ2 said;

> *The Council should organise meetings for transcribers where braille codes can be harmonised country wide*

4.4.4 Strategies that were suggested to address the challenges faced in marking Examination Scripts for the grade twelve Learners with Visual Impairments

In responding to the questions on the strategies that can be employed to overcome the challenges faced in the marking of scripts for the visually impaired learners, ECZ officials suggested that the Examination Council Zambia should change the approach of marking where the scripts for the visually impaired are marked by ordinary subject teachers in various centres according to the subject.

ECZ1 in her own words said;

> *I would suggest that ECZ should come up with the group of special education teachers with expertise in braille to specifically mark the scripts for the visually impaired learners and also my opinion is that their scripts should be transcribed and marked in one centre to solve the problem of*

missing results because due to the movements of these scripts to various marking centres, some scripts go missing in the process

ECZ2 in his own words said;

I suggest that their scripts should be marked by specialist teachers who understand their needs better and have the skills in braille

Additionally, teachers added that ECZ should come up with a marking centre specifically where the scripts for the visually impaired learners should be marked so that the issue of missing results can be eliminated and their performance can be enhanced. In addition, the teachers suggested that ECZ should train more markers that have done braille to be markers in various subjects in order to eliminate the problem of missing results for the visually impaired learners.

In addition, the HT1 in her own words suggested;

And when it comes to the making of scripts for the visually impaired learners, the teachers who are able to read braille should mark the scripts for the visually impaired learners because handling the visually impaired requires someone who has been trained to handle them and did some basics in special education

In addition, HT2 in his own words commented;

We need more specialist teachers with skills in braille to mark the scripts for the visually impaired learners in various subjects

In line with this, ESOS1 said;

I also suggest that the marking of scripts for the visually impaired learners should be separated from the mainstream so that they are given the attention they deserve up to the time the results are published

Additionally, ESOS2 suggested that;

The markers of scripts for the visually impaired learners should strictly follow the marking keys for the modified papers, so that the visually impaired learners are not disadvantaged in any way

In support of this view, the pupils and school leavers suggested that there is a need to have a single marking centre for scripts for the visually impaired learners and the markers should be specialist teachers trained in various subjects and with a developed skill in braille to avoid missing results.

In addition, SL3 commented;

> *Madam I suggest that when packing scripts for the visually impaired learners, extra care should be taken and the markers should be trained how to specifically mark scripts for the visually impaired learners so that our papers are marked accordingly*

4.4.5 Suggestions on the Strategies that can be employed to Address the Challenges which Learners with Visual Impairments face with regards to the Time given when writing the grade twelve National Exams

With regards to added time, all the respondents to this study suggested that added time should be increased or doubled and it should be indicated on the question papers so that the visually impaired learners are not disadvantaged. They said that the invigilators should make sure that they add time to the normal duration of the paper and the visually impaired learners should be told right at the beginning of the exam on how much time is added. Out of the 22 respondents that participated in the study, 20 respondents suggested that 100 percent of time should be added so that the learners with visual impairment should write their exams at easy and two respondents suggested that 50 percent of time should be added.

TR1 said;

> *Added time should be increased to 50* percent

4.4.6 Suggestions on the Strategies that should be Employed to address the challenges which Learners with Visual Impairments face when using Devices during the grade twelve National Exams.

With regards to strategies that can be employed to solve the problems which learners with visual impairments face when using devices; TR1, TR2, TR3, TR5 and TR6 pointed out that there is a great need to procure modern technologies like computers

and sound recorders which the visually impaired learners can use to write exams. In addition, they suggested that broken Perkins should be fixed before the examinations commences, so that the VI learners should write the exams smoothly.

In support of this view, TR4 commented;

> *They should be devices which are specially meant for the final exam and beside that the visually impaired learners who can use computers should be allowed if they are comfortable to use computers...then those who want to use Perkins braillers should be allowed and those who are comfortable with using the hand frames should be allowed....so it should be open unlike a situation where the learners are forced to use hand flames and some of them are not even comfortable with them, like you know they are those who became blind at old age so they will be more comfortable to use computers ... therefore, ECZ should leave it open*

Additionally, HT2 said in his own words;

> *The schools have no choice but to procure more equipment for the visually impaired learners to use during the exam period with the guidance of the special teachers*

In line with this, ESOS officers suggested that the Perkins braillers should be serviced before the exams begins and that the schools should make sure that the hand frames which the learners use during the exams have the pins to hold braille paper in position to solve the challenges which the learners face. In support of this view, the pupils and the school leavers suggested that the schools should make sure that the Perkin braillers are working properly before an exam.

L3 suggested in his own words;

> *We need writing equipments that do not make noise and also we need more writing equipments and materials for us to effectively prepare for and write the exams; Madam I feel we need to start using computers because they are better than the Perkins and hand frames*

Additionally, SL4 said in his own words;

> *We need more equipment and new ones should be bought and old ones should be fixed and moreover we need computers because this is a new technology world*

4.4.7 Suggestions on the Strategies that can be employed to overcome the challenges experienced at a Learner, School, Examination Council of Zambia and Policy Level.

With regards to the strategies that can be employed to overcome the challenges experienced at a learner, school, Examination Council of Zambia and policy level; the teachers suggested that at a learner's level the visually impaired learners should be adequately prepared for the exams and also should utilise modified past papers so that they get acquainted to the modifications made in the final examinations. They added that the learners with visual impairments should be prepared psychologically in case ECZ fails to distribute papers that suit their needs and also if the Perkins stops working during the exam.

In addition, TR4 suggested that;

> *Expertise in braille should meet and discuss the current trends on exam setting for the visually impaired learners to improve on exam setting of exams for these learners*

In support of this view, the Education Standard Officers Special suggested that the learners with visual impairments should be provided with text books in braille and enlarged print so that these learners can adequately prepare for examinations.

At a school level, the teachers suggested that the administrators and teachers should be sensitized on how the management of examinations for the visually impaired learners are handled so that the challenges can be shared and solved. In support of this view, the HTs and ESOS officials suggested that the head teachers should be willing to learn from the special education teachers on how to manage the exams for the visually impaired learners

At ECZ level, ECZ officials said that the Examination Council of Zambia should give the best services by improving the way exams are prepared, handled and processed at grade twelve for the visually impaired learners so that the problems of missing results can be electrified. In addition, the teachers suggested that the Council should employ more people to specifically look into the examinations for the visually impaired learners at ECZ to solve the problem of missing results.

In addition, TR4 in his own words said;

> *At ECZ they should increase the number of specialist handling special education because currently there is only one person and you may find that the person may only be good in one area and if that person is not competent with VI it means that they are left out.... So I suggest that ECZ should employ a specialist specifically for the VI, one for the HI and one for the other categories*

Additionally, the HTs suggested that ECZ should train more markers that have done braille and place braille transcribers in all the marking centres to electrify the problem of missing results for the visually impaired learners. In support of this view, the head teachers added that ECZ should conduct a research on the reasons why results for the VI go missing and should as well come up with a one long lasting solution. In line with this, the ESOS officers suggested that ECZ should give maximum attention to the way the exams for the visually impaired are prepared and how their scripts are marked so that the problem of missing results can be electrified.

At a policy level, the ECZ officials, ESOS officials, HTs and TRs suggested that the Examination Council of Zambia should come up with a policy to give guidance on how the examinations for the visually impaired learners are prepared, administered, marked, processed and published. They emphasized that they should be a policy in place to show a road map on how to handle the exams for the visually impaired learners and the policy should be availed to the stake holders with regards to the examinations for the visually impaired learners.

The findings above show that the majority of respondents suggested that ECZ should modify examination papers to suit the individual needs of the visually impaired learners and improve the way the scripts for the visually impaired learners are transcribed and marked. Additionally, it was suggested that the schools should adequately prepare the materials and equipments to be used by the visually impaired learners during the final examinations.

4.5 Summary

The above chapter four presented the findings of the study on the current practices on the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka districts, Zambia. The findings of the study were presented according to the following themes derived from

the objectives; current practices of the grade twelve national examination assessment for learners with visual impairments in Zambia, factors affecting the grade twelve national examination assessment for learners with visual impairments in Zambia and the measures that should be taken to improve the existing practices in the grade twelve national assessment for learners with visual impairments. The themes brought out the views of the respondents according to the way they were said by bringing out direct quotations. The next chapter discusses the findings of the study in line the study objectives.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1 Overview

The previous chapter presented the findings of the study in relation to the research objectives. This chapter discusses the research findings, on the grade twelve national examination assessments for learners with visual impairments in selected schools in Mwense and Lusaka Districts. The discussion is presented in accordance with the research objectives which were;

1) To establish the current practices of grade twelve national examination assessments for learners with visual impairments.
2) To ascertain the challenges affecting the current practices in the grade twelve national examination assessments for learners with visual impairments.
3) To determine the measures that should be taken to improve the grade twelve national examination assessments for learners with visual impairments.

5.2 Current Practices of the grade twelve National Examination Assessment for Learners with Visual Impairments in Zambia

The first objective was to establish the current practices of the grade twelve national examination assessments for learners with visual impairments. The findings revealed a number of issues which will be discussed below.

5.2.1 General Practice for the grade twelve National Examinations for the Visually Impaired Learners

Arising from the findings of this study, it was evident that the exams for the visually impaired learners were modified into two formats and these are; braille for the totally blind and enlarged print for the partially sighted learners. This is in line with what Cecil *et al.*, (2007) highlighted that learners with visual impairments cannot be assessed in exactly the same manner as the learners without visual impairments and hence; the exams should be modified in order to make them accessible to them. Additionally, Gebreslassie and Menggistu (2016) added that in most developed

countries awarding Examination Bodies offer a range of assessment formats for students with visual impairments by modifying the examination papers into accessible formats. Additionally, the MoGE (2016) has a progressive policy which states; examinations shall be based on modified or alternative curriculum for learners with SEN. However, whilst the provision of modified examination papers may be a good approach, it appears that ECZ do not modify the examination papers according to the severity of each individual visual acuity. This may not be a good approach in that those with severe and profound visual acuity may not fully benefit from the way the exams are practiced since ECZ only make general modifications. Therefore, for the visually impaired learners to fully benefit from the way the examinations are modified, the adaptations should be made to suit the actual individual needs of each learner with visual impairments

It was also evident that at times the visually impaired learners were subjected to write papers prepared for the sighted learners when ECZ failed to send the modified papers and it was difficult for them to write. This is a similar picture with what Jaroslav (2012) found in some rural parts of South Africa, where the visually impaired learners were subjected to write exams through auditory channels because the Department of Education did not provide assessment in the appropriate format and the questions had to be dictated to the candidates. This may not be a very helpful approach because if the questions are dictated to them, the visually impaired learners may not fully understand the questions as compared to when they read for themselves and the chances are very high that these candidates may not request for the invigilators to read for them the questions over and over so that they apply what they understood.

Therefore, because the visually impaired learners did not understand the questions the chances are very high that they may answer the questions wrongly and if that happens they may be marked wrong without realising the mistake that was there. In line with the ECZ presentation that for ten years, less than 10 percent of the visually impaired learners passed very well, it might be argued that these poor exam administration may have contributed. Therefore, ECZ and other stake holders like the PEO and DEBS offices should ensure that the modified question papers are distributed to the schools.

5.2.2 Modifications which are made to make the Examinations for the Visually Impaired Learners Accessible

The findings show that some modifications were made to the exams in order to make them accessible to the learners with visual impairments. The study also revealed that the questions in the examination papers were modified into a descriptive form and all the barriers that can hinder these learners from accessing the exams were removed. Additionally, the respondents added that all the visual information like charts, maps, pictures and diagrams were removed from the question papers as one of the modifications. This is supported by what Jonathan (2010) states that nevertheless it should be noted that in order to make exams accessible for pupils with low vision, both large print and electronic versions of the paper should be provided and all the visual materials should be removed from the item. This is a very good approach especially that the visually impaired learners may access the questions without difficulties which may positively affect their performance rate with regards to the grade twelve exams.

Arising from this study, it was evident that at a school level, the visually impaired learners wrote their exams in separate rooms from the mainstream to avoid disturbances and their examination rooms were organised to suit their needs. For instance the tables and chairs were positioned to suit the needs of the learners because some learner's eyes were sensitive to light. This was supported by what Nesbit (2009) points out that the examination room must be arranged to suit the needs of the learners with visual impairment in order to eliminate all forms of hindrances towards accessibility to the assessment of the visually impaired learners. This approach of location accommodations is good because the visually impaired students are able write exams peacefully without the disturbances of external factors and since they are allowed to seat in position they are comfortable with, the chances are that these students are likely to perform well.

5.2.3 Added Time for the Visually Impaired Learners during the Final Exams

Emerging from this study, it was evident that when the learners with visual impairments are writing their final exams, there was an allowance of added time. This is similar to a study conducted by (Vaughn *et al.,* 2000) that in most developed

countries, learners with visual impairments are given extra time to complete the exams since, learners who read braille need twice as much time as other learners and it is estimated that learners who read enlarged print need time and a half to complete an exam. The study revealed that twenty to thirty percent of extra time is added during exams, per examination paper and added time is not enough because reading and writing in braille consumes a lot of time. This is similar to what (Graeme *et al.,* 2009) found that for example, the Netherlands and Czech Republic appear to have options for hundred percent extra time (i.e. double time), while other countries have less (e.g. Ireland and France report thirty three percent extra). Although there is no policy on extra time allocated to accommodate the needs of learners with disabilities during exams there is a directive from the Examinations Council of Zambia that a twenty five percent of extra time should be allocated to accommodate the needs of learners with disabilities. Further, the researcher found that the ECZ allows twenty five percent of extra time to candidates with Special Education Needs (ECZ, 2011).

However, the fact that the responses varied across the respondents in this study as to the extra time allowance is indicative of lack of awareness for the twenty five percent directive of added time from the Examination Council of Zambia. This therefore, calls for the need to come up with a policy on how best the needs of the learners with visual impairments could be accommodated to ensure some level of equity during the assessment process. The lack of awareness among the respondents has to a larger extent left the visually impaired learners at a disadvantage with regards to the passing rate.

5.2.4 Responses on the Extent to which the Visually Impaired Learners benefit from the Way Examinations are handled

The findings of the study revealed that to some extent the visually impaired learners did benefit from the way the exams were handled because their needs were catered for since their examinations were modified into braille and enlarged print and because they were also given added time. Contrary to this, the study also revealed that at times they did not benefit from the way the exams were handled because modified papers were sometimes not distributed to the schools and in such a case

they were given examination papers designed for the sighted learners and the invigilators read for them. This greatly, affected their pace of writing.

In addition, the study revealed that the learners with visual impairments were not given equipment like cubes and types to help them to solve mathematics and this affected the performance of learners with visual impairments. Additionally, the study revealed that the coverage of the syllabus was mainly concentrated on the ordinary learners and materials like text books were not provided in favour of the visually impaired learners. This therefore, is evident that there is less professionalism in the setting of exams and just the way the exams for the visually impaired learners were handled. This is similar to what Renfranz (2009) found out that tests for the visually impaired arrived late, the learners wrote before the material was covered in class and the exam had braille transcription errors that made questions unanswerable, and exam results for the visually impaired students were lost. In order for the visually impaired learners to excel in the national exams the government through the Curriculum Development Centre should ensure that text books are embossed into braille and adapted to enlarged print format as this may be very crucial in ensuring that the visually impaired learners adequately prepare for the final exams.

5.2.5 Responses on whether there are Specialised Teachers at Examination Centres with Expertise in Braille during the Final Exam

The study revealed that the expertises in braille were there in the examination centres but there were not enough to assist all the visually impaired learners. It was evident that in some centres, there were no specialised teachers with expertise in braille which negatively affected the performance of the visually impaired learners. This is similar to what Ponchillia and Susan (1996) found out that the candidates with visual impairment perform poorly because they are not provided with specific support assistant that may give specific advice if the exams involve technical procedures that may be new to the candidates. Therefore, the absence of expertises in braille in the examination centres may be crucial for the visually impaired learners because in order for them to excel especially when using various devices, braille expertises should be adequate to assist all the visually impaired learners. Expertises in braille are also crucial when it comes to packaging of embossed brailed scripts in readiness

for transcription at ECZ. Therefore, the Ministry of Education should ensure that expertises in braille are adequate in all the examination centres for the visually impaired learners to benefit in the way the exams are practiced.

5.2.6 Assistive Devices which are given to the Visually Impaired Learners to assist them when writing the grade twelve Examinations

With regards to the assistive devices which are given to the visually impaired learners to assist them when writing the grade twelve examinations, the study revealed that equipment for the visually impaired learners were not enough to assist all the visually impaired learners. It was evident that the visually impaired learners were not allowed to write their exams using computers. This is in line with what Jonathan (2010) and Nesbit (2009) found out that when writing exams, students with visual impairments do not have access to technology that will enable them to overcome their difficulties in the exams. However, this is consistent with the findings by (Allan, 2009 and Connell, 2008) who argues that the devices such as magnification devices which include eyeglass-mounted magnifiers, free standing or handheld magnifiers, and electronic equipment such as the closed circuit television (CCTV) or a computer that has text enlargement software installed do not provide a student with an unfair advantage, rather they are devices that the student requires to access print, and they should be allowed as standard accommodations for the visually impaired learners to fully access the exams.

In this regard, the implication is that when the visually impaired learners are subjected to use the devices they are not comfortable with, the chances are high that they may not perform well in the national examinations. Therefore, when writing exams, students with visual impairments should have access to technology that will enable them to overcome their difficulties. The visually impaired learners should be allowed to use the technologies they are comfortable with for them to excel in the national exams.

5.2.7 Marking of Examination Scripts for the Visually Impaired Learners

Emerging from this study, it was evident that there was no special training that was given to the markers concerning how to mark scripts for the visually impaired

learners and that some brailed scripts were marked by the general markers in various marking centres. It was revealed that there were no special provisions when it came to the marking of scripts for the visually impaired learners, which meant that their scripts were marked just like any other scripts. This was similar to what Waterfield and West (2008) found out that there are no special provisions considered when marking the scripts for the learners with visual impairments which affect their performance in the national high stake exams. However, this may not be a good approach because students with visual impairments may present their work poorly if they are unable to re-read their own work which may affect their performance in the national examinations. Therefore, the government through the Examination Council of Zambia should engage special education teachers in the marking scripts for the visually impaired learners and marks should not be deducted when they make grammatical errors.

The outcomes in objective one were in collaboration with assessment of learning theory propounded by Baku (2011) which postulates that the national assessment is used for accountability. This therefore, means that the examining board of each nation has a legal responsibility to modify the national examinations for the learners with disabilities to access the examinations with little or no difficulties.

5.3 Factors affecting the grade twelve National Examination Assessment for Learners with Visual Impairments in Zambia

The second objective was to ascertain the challenges affecting the grade twelve national assessments for learners with visual impairments in Zambia. The findings revealed a number of issues which will be discussed below.

5.3.1 Challenges Which Learners with Visual Impairments face when writing the grade twelve National Examinations

Arising from this study, it was evident that during registration of the national exams for the visually impaired learners, instead of entering a particular subject a wrong one was entered thereby disadvantaging the learners because they were forced to write papers they did not learn. This is similar to the findings by Hewett *et al.*, (2015) on a study which they conducted on, 24 participants about modified examination

arrangements that they had experienced; twelve reported having problems including; inappropriately formatted exams, electronic files which were inaccessible, poor equipment, and incorrect time and three participants took their exams later than their peers (in the summer when others were re-taking exams) and four more experienced other delays with written assessment. This therefore, shows that there are inconsistencies in the way the exams for the visually impaired learners are practiced from the registration process to the time the results are published. Therefore, for the visually impaired learners to excel all the stake holders should be dedicated in ensuring that they play their role with regards to the exams for the visually impaired learners. At a school level, the guidance officers should enter the correct particulars in terms of format of an exam and a subject requested by the individual learners.

Additionally, it was evident that the learners with visual impairments lacked the materials that were modified to suit their needs especially text books that were printed in enlarged print and embossed to braille; hence learners with visual impairment were not fully prepared for the exams. This is in line with what Khochen (2011) states that braille readers have very limited access to books in braille and enlarged print that they may wish to read, according to the school curriculum. This was also consistent to what Sahasrabudhe and Prashant (2013) states that in most educational systems, the educational curriculum is oriented towards the use of eye sight especially in developing nations. This is also consistent with what Hewett *et al.,* (2015) found out that there were consistent challenges experienced by the visually impaired learners in all aspects of accessing learning materials, delayed availability to reference materials, inaccessible materials, unhelpful lecturers and difficulty in accessing the library. However, this may have a negative implication on the performance of the learners with visual impairments because if these learners have no access to the learning materials the chances are that they are more likely to perform poorly in the national exams. Therefore, the government through Curriculum Development Centre should provide books that are modified into enlarged print and embossed into braille in all the subjects.

In addition, it was marked that the visually impaired learners did not understand the braille codes of mathematics and scientific symbols which caused most of them to either drop these subjects or perform poorly. This is consistent with what Hewett *et*

al., (2015) found out that the mathematical paper was written using a slightly different braille code to what the students would normally work in and it greatly had a negative impact on the performance of the students. Hence, because many visually impaired learners do not understand braille codes for mathematics and scientific symbols it has led to a high dropout rate in maths and sciences and a few that endured to study these subjects have performed poorly. This however has been worsened by lack of modified books for the visually impaired learners in mathematics and sciences. Therefore, for the learners with visual impairments to excel, mathematical and scientific braille codes should be taught to these learners and modified mathematical and scientific books should be provided.

5.3.2 Challenges faced when transcribing Brailed Work to Ink at ECZ

Emerging from the findings, it was revealed that the transcribers of papers from braille to ink made a lot of mistakes which affected the way the scripts were marked and some of the results of the visually impaired learners went missing. The findings revealed that there were a lot of irregularities in the transcription of brailed scripts for the visually impaired learners. This is in line with what Alden (2016) found out that the shortage of teachers knowledgeable of the braille codes presents a further serious challenge in the transcription of brailed work for students with visual impairments. However, the implication is that the learners with visual impairments may be affected negatively because if the scripts are transcribed badly there are higher chances that the transcribed scripts may be marked wrongly which might affect the failing rate of the these learners. Therefore, the Examination Council of Zambia should engage expertise in braille transcription to be responsible for the transcription of embossed scripts for the visually impaired learners. This may improve the accuracy in the way the scripts for the visually impaired learners are marked and may greatly uplift the performance for these learners in the national exams.

5.3.3 Challenges which Learners with Visual Impairments face when accessing the grade twelve Examination Papers with regards to Modifications

With regards to the challenges which the visually impaired learners face when accessing the grade twelve national exams, the findings of the study revealed that

the modifications made in the question papers did not suit the real needs of the visually impaired learners. This is in line with what Purcell *et al.*, (2009) reported that even though the papers were modified, they were not modified sufficiently in that the font size was not enlarged enough and there were a lot of inconsistencies in the way the adaptations were made. The findings of the study revealed that some subject s like mathematics and sciences were too abstract in nature, hence; they were difficult to modify into a descriptive form which made it difficult for the visually impaired learners to understand the questions. This is a similar picture with what Mbulaheni (2015) reported that while science and mathematics exams are easily accessible to the sighted learners, it is not or less accessible to the blind and partially sighted learners, since many of its concepts are presented graphically, and there are many concepts that cannot be explored by touch and are too abstract in nature. However, in a centralised arrangement where the council manages the examinations, measures should be taken into consideration to provide assessment that accommodates the visually impaired learners. In an inclusive assessment arena, flexibility, fairness and equity need to prevail. This will help Zambia increase the chances of attaining the sustainable development goal number 4 on quality education (Muzata, 2018).

5.3.4 Challenges faced when marking the Scripts for the Visually Impaired Learners

The study findings revealed that at times scripts of the visually impaired learners were not transcribed which made it difficult for the markers to mark. The study also revealed that the markers had a negative attitude towards marking the scripts for the visually impaired learners. This is in line with what Alden (2016) found out that the majorities of teachers do not have the necessary braille knowledge and therefore have a negative attitude towards marking of brailed scripts. Teachers' negative attitude towards marking embossed scripts may negatively affect the performance of learners with visual impairments. Therefore ECZ should orient markers on how best scripts for the learners with visual impairments should be marked and this may reduce biasness thereby promoting equality in the way scripts are marked.

5.3.5 Challenges which Learners with Visual Impairments face with regards to Time when writing the grade twelve National Exams

The study revealed that time was not enough for the visually impaired learners to finish writing their exams within a given time. This was similar with the study conducted by Hewett *et al.,* (2015) who found that the amount of extra time given varied, ranging from 20 percent to 100 percent and of particular note was one participant who had been used to having at least 50 percent extra time when at school, but was only allocated 20 percent through her support plan during the final exam, which proved to be a struggle to her. Further, in Examination Council of Zambia guidelines, the researcher found that the ECZ allows 25 percent extra time to all candidates with SENs. However, even though the council has made such commendable efforts, the factor of added time has minimal impact on the visually impaired learners especially those with multiple disabilities. Therefore, for the visually impaired learners to fully benefit from the way the exams are been practised time should be added to suit the real needs of these learners. In addition, the learners with visual impairments that require more time should be granted so that the council can create an equal ground for these learners to exploit their potentialities with regards to the exams. The Examination Council of Zambia should as well make sure that added time is indicated on the examination question papers designed for the visually impaired learners.

5.3.6 Challenges which Learners with Visual Impairments face when using Devices during the grade twelve National Examinations

The study revealed that the devices such as Perkins braillers were not available in most of the schools and a few which were there were not in a good shape. Additionally, the findings showed that certain equipment like Perkins were not easily handled and they stopped operating in the middle of exams and most braille frames had broken pins which failed to hold the braille papers and the visually impaired learners were not allowed to use computers in the exams. This is similar with what Connell (2008) found out that students who are visually impaired lack advanced technologies and more innovative tools for writing braille dots and the fact remains that these students lack a wide range of devices to use when writing in braille. This is

contrary to what Ndhlovu *et al.*, (2018) highlights that learners with visual impairments should not have to expend physical energy on braille writing and that various technologies such as screen readers with Job Access With Speech (JAWS) software should be used by the visually impaired learners to write the examinations. This is consistent with Maholo (2017) who highlights that assistive technologies are perfect solutions to mitigate barriers when the visually impaired learners are writing their examinations. However, without assistive devices the implication is that the visually impaired learners may access the examinations with a lot of difficulties. Therefore, ECZ should allow the use of assistive technologies such as computers with Jobs Access With Speech JAWS software when writing the national examinations for better results.

5.3.7 Difficulties faced when Managing Exams for Learners with Visual Impairments

The study revealed that difficulties in managing exams for the visually impaired learners came in when trying to make the ordinary teachers and administrators understand how examinations for the visually impaired learners were supposed to be administered and managed. This was in line with what Alden (2016) found out that the majorities of teachers did not have the necessary knowledge on special education and therefore had a negative attitude towards braille and the visually impaired students. The study also revealed that it became a challenge when the question papers for the visually impaired learners were not set according to their needs and lack of specialists in braille to prepare and handle the exams for them. This is in line with what Willings (2017) points out that a student who has never taken a test using an audio, braille or enlarged print formats would be at a disadvantaged if the test was provided only in an audio format, braille or enlarged print formats. However, the attitude of teachers in the administration of exams for the visually impaired learners is crucial as this may positively or negatively affect their performance in the national exams. Therefore, at a school level the school administrators should ensure that workshops and continuous professional development programs are organised to suit the real needs of learners with visuals impairments. This may have a positive impact on the performance of these learners.

5.3.8 How giving Examinations in a way they are given affected the Performance of the Visually Impaired Learners

The study revealed that the people who marked the scripts for visually impaired had no skills in braille transcription, hence they could not read braille and when the untranscribed brailed scripts were identified in the marking centres, it was impossible for the ordinary markers to mark their scripts thereby contributing to the problem of missing results. This is in line with what Alden (2016) and Khochen (2011) found out that not having teachers with the knowledge on braille codes affected the way scripts were transcribed and marked leading to missing tests results. It was also revealed that some invigilators who did not have skills in braille made mistakes of packing some question papers instead of packing some answer scripts which contribute to missing results.

This is in line with what Alden (2016) found out that the shortage of teachers knowledgeable of the braille codes presents a further serious challenge in the way the scripts for the students with visual impairment are packed in readiness for marking especially in developing countries. In as much as the Examination of Zambia is trying to improve the marking, processing and the release of results at various categories, there are a lot of gaps in the way the exams for the visually impaired learners are practiced. The fact that the results for the visually impaired learners in most cases went missing is proof enough that there was a problem in the way the scripts were marked, transcribed and processed. Therefore, the Examination Council of Zambia should work towards improving the examination practices for the visually impaired learners form the registration processes to the publishing of the results at grade twelve. Other stakeholders in the administration of exams especially at a school level should make sure that only expertises in braille are involved in the packaging of the answer scripts for the visually impaired to solve the problem which the invigilators make of packing question papers instead of packing answer scripts

5.4 Measures that can improve the existing Practices in the grade twelve National Assessment for Learners with Visual Impairments

The third research objective was to determine the strategies that can be employed to improve the existing practices in the grade twelve national assessments for learners

with visual impairments. The findings revealed a number of issues as discussed below.

5.4.1 Strategies that were suggested to solve the challenges faced when identifying the Brailed Scripts for Transcription at ECZ in Readiness for Marking.

In responding to the questions on what strategies should be employed to deal with the challenges affecting the existing practices in the grade twelve national examination assessments, it was evident from the study that packaging of scripts for the visually impaired learners should be done appropriately for easily identification of brailed papers for transcription and marking. This is consistent to what Sutton (2002) suggested that if you are embossing and packing several different items at the same time, be careful to check that the items are appropriately packed and labelled, since doing so makes each piece easier to locate quickly. The study findings also showed that the Examination Council of Zambia should organise workshops in all the provinces to sensitise teachers on how to handle the exams for the visually impaired learners and the schools through the guidance officers should request for the correct exam papers for the visually impaired learners during the registration of examinations. This is in line with what Willings (2017) states that the registration process can be used to ask the blind people about their format preferences when registering for examinations which can be used when modifying the items to suit their needs. However, the stakeholders should improve the way the exams for the visually impaired learners are handled, as this will improve the performance of these learners in the national exams as the barriers will be reduced thereby enhancing the status of the visually impaired learners with regards to the exams.

5.4.2 Strategies that were suggested to solve the challenges experienced when making Modifications or Adaptations to the Visually Impaired Examination Papers.

The study findings revealed that ECZ should look for benefiting ways of modifying subjects like sciences and mathematics. Additionally, the findings revealed that the modifications should be made according to the individual needs of each visually

impaired learner. This is similar to what Allman (2009) suggested that the examining bodies should ensure that the modifications are effective and made to meet the needs of each learner. In addition, it was suggested that the Examination Council of Zambia should carefully check that the right question papers or subjects are packed as indicated on the envelopes and the P.E.O and DEBS offices should do an excellent job in making sure that papers for the visually impaired learners are taken to the schools at the right time and not forgotten in their offices.

In addition, the study revealed that when making modifications at ECZ, they should use specialist teachers who practise the modifications during the time when they are giving tests and the same modifications should be used in the final exams. This is in line with what Allman (2009) suggested that educators with specialization in the field of visual impairments must be included in the test item development process and the test items must be reviewed by persons familiar with visual disability issues to ensure that no test item is biased or discriminating toward persons with visual impairments.

It was also revealed that the examination papers should be prepared in braille grade one so that all the learners with visual impairments can access the examinations with less difficulties. In addition to this view, it was suggested that when making modifications, the Examination Council of Zambia should follow the specifications which are given by the schools when modifying the papers so that the modifications can be made to suit for the needs of learners. This is consistent with what Vaughn and Schum (2000) points out that accommodations used during final exams should generally match those used by the student for classroom instruction, assuming they are familiar and effective for the students. Additionally, the findings revealed that those with eyes that are sensitive to white paper should be given a colour of braille paper that is not sensitive to their eyes. This is similar to with what Allman (2009) states that colour is critical to the conveyance of meaning in tests and other written presentations and some people, specifically those with colour discrimination difficulties, need special consideration when colour planning for educational assessments. However, for the learners with visual impairments to fully benefit from the national examinations, modification and adaptation of the exams should be made. Therefore, the Examination Council of Zambia should ensure that reasonable

accommodations are achieved from the registration period to the time the exams for the visually impaired are released as this will create an environment where all the candidates can compete regardless of the disabilities and abilities. Through reasonable accommodations the enhancement of the performance for the learners with visual impairments can be achieved.

5.4.3 Strategies that were suggested to solve the challenges faced when Transcribing Brailed Work to Ink

Emerging from the study it was suggested that ECZ should come up with a standard way of engaging transcribers and these braille transcribers should be placed in all the marking centres so that whenever a script which is not transcribed is discovered, it should be transcribed and marked just there in the making centres to solve the problems of missing results for the visually impaired learners. This is in line with what Allman (2009) suggested that experienced braille readers might also need to transcribe students' braille responses into print for marking and scoring. Additionally, only special education teachers with a developed skill of transcription should be given the papers to transcribe at ECZ. This is consistent with what Omede (2015) suggests that test developers and publishers must ensure that contracts for braille materials specify the use of braille transcribers who are certified at transcribing tests, and are knowledgeable of braille codes. When the scripts for the learners with visual impairments are transcribed with accuracy the chances are that their scripts will be marked with accuracy. Therefore, when the scripts for the visually impaired learners are marked accurately it will definitely give us the true picture of the performance of these learners. Hence, the Examination Council of Zambia should ensure that all form biasness is eradicated at all stages of examination process concerning the visually impaired learners so that the passing rate can be enhanced in the national examinations.

5.4.4 Strategies that were suggested to address the challenges faced in marking Examination Scripts for the grade twelve learners with Visual Impairments

The study revealed that the scripts for the visually impaired learners should be marked in one centre by special education subject teachers with a skill in braille. This is in line with what Allman (2009) suggested that only experienced braille readers and markers should handle the scripts of the students with visual impairments. Additionally, the findings revealed that ECZ should train more markers that have done braille to eliminate the problem of missing results for the visually impaired learners and scripts for the visually impaired learners should be packed in blue envelopes for easy identification when transcribing. This is similar to what Sutton (2007) points out that special education teachers should acquire training regarding current research on packaging, transcription, marking, technology use, and best practice strategies to be used in the assessment of the visually impaired learners.

The study findings also revealed that the Examination Council of Zambia should conduct a research on the missing results for the visually impaired learners and also come up with workable measures that will solve the problems of missing results for the visually impaired learners. This is in line with what Sutton (2002) suggested that there is a huge need to collaborate with colleagues regarding challenges surrounding the exams for the visually impaired learners and putting effective assessment strategies, tools, and equipment to enhance their performance in the high stake exams. However, the marking of scripts for the visually impaired learners is a crucial process which should be handled with care. Therefore, the Examination Council of Zambia should ensure professionalism in the way the papers are transcribed and marked by engaging expertises in the field of visual impairments. This is vital because all the barriers that affect the performance of these learners at transcription and marking level will be eradicated thereby enhancing the performance of these learners.

5.4.5 Suggestions on the Strategies that can be employed to address the challenges which Learners with Visual Impairments face with regards to the Time Allocated when writing the grade twelve National Exams

With regards to added time, the findings of the study revealed that added time should be increased or doubled. Out of the 22 respondents that participated in the study, 20 respondents suggested that 100 percent of time should be added so that the learners should write their exams at easy and two said that 50 percent of time should be added. This is in line with what Wetzel and Knowlton (2000) suggests that experienced adult braille readers may need no more than 50 percent more time than the stated duration, with additional time allowed for the manipulation of devices or embossing in braille. This is also consistent to a study by Allman (2009) who points out that students with visual impairments will usually require extended time during testing because using braille, enlarged print, and audio formats require more time than does reading print with acceptable visual acuity. Despite, the Examination Council of Zambia adding 25 percent to the normal duration when the visually impaired are writing the examinations, the failing rate for the visually impaired learners has continued to increase. It appears the 25 percent of added time has not really helped the visually impaired learners to excel with regards to the national examinations. Therefore, the Examination Council of Zambia should consider adding time according to the individual needs of each visually impaired learner. The council should make sure that those that require 100 percent of extra time should be given in order for them to easily access the examinations.

5.4.6 Suggestions on the Strategies that can be employed to address the challenges which Learners with Visual Impairments face when using Devices during the grade twelve National Exams.

The findings revealed that the visually impaired learners should be allowed to use modern technologies like computers and sound recorders when writing the grade twelve exams. The study also showed that broken Perkins should be fixed before the exams commences so that the visually impaired learners can write the exams smoothly. This is in line with what Jonathan (2010) and Nesbit (2009) states that magnification devices include eyeglass-mounted magnifiers, free standing or

handheld magnifiers, and electronic equipment such as the closed circuit television (CCTV) or a computer that has text enlargement software installed and these should be used by the visually impaired learners to enable them to overcome their difficulties when writing the exams. Assistive technologies are vital in increasing accessibility in the examination of the learners with visual impairments. Therefore, the council should consider allowing, the use computers and sound recorders as a way of increasing accessibility to the national exams by the visually impaired learners thereby improving their performance.

5.4.7 Suggestions on the Strategies that can be employed to overcome the challenges experienced at a Learner, School, Examination Council of Zambia and Policy Level.

At the level of the learners, the study revealed that the visually impaired learners should be adequately prepared for the exams and should utilise modified past papers so that they get acquainted to the modifications made in the final examinations. This is in line with the observation made by Sutton (2002) that in collaboration with school staff, officers responsible must ensure that accessible materials, past test papers, and modifications needed by the students, are provided in a timely manner to ensure the student's maximum participation in summative assessment. In addition, the learners with visual impairments should be prepared psychologically for the short falls in the exam. For instance, in case the papers do not suit their needs and also if the Perkins stops working during the exam. Additionally, the study findings revealed that the learners with visual impairments should be provided with text books in braille and enlarged print so that the learners can adequately prepare for an exam. This is similar to what Salisbury (2008) states that to ensure accessibility, a range of adaptations and modifications may be required which will vary considerably depending on the nature of visual impairments and the needs of individual learner.

At a school level, the study revealed that the administrators and teachers should be sensitized so that the challenges with regards to the examinations for the visually impaired learners can be shared and solved. This is similar to what Khochen (2011) suggested that it is also vital that teachers interacting with braille learners understand the procedures by which their learners are assessed in formative and summative

assessment. Good performance of the visually impaired learners in the national exams cannot be achieved by ECZ alone. Therefore, there should be combined efforts of all the stakeholders for the goal to the achieved. At a school level, the learners should be adequately prepared for the exams and the administrators and teachers should develop positive attitudes towards the learners with visual impairments as this is key in enhancing their performance.

At ECZ level, the findings revealed that the Examination Council of Zambia should give the best services by improving the way exams are prepared, handled and processed at grade twelve for the visually impaired learners so that the problems of missing results can be corrected. Additionally, the study shows that the Examination Council of Zambia should employ more people to specifically look into the examinations for the visually impaired learners to solve the problem of missing results for the visually impaired learners. This is consistent with what Omede (2015) states that the education of the visually impaired learners requires more human resource to handle their education at all levels, as a way of eliminating the challenges. Despite the council putting efforts, the performance of the learners with visual impairments in the national exams has continued to be poor which indicate that there are gaps in the way the exams for the these learners are practised. Therefore, the examination council of Zambia should ensure that the come up with workable measures in order to improve the grade twelve national examination practices.

At a policy level, the findings revealed that the Examination Council of Zambia should come up with a policy to give guidance on how the examinations for the visually impaired learners should be prepared, administered, marked, processed and published. The policy should be there to show a road map on how to handle the exams for the visually impaired learners. This is consistent to what Staffan and Anna (2006) states that a guiding policy should be in existence to channel action in certain directions in order to achieve greater heights. All the categories of special education are different, unique and cannot be given the same attention. Therefore, the Examination Council of Zambia should consider coming up with a policy specifically on how to manage the examinations for the visually impaired at grade twelve.

5.5 Summary

The above chapter presented the discussion of findings of the study, on the current practices on the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka districts. The discussion of findings of the study were presented according to the following themes derived from the objectives; current practices of the grade twelve national examination assessment for learners with visual impairment in Zambia, factors affecting the grade twelve national examination assessment for learners with visual impairment in Zambia and the measures that should be taken to improve the existing practices in the grade twelve national assessment for learners with visual impairment. The themes brought out the discussion of the findings of the study in line the study objectives. The next chapter outlined the conclusion and recommendations.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Overview

This chapter presents the conclusions and recommendations arising from the findings of the study. The objectives were to establish the current practices of grade twelve national examination assessment for learners with visual impairments in Mwense and Lusaka districts Zambia, ascertain the challenges affecting the current practices in the grade twelve national examination assessments for learners with visual impairment s and to determine the measures which should be taken to improve the grade twelve national examination assessments for learners with visual impairments.

6.2 Conclusion

In line with the objectives of the study, the following conclusions were made with regards to the current practices of the grade twelve national examination assessments for the learners with visual impairments. The study revealed that the learners with visual impairments wrote their examinations using two formats and these were; braille for the totally blind and enlarged print for the partially sighted learners. On the other hand, the study revealed that some modifications were made to the examination papers in order to make them accessible to the learners with visual impairments but at times, these learners were subjected to write examination papers for the sighted learners when ECZ failed to send some modified papers.

Additionally, the study revealed that all the visual information like charts, maps, pictures and diagrams were removed from the question papers as one of the modifications. This brings justification that the national examinations should be provided in a format which suits the needs of the learners, advocated for by assessment of learning theory propounded by (Baku, 2008 and Shirlee, 2011). In addition, the study revealed that friendly language and not language that is humiliating was used so that the final exam was not discriminative in any way to the visually impaired learners. In line with this, the research findings revealed that when the learners with visual impairments were writing their examinations, there was an allowance of added time. However, the modifications made to the examinations for the visually impaired learners brings justifications that the national assessment is

used for accountability, advocated for by assessment of learning theory propounded by (Baku, 2008 and Shirlee, 2011). This therefore, means that the examining body of each nation has a legal responsibility to modify the national examinations for the learners with disabilities to access the examinations with little or no difficulties.

Coming to the factors affecting the current practices in the grade twelve national examination assessments for learners with visual impairments, the study revealed that braille expertise in the examination centres were not enough to assist all the visually impaired learners. Similar to this, the study also revealed that at times a wrong format of paper was prepared for the visually impaired learners contrary to what they requested for during the registration of exams. It was also found that some visually impaired learners had not mastered braille grade two and relied on the fellow learners and the invigilators to read for them when writing the national examinations. In addition, the study findings revealed that at times, scripts of the visually impaired learners were not transcribed which made it hard for the markers to mark.

On the strategies that should be employed to improve the grade twelve national examination assessments for learners with visual impairments, the study findings showed that packaging of scripts for the visually impaired learners should be appropriately done for easily identification of brailed papers for transcription and marking. It was also suggested that ECZ should modify brailed exams using braille grade one in order to specifically meet the real needs of the visually impaired learners who cannot read grade two braille. Additionally, the findings revealed that the visually impaired learners should be allowed to use modern technologies like computers and sound recorders when writing the grade twelve exams and broken Perkin braillers should be serviced before the exams begins.

6.3 Recommendations

1. The Examination Council of Zambia should employ braille transcribers on a permanent basis to be responsible for the transcription of brailed work for the visually impaired learners.
2. The Examination Council of Zambia should engage subject specialist special education teachers with expertise in braille in the transcription and marking of scripts for the visually impaired learners.

3. The Examination Council of Zambia should come up with a marking centre specifically dedicated to marking scripts for the visually impaired learners.
4. The Examination Council of Zambia should ensure that a percentage of added time is indicated on the modified question papers to assist the invigilators to add the actual percentage of additional time.
5. The Examination Council of Zambia should ensure that added time is indicated on the modified question papers to avoid biases.
6. The Curriculum Development Centre should make sure that text books in all the subjects and other relevant materials are modified into braille and enlarged print so that the visually impaired learners can adequately prepare for the exams in all the subjects.
7. At a school level it will also be very helpful to ensure that pupils with visual impairments are made computer literate so that in future they can type examinations on their own.

6.4 Future Research

This study was aimed at, examining the current practices in the grade twelve national examination assessments for learners with visual impairments in selected schools in Mwense and Lusaka districts, Zambia. Future studies in relation to this study, should be conducted in all the provinces to determine the performance of the grade twelve visually impaired learners in the national exams. Secondly, a study should be conducted on the modifications of teaching and learning materials for the visually impaired learners.

6.5 Summary

The chapter has given a conclusion on the current practices of grade twelve national examination assessments for learners with visual impairments in selected schools in Mwense and Lusaka districts Zambia. The chapter also outlined the recommendations and provided a proposed study area for the future research.

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APPENDICES

APPENDIX A

INTERVIEW SCHEDULE FOR THE EXAMINATION COUNCIL OF ZAMBIA OFFICIALS

SECTION A: CURRENT PRACTICES OF GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

1. What is the general practice for grade 12 national assessments / examination for learners with Visual Impairments?
2. Are there special provisions or considerations in the administering of grade 12 examinations for learners with Visual Impairments?
3. Has the examination council of Zambia put measures for modifications and adaptations of examination papers for learners with Visual Impairments?
4. If yes what factors do you consider in adaptation and modification process?
5. In which format do learners with Visual Impairments write the national examinations?
6. Do learners with Visual Impairments use braille or enlarge print when writing their final examinations?
7. If yes how do you categorise them for braille and enlarged print?
8. How are the markers identified?
9. What level of orientation is given to the markers of scripts for the visually impaired learners?
10. How is the marking of national examinations for learners with Visual Impairments done?
11. What are the special provisions or modifications in the marking of examination scripts for learners with Visual Impairments?
12. How are the papers processed?
13. How are the marked papers handled?

SECTION B: FACTORS CHALLENGING THE GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

14. What do you think are the challenges associated with the administering of grade twelve national examinations for learners with Visual Impairments?

15. What do you think are the challenges faced when making adaptations or modifications to the national examination question papers for the grade twelve learners with Visual Impairments?
16. What are the challenges faced when transcribing papers for learners with Visual Impairments?
17. What do you think are the challenges associated with the marking of examination answered scripts for the learners with Visual Impairments in the national exams?

SECTION C: MEASURES THAT CAN IMPROVE THE EXISTING PRACTICES IN THE GRADE TWELVE NATIONAL ASSESSMENTS FOR LEARNERS WITH VISUAL IMPAIRMENTS

18. What do you think should be done to address the challenges experienced during the process of running the grade twelve national examinations in order to improve the National Assessment for learners with Visual Impairments?
19. What do you think should be done to address the challenges faced when making adaptations or modifications to the grade twelve national examination question papers for learners with visual papers?
20. What do think should be done to address the challenges faced in the transcription of examination scripts for the grade twelve learners with visual impairments?
21. What should be done to address the challenges faced in marking examination scripts for the grade twelve learners with Visual Impairments?
22. What do you think can be done to overcome the challenges experienced at
    a) ECZ level……
    b) Policy level……..
23. What is your overall comment on the grade National Assessment for learners with Visual Impairment?

THANK YOU FOR TIME

APPENDIX B

INTERVIEW SCHEDULE FOR LEARNERS WITH VISUAL MPAIRMENTS IN ZAMBIA

SECTION A: CURRENT PRACTICES OF GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

1. What do you know about the grade 12 National Exams for learners with Visual Impairments?
2. What are the special provisions or adaptations in the National Assessment for learners with Visual Impairments?
3. What do you think about the duration given to learners with Visual Impairment when writing the national examinations?
4. Are the question papers easily accessible to you as a learner?
5. If NO, please explain the limitations in the current examinations practices.
6. Are learners with Visual Impairments given assistive technologies to assist them when writing the examinations?
7. Are learners with Visual Impairments given any assistance (e.g. by braille readers) to enhance their accessibility to the national examinations?

SECTION B: FACTORS CHALLENGING THE GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

8. What do you think are the challenges which learners with Visual Impairments face when writing national examinations?
9. What do you think are the challenges which learners with Visual Impairments face when accessing the examination papers with regards to modifications?
10. What do you think are the challenges which learners with Visual Impairments face when with regards to time when writing the national exams?
11. What are the challenges which learners with Visual Impairments face when using technologies during the national examinations?

SECTION C: MEASURES THAT CAN IMPROVE THE EXISTING PRACTICES IN THE GRADE TWELVE NATIONAL ASSESSMENTS FOR LEARNERS WITH VISUAL IMPAIRMENTS

12. What do you think should be done to address the problems which learners with Visual Impairments face when writing the grade twelve national examinations?
13. What do you think should be done to address the problems which learners with Visual Impairments face when accessing the grade twelve national exams with regards to modifications?
14. What do you think should be done to address the challenges which learners with Visual Impairments face with regards to the time given when writing the grade twelve national exams?
15. What do you think can be done to address the challenges which learners with Visual Impairments face when using technologies during the grade twelve national exams?
16. What is your overall comment on the grade twelve national assessments for learners with visual impairments?

THANK YOU FOR YOUR COOPERATION

APPENDIX C

INTERVIEW SCHEDULE FOR SCHOOL LEAVERS WITH VISUAL MPAIRMENTS IN ZAMBIA

SECTION A: CURRENT PRACTICES OF GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

1. What do you know about the grade 12 National Exams for learners with Visual Impairments?
2. What are the special provisions or adaptations in the National Assessment for learners with Visual Impairments?
3. What do you think about the duration given to learners with Visual Impairments when writing the national examinations?
4. Are the question papers easily accessible to you as a learner?
5. If NO, please explain the limitations in the current examinations practices.
6. Are learners with Visual Impairments given assistive technologies to assist them when writing the examinations?
7. Are learners with Visual Impairments given any assistance (e.g. by braille readers) to enhance their accessibility to the national examinations?

SECTION B: FACTORS CHALLENGING THE GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

8. What do you think are the challenges which learners with Visual Impairments face when writing national examinations?
9. What do you think are the challenges which learners with Visual Impairments face when accessing the examination papers with regards to modifications?
10. What do you think are the challenges which learners with Visual Impairments face when with regards to time when writing the national exams?
11. What are the challenges which learners with Visual Impairments face when using technologies during the national examinations?

SECTION C: MEASURES THAT CAN IMPROVE THE EXISTING PRACTICES IN THE GRADE TWELVE NATIONAL ASSESSMENTS FOR LEARNERS WITH VISUAL IMPAIRMENTS

12. What do you think should be done to address the problems which learners with Visual Impairments face when writing the grade twelve national examinations?
13. What do you think should be done to address the problems which learners with Visual Impairments face when accessing the grade twelve national exams with regards to modifications?
14. What do you think should be done to address the challenges which learners with Visual Impairments face with regards to the time given when writing the grade twelve national exams?
15. What do you think can be done to address the challenges which learners with Visual Impairments face when using technologies during the grade twelve national exams?
16. What is your overall comment on the grade twelve national assessments for learners with visual impairments?

THANK YOU FOR YOUR COOPERATIO

APPENDIX D

INTERVIEW SCHEDULE FOR TEACHERS OF LEARNERS WITH VISAUL IMPAIRMENTS, SCHOOL HEAD MASTERS, AND ESO SPECIAL OFFICIALS

SECTION A: CURRENT PRACTICES OF GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

1. How is the National Examination Assessments for learners with Visual Impairments done at grade 12?
2. Do you think the visually impaired learners benefit from the way examinations are handled? Give reasons to your answer
3. What forms of modifications are made to help learners with Visual Impairments to access the grade twelve national examinations without challenges?
4. What training have you received with regards to the management of grade twelve exams for learners with Visual Impairments?
5. Are there specialised teachers at examination centres with expertise in Braille to assist learners where necessary?
6. Is there added time to the normal duration given to visually impaired learners when writing the final examinations?
7. If YES, how is the time allowance arrived at?
8. In your own view is the added time adequate for the visually impaired learners to write examinations?
9. Are learners with Visual Impairments given assistive technologies to assist them when writing the grade twelve examinations?
10. How are the markers identified?
11. What level of orientation is given to the markers of scripts for the visually impaired learners?
12. How is the marking done?
13. How are the papers processed?
14. How are the marked scripts handled?

SECTION B: FACTORS CHALLENGING THE GRADE TWELVE NATIONAL EXAMINATION ASSESSMENT FOR LEARNERS WITH VISUAL IMPAIRMENTS IN ZAMBIA

15. What do you think are the challenges which learners with Visual Impairment sface when writing the grade twelve national examinations?
16. What do you think are the challenges which learners with Visual Impairments face when accessing the grade twelve examination papers with regards to modifications?
17. What do you think are the challenges which learners with Visual Impairment face when with regards to time when writing the grade twelve national exams?
18. What are the challenges which learners with Visual Impairments face when using technologies during the grade twelve national examinations?
19. Do you have difficulties in managing exams for learners with visual impairments?
20. Do giving examinations in such a way affect their performance? Explain

SECTION C: MEASURES THAT CAN IMPROVE THE EXISTING PRACTICES IN THE GRADE TWELVE NATIONAL ASSESSMENTS FOR LEARNERS WITH VISUAL IMPAIRMENTS

21. What do you think should be done to address the problems which learners with Visual Impairments face when writing the grade twelve national examinations?
22. What do you think should be done to address the problems which learners with visual impairments face when accessing the grade twelve national exams with regards to modifications?
23. What do you think should be done to address the challenges which learners with Visual Impairments face with regards to the time given when writing the grade twelve national exams?
24. What do you think should be done to address the challenges which learners with Visual Impairments face when using technologies during the grade twelve national exams?
25. What do you think can be done to overcome the challenges experienced at?

a) Learners level
b) School level
c) ECZ level
d) Policy level

26. What is your overall comment on the grade twelve national assessments for learners with visual impairments?

THANK YOU

APPENDIX E

INFORMATION SHEET

THE UNIVERSITY OF ZAMBIA

DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

Telephone: +260-211-290258/293937 P O Box 32379

Fax: +260-211-290258/293937 Lusaka, Zambia

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HUMANITIES AND SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

PARTICIPANT INFORMATION SHEET & CONSENT FORMS

(This template is for research interventions that use questionnaires, in-depth interviews or focus group discussions)

(Language used throughout form should be at the level of a local student of 6th/8th grade)

Notes to Researchers:

1. Please note that this is a template developed by the WHO ERC to assist the Principal Investigator in the design of their informed consent forms (ICF). It is important that Principal Investigators adapt their own ICFs to the outline and requirements of their particular study.

2. The informed consent form consists of two parts: the information sheet and the consent certificate.

3. Do not be concerned by the length of this template. It is long only because it contains guidance and explanations which are for you and which you will not include in the informed consent forms that you develop and provide to participants in your research.

4. This template includes examples of key questions that may be asked at the end of each section that could ensure the understanding of the information being provided, especially if the research study is complex. These are just examples, and suggestions, and the investigators will have to modify the questions depending upon their study.

5. In this template;

- square brackets indicate where specific information is to be inserted
- bold lettering indicates sections or wording which should be included
- Standard lettering is used for explanations to researchers only and must not be included in your consent forms. The explanation is provided in black, and examples are provided in red in italics. Suggested questions to elucidate understanding are given in black in italics.

Informed Consent Form for: the visually impaired learners

This informed consent form is for the visually impaired learners (boys and girls) who I am inviting to participate in the academic research, 'Current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka district.'

Name of Principle Investigator: Ndume Muyoma Sarah

Name of Organization: The University Of Zambia, School Of Education

Name of Sponsor: Self

Name of Project and Version: Current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka district.

This Informed Consent Form has two parts:

• Information Sheet (to share information about the study with you)

• Certificate of Consent (for signatures if you choose to participate)

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

Part I: Information Sheet

Introduction

I am **Ndume Muyoma Sarah**, a master student in the School of Education at the University of Zambia. I am doing a research on the current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka district. I am going to give you information and invite you to be part of this research. You do not have to decide today whether or not you will participate in the research, you may take time to think about it then accept willingly. This consent form may contain words that you do not understand. Please ask me to stop as we go through the information and I will take time to explain. If you have questions later, you should feel free to ask them.

Purpose of the research

The purpose of the study is to examine the current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka districts, Zambia. I believe that you can help me by giving me the information you have on the current practices on the current practices in the grade twelve national examination assessments for learners with visual impairment.

Type of Research Intervention

This research will involve your participation in a group discussion that will take about one and a half minute's interview.

Participant Selection

You are being invited to take part in this research because I feel that you are the suitable people with the data that can contribute much to the research that I am undertaking. The information obtained will as well help the teachers and the examination council of Zambia to improve the current practices in the grade twelve national examination assessments for learners with visual impairment.

- Do you know why I am asking you to take part in this study?
- Do you know what the study is about?

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. If you choose not to participate, its fine and nothing will change. You

are free to decide.

- Do you know that you do not have to take part in this research study, if you do not wish to?
- Do you have any questions?

Procedures

A. I am here to find out on the current practices in the grade twelve national examination assessments for learners with visual impairment in Zambia. I am inviting you to take part in this research project. If you accept, you will be asked to give me the details on how you write the national examinations.

B. For semi- structured interviews

I would like you to participate in an interview with me. During the interview, I will sit down with you in a comfortable place. If it is better for you, the interview can take place in your home or a friend's home. If you do not wish to answer any of the questions during the interview, you may say so and I will move on to the next question. No one else but the interviewer will be present unless you would like someone else to be there.

Duration

The research takes place over four weeks in total. During that time, I will visit you once or twice in case there is something I need you to clarify more and each interview will last for about 30 minutes each. If you decide to take part in the study;

- Do you know how much time will the interview take?
- Where will it take place?
- If you agree to take part, do you know if you can stop participating?
- Do you know that you may not respond to the questions that you do not wish to respond to?
- Do you have any more question

Risks

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

Benefits

There will be direct benefit to you as a participant because you will be helped to realize how much knowledge you and that it can be used for writing and reading in many subjects as you go to school, but your participation is likely to help us find out more about how I can best utilise the knowledge that you acquire during the herding of cattle as a foundation to teaching initial literacy in school.

Reimbursements

You will not be provided with any incentive to take part in the research because this is purely an academic research intended for academic purposes.

- Can you tell me if you have understood correctly the benefits that you will have if you take part in the study?

Confidentiality

I will not be sharing information about you to anyone outside of the research team. The information that I am collecting from this research project will be kept private. Any information about you will have a number on it instead of your name. It is only me who will have this information. It will not be shared with or given to anyone.

The following applies to focus groups:

I will ask you and others in the group not to talk to people outside the group about what was said in the group. I will, in other words, ask each of you to keep what was said in the group confidential. You should know, however, that we cannot stop or prevent participants who were in the group from sharing things that should be confidential.

- Did you understand the procedures that I will be using to make sure that any information that as a researchers collect about you will remain confidential?
- Do you understand that I cannot guarantee complete confidentiality of information that you share with us in a group discussion?
- Do you have any more questions?

Sharing the Results

Nothing that you tell me today will be shared with anybody outside the research apart from being published in the dissertation and nothing will be attributed to you by name. No information will be shared as this is a purely academic research.

Right to Refuse or Withdraw

You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your learning at school in any way. You may stop participating in the (discussion/interview) at any time that you wish without.

Who to Contact

This proposal has been reviewed and approved by ……, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find out about more about the IRB, co……It has also been reviewed by the Ethics Review Committee of the World Health Organization (WHO), which is funding/sponsoring/supporting the study.

- Do you know that you do not have to take part in this study if you do not wish to? You can say No if you wish to?
- Do you know that you can ask me questions later, if you wish to?
- Do you know that I have given the contact details of the person who can give you more information about the study? Etc.
- You can ask me any more questions about any part of the research study, if you wish to.
- Do you have any questions?

Part II: Certificate of Consent

I have been invited to participate in research on the current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Zambia. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant_____

Signature of Participant _____

Date _____

Day/month/year

If illiterate [1]

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has

[1] *A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb print as well.*

given consent freely.

Print name of witness_____ Thumb print of participant

Signature of witness _____

Date _____

Day/month/year

Statement by the researcher/person taking consent

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

1. Confidentiality would be considered
2. Risks if any will be taken care off
3. Anonymity of the participants would be maintained

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

A copy of this ICF has been provided to the participant.

Print Name of Researcher/person taking the consent Ndume Muyoma Sarah/…….....

Signature of Researcher /person taking the consent …… /……..…

Date _____

APPENDIX F: RESPONDENTS' CONSENT FORM

The University of Zambia, School of Education Dept of EPSSE

Dear Sir/Madam,

REF: REQUEST FOR CONSENT AS A RESEARCH RESPONDENT

I am Ndume Muyoma Sarah, a student at The University of Zambia studying for Master of Education in Special Education. I am requesting you to take part in my research as a respondent. The research is about; "Current practices in the grade twelve national examination assessments for learners with visual impairment in selected schools in Mwense and Lusaka districts, Zambia". Your participation is going to help me come up with information regarding the matter mentioned above. Be assured that the information you will share with me remains confidential and only for academic purposes. Your consent to this request will go a long way.

Yours Faithfully,

…… (Sign) Ndume S. Muyoma – Researcher/Student

Consent by respondent

Having read or heard the information concerning this research, I hereby consent by virtue of office/position/parent to be one of the respondents. In this regard, I reserve the right not to answer particular questions if necessary.

Name: …… Sign: ……..……Date: ….....…