

**FACILITATORS AND BARRIERS IN ACADEMIC ASSESSMENT OF LEARNERS
WITH HEARING IMPAIRMENT: A CASE OF EXAMINATIONS COUNCIL OF
ZAMBIA**

By

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**A Dissertation Submitted in Partial Fulfilment of the Requirements for the Award of the
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DECLARATION

I, CHIFINDA RUTH, declare that this dissertation represents my own work and not previously been submitted for a degree at this university or any other institution. Furthermore, I declare that all the work from other researchers has been acknowledged in this study.

Signature:.....

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CERTIFICATE OF APPROVAL

This Dissertation of CHIFINDA RUTH is approved as a fulfilling the partial requirements for the award of the degree of Master of Education in Special Education by the University of Zambia.

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ABSTRACT

The purpose of the study was to examine facilitators and barriers in the academic assessment of learners with hearing impairment (LHI) at Grade 9 level of education. The study used a case study design and utilized qualitative approach. The study had a sample size of fifty participants who included ten teachers, ten item writers, ten examiners, five ECZ Subject Specialist Officers, five Education Standards Officers, three Curriculum Specialist Officers and seven college lecturers. All the participants had a teaching background in the field of Special Education except for some examiners and ECZ Subject Specialist Officers. All participants were selected using purposive sampling technique due to the nature of their work and positions. A questionnaire was administered to gather data on assessment strategies, weaknesses, gaps and best practices and interview guides were used on teachers, lecturers and examiners to gather more detailed information. Data collected was analyzed qualitatively using inductive analysis method. This involved coding and categorizing the merging themes in relation to the study.

The study revealed that there were limited examination strategies or facilitators and showed several weaknesses and significant gaps in the process of assessing LHI at Grade 9 level of education by Examinations Council of Zambia. The weaknesses/barriers and gaps have to a large extent negatively affected the academic performance of LHI in public examinations. As part of the strategies to support LHI during assessment, the learners were given 25 percent extra time and reading of examination instructions in sign language. However there were several gaps in the assessment of the LHI which included; limitations in methods of test administration, inappropriate assessment tools, insistence on use of written standard British English as a communication mode, time limitation, and lack of qualified specialist Hearing Impaired teachers to set test items and mark examinations as well as handling invigilation related challenges of examinations.

Arising from these findings the study recommended as strategies to improve the assessment of LHI, use of adapted/modified English alongside Sign Language Interpreters; increased use of objective tests and continuous assessment (CA). Further, the study recommended that qualified Hearing Impaired specialist teachers are trained in marking and setting of examinations for LHI.

Key words: Facilitators, barriers, hearing impairment, assessment, Strategies.

DEDICATION

This dissertation is dedicated to my late father Mr. Amon Bwambu Chifinda and my mother Mrs Joan Mwale Chalwe Chifinda.

To my husband Masauso Msoni and my children, Lindiwe, Chubo, Kondwani, Daliso and Ethel for the unfailing love, understanding and encouragement they accorded me during my studies.

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LIST OF ABBREVIATIONS

CA:	Continuous Assessment
CVT:	Captioned Video Type
DALICE:	David Livingstone College of Education
ECZ:	Examinations Council of Zambia
ESO:	Education Standards Officer
FM:	Frequency Modulation
HI:	Hearing Impairment
LHI:	Learners with Hearing Impairment
MoE:	Ministry of Education
SEN:	Special Educational Needs
TCD:	Telecommunication Device
ZAMISE:	Zambia Institute of Special Education

CHAPTER ONE: INTRODUCTION

1.1 Overview

This chapter discusses the background of the study, statement of the problem, purpose of the study, objectives, research questions, significance, delimitations, limitations and key operational definitions of the study.

1.2 Background

Academic assessment involves procedures that directly assess students' performance within the course content with a purpose of evaluating the learners' skills on tasks and specific items. Ministry of Education (1996 page No. 11) states that, "*the Ministry will seek to develop evaluation procedures that can assess, not merely a narrow intellectual area, but also attitudinal and dispositional outcomes, and such areas as innovativeness, problem-solving ability, and capacity for self-initiated and self-sustaining learning.*" The Examinations Council of Zambia (ECZ) a corporate body established in 1983 by an Act of Parliament with a mandate of conducting examinations at different school levels for all learners without discrimination and based on the principle that evidence-based decision making is critical for improving the quality of education for all (MoE 1996). ECZ has been examining among other learners those with Hearing Impairment (HI). However, their performance in public examinations at Grade 9 has been unsatisfactory (Moonga 2014). Hence, these concerns among stakeholders have raised the need to investigate factors responsible for the bad performance of learners with hearing impairment in summative academic assessment at grade 9 level of education in relation to facilitators and barriers.

Gordon (2012) states that any assessment must be planned to focus on the purpose because it has a role to play in supporting student learning and hence the need for it to be appropriately balanced. The most important part of assessment is the interpretation and use of information that is gleaned for its intended purpose. Assessment is embedded in the learning process. It is tightly interconnected with curriculum and instruction as students and teachers work together to achieve out comes, assessment plays a constant role of informing instruction, guiding the student's next step and checking progress and achievement (Moores 1996). Teachers use many different

processes and strategies for classroom assessment of students with hearing impairment and adapt them to suit the assessment purposes and needs of learners with hearing impairment.

Deaf Students Deaf Education (2011) urges that assessment serves four many functions: classification and diagnostic classification, selection for educational placement and group assignment, specific treatment planning and evaluation of interventions. Therefore, assessment should have the ability to give a dependable feedback that is both valid and reliable account of pupils' learning and performance. It is argued that the negative consequences of public examinations for learners with hearing loss stems from the notion of barriers to assessment that encompass their education, (Mitchell 2002). Barriers to assessment encompass both external and internal factors that interfere with learner performance in examinations aid at school.

The process of taking a test which requires writing by deaf students in itself becomes the most complex and difficult task for all students with hearing loss. Students with hearing loss have challenges with writing English because they have difficulties accessing and learning English syntactical and morphological structures. Either auditory or visually, they make numerous errors at the sentence level, (Martin 2012). In addition, because many students with hearing loss have difficulty with reading, their exposure to models of good writing may be limited. Teachers of the deaf often emphasize an approach to writing that focuses on producing basic sentences, which results in them writing uninformative, uninteresting and incoherent texts, (Zikey 2006).

According to Dana (2006) test questions become accessible to learners with hearing loss when they include insufficient context in question stem, use double negative statements, use idiomatic expressions, use multiple meaning words, use embedded clauses, use inappropriate structure of questions and content that is inappropriate to the experience of deaf test-takers, (Zikey 2006). At test becomes a mere test of understanding English form from the viewpoint of a native user of English who has had auditory input than the intended test of the subject matter at hand. Such tests create a critical barrier, blocking access by the deaf learner to the test itself.

Mcarmen and Sugrue (2007) believe that the biggest barrier in the assessment of students with hearing impairment is the language that test items are written in. Language is identified to be the single biggest barrier because of the speaking, reading and comprehension that students or generally people with hearing impairment have. Sohn and Way (2006) echo findings that children with listening difficulties due to hearing or auditory processing problems continue to

have delays in the development of receptive and expressive communication skills. The language deficit causes learning problems that result in reduced academic impact on vocational choices.

It is through the assessments that are conducted by the Examinations Council of Zambia annually at Grades 7, 9 and 12 that are written by the general school populous including learners with hearing impairment that the researcher got an insight to write about establishing the presumed barriers and facilitators to accessing assessment by learners with hearing loss. This happened after noticing that learners with hearing impairment had a trend of having low academic achievements for a series of years

An observation was made over a three year period on the performance of learners with hearing impairment from three provinces being Lusaka, Eastern and Northern. This consequently occurred after the examining body satisfied the necessary demands of equality, validity and reliability of question papers administered to learners with hearing impairments. In an effort to find scientific evidence the Examinations Council of Zambia conducted an explorative study into the current assessment practices for learners with special educational needs in 2013. The study revealed that the level of language in examination question papers phrased in ordinary English language proved to be too difficult for the learners with special educational needs, especially those with hearing impairment. The study further established that deaf learners take considerable time to comprehend and respond to questions appropriately during tests and examinations.

In a related study done by Moonga (2014) writing on equity in educational assessment of Grade 12 students with hearing impairment, said two sets of tests were administered to learners with hearing impairment. One test was modified and the other test was in written Standard English. After marking results showed that deaf students who wrote a modified test performed better than the other group exposed to writing a test in written Standard English. Mwale et al (2014) focused on modeling a test instrument for candidates with absolute deafness at Grade 7 level. His findings established that use of modified language alone in assessment did not bring significant change. He emphasized that Sign language interpreters in the assessment of the deaf remained critical and indispensable. The figures below show performance of learners with hearing impairment at Grade 9 from Lusaka, Eastern and Northern Provinces for three (3) consecutive examination years.

Table 1: Grade 9 Results for Learners with Hearing Impairments for Eastern, Northern and Lusaka Provinces

REGION	YEAR	REGISTERED			SAT			SELECTED			
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Percentage Selected
Eastern	2013	42	22	64	40	20	60	12	10	22	36.67
Northern	2013	26	20	46	26	18	44	11	9	20	45.45
Lusaka	2013	27	33	60	27	30	57	19	18	37	64.91
Eastern	2014	30	22	52	30	22	52	14	11	25	48.08
Northern	2014	35	25	60	33	24	57	20	11	31	54.39
Lusaka	2014	40	29	69	40	27	67	20	15	34	50.75
Eastern	2015	18	22	40	18	22	40	10	10	20	50.00
Northern	2015	18	20	38	18	17	35	10	9	19	54.29
Lusaka	2015	34	20	54	34	18	52	22	10	32	61.54

Source: Examinations Council of Zambia 2013, 2014 and 2015

A snap survey conducted by ECZ shows a progressive rate of between 30 and 40 percent for learners with hearing impairment in three (3) provinces for three consecutive years as seen in the above table. The performance challenges may be attributed to examination strategies and barriers present in the academic assessment of these learners which have not yet been fully explored to inform ECZ management and other stakeholders. Realizing that assessment plays an integral role in the learners' advancement and instructional needs among others, it is therefore, necessary that assessment is designed in a manner that excludes barriers and make assessment much easy and more accessible to all learners including those with hearing impairment. With this consideration, learners with hearing impairment can also have the opportunity to demonstrate their attainments. The study therefore sought to investigate facilitators and barriers in the current academic assessment of learners with hearing impairment by ECZ at grade 9 level of education.

1.3 Statement of the Problem

Effective assessment is very essential in determining the quality of education offered to learners of different abilities (Martin 2012). The results obtained by the test takers that enable them to excel in education is deemed good examination. However, assessment of learners with Hearing

Impairment has continued to pose a challenge to the successful education completion due to their unsatisfactory performance in public examinations. Attempts were made by the Examinations Council of Zambia in (2013) in an explorative study on Current Assessment Practices for Learners with Special Educational Needs (SEN) and a related study was done by Moonga in (2014) on Equity in Assessment of Grade 12 Students with Hearing Impairment. Mwale et al (2014) looked at Modelling a Test Instrument for Candidates with Absolute Deafness at Grade 7 level and found that Sign Language and Sign Language Interpreters remained critical in the assessment of the deaf. Previous studies were however based on different themes rather than focusing on facilitators and barriers in the academic assessment process of learners with Hearing Impairment at Grade 9 level by the Examination Council of Zambia. Therefore, the researcher found it appropriate to make an inquiry into facilitators and barriers in the academic assessment of learners with Hearing Impairment at Grade 9 education level through examinations offered by ECZ. In addition investigate how facilitators and barriers have influenced performance of such learners at junior secondary school level of education in Zambia. The study following questions guided the present study:

1.4 Purpose of the Study

The purpose of the study was to explore the facilitators and barriers in the assessment of learners with hearing impairment at Grade 9 level of education by the Examinations Council of Zambia.

1.5 Objectives

The study was guided by the following objectives, to:

1. Explore facilitators of academic assessment of learners with Hearing Impairment at Grade 9.
2. Assess barriers to academic assessment of learners with Hearing Impairment at Grade 9.
3. Determine existing gaps in the assessment of learners with Hearing Impairment at Grade 9 level.
4. Identify best practices in the assessment of learners with Hearing Impairment.

1.6 Research Questions

The study was guided by the following questions:

1. What facilitators are put in place in the academic assessment of learners with Hearing Impairment at grade 9 level?
2. What gaps are there in the academic assessment of Grade 9 learners with Hearing Impairment effective?
3. What gaps exist in the current academic assessment process involving learners with Hearing Impairment at Grade 9 level of education?
4. What are the best practices in the assessment to learners with Hearing Impairment at Grade level of education 9?

1.7 Significance of the Study

The significance of this study was that it would help assessment bodies to develop better approaches of administering assessment and assessing learners with Hearing Impairment. Further the Ministry of General Education and teachers in schools would benefit as they would be informed about the best assessment practices and approaches for the learners with Hearing Impairment. The new assessment models found based on the findings would guide teachers in instruction giving and assessment of programmes.

1.8 Delimitation of the Study

The study was delimited to special education teachers, lecturers, education standard officers, ECZ Subject Specialist Officers, Curriculum Specialist Officers, item writers and examiners/markers. This group of participants and the ECZ officers became particular to this study because of their experience in working with learners with Hearing Impairment. The research participants came from Copperbelt, Lusaka, Southern and Luapula provinces.

TOPOGRAPHICAL STUDY AREA

The Examinations Council of Zambia (ECZ) is an assessment body established by the Act of the Zambian parliament and entrusted with the responsibility of developing, administering examinations and certifying all learners including those with special educational needs (SEN) at

primary, secondary and teacher education level of education and training on behalf of the Zambian government. The body serves as a wing of the Ministry of Education and operates independently. ECZ has its headquarters in Lusaka, the capital city of Zambia but functions through the school system with representation at the Ministry of Education national headquarters and provincial centres. Although it has various departments which are headed by specialized personnel, it functions mainly through teachers and other education specialized personnel in schools and educational administrative structure. This is because of the nature of its establishment, the researcher drew participants from ECZ, Ministry of General Education as well as schools for learners with Hearing Impairment with a purpose of understanding the strategies used in assessment of such learners and how strategies used have influenced the performance of the Hearing Impaired in examinations at junior secondary school level of education (Grade 9).

1.9 Limitation of the Study

The current study focused on facilitators and barriers in the academic assessment of learners with Hearing Impairment who were found in schools all-round the country but this research was only conducted in Lusaka, Luapula, and Southern provinces, which might limit the generalization of the results. Another limitation was that the study was conducted in the third term when many teachers were preparing their learners for examinations. As a result the researcher was faced with challenges recruiting teacher participants. Those who participated may not have given the research the attention it deserved. The findings of the study were not generalized because the qualitative research design used sort to understand the phenomenon rather than generalisation of results

1.10 Theoretical Framework

The study adopted the Herbert Bounded Rationality Theory discovered in 1957. The theory challenged the classical economic theory that economic behavior was essentially rational behavior in which decisions were made on the basis of all available strategies and information with a view of securing the optimum result possible for each decision made (Atkin & Neels, 2005). Herbert contended that in today's complex world individuals cannot possibly process or even obtain all the information they need to make fully rational decisions without the support of well-defined strategies. The researcher found it precise to adopt the Herbert Bounded Rationality theory on account that decisions made at the end of the study on strategies that are employed in

the assessment of learners did not seem to consider everything that consisted the learning process more so among learners with special educational needs in the school system. Hence, the assessment did not seem to provide reasonable outcomes comparable to the in-puts of learners with varied disabilities.

1.11 Definition of Key Operational Terms

Academic Performance: How well students deal with their studies and how they cope with or accomplish different tasks given to them by teachers or simply the level of performance.

Barriers: Obstacle that prevents learners from performing to their full potential.

Comprehension: The ability to understand speech and comprehension or capacity to understand fully.

Communication: The activity of conveying information through an exchange of ideas, feelings, ideas, intentions, attitudes, expectations, perceptions or commands, as by speech, gestures, writings, behavior.

Deaf: Refers to an individual who has little or no hearing.

Examinations Council of Zambia (ECZ): Is a corporate body established by an Act of parliament to conduct examinations at different education levels

Facilitators: Processes or practices that help examinations conduct.

Hard of Hearing: Refers to an individual who has a mild to moderate hearing loss who may communicate through sign language.

Hearing Impairment: Is a partial or total inability to hear.

Item Writers individuals professionally trained to set examination question papers

Level of education: Educational stage.

Reading: The ability to understand writing, obtain meaning, interpret and translate from print..

Special Education Needs: Refers to children or individuals who have difficulties or disabilities that make it harder for them to learn than most children of the same age.

1.12 Summary of the Chapter

This chapter introduced the study by giving rich broad background of the study. It explained the role of the Examinations Council of Zambia and discussed the academic challenges learners with Hearing Impairment encounter at school. It also explained the importance of academic assessment for learners with hearing impairment. This chapter further discussed the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, delimitation of the study, limitations of the study, key operational definitions and the theoretical framework. The Herbert Bounded Rationality Theory guided the study on account that assessment strategies employed by ECZ during examinations did not seem to consider everything that made the learning process of learners with Hearing Impairment but utilized available strategies that made assessment produce unreasonable outcomes

CHAPTER 2: LITERATURE REVIEW

2.1 Overview

The chapter reviewed available literature on facilitators (good practices/process) and barriers (obstacle) in academic assessment of learners with hearing impairment by looking firstly at facilitators. This is followed by a review on barriers, gaps and possible measures towards improved approach to academic assessment of hearing impairment. The chapter ends with a summary.

2.2 Facilitators of Assessing Learners with Hearing Impairment

The literature reviewed under this part shed light on the facilitators that exist in the assessment of learners with hearing impairment at Grade 9 education levels. University of Washington (2016) observed that students who are deaf utilize different accommodations in examinations. Closed captioned videos in form of films are shown to deaf pupils in order for them to write examinations. The audiovisuals are closed captured and clearly labeled with titles and all the necessary details are given. The instructor in the video relaxes and talks normally for learners to follow easily. Andrew (2000) postulates that there is a variety of live captioning services available to support students with hearing and hard of hearing impairment in writing examinations founded on the fact that people who are deaf or hard of hearing often use vision of receiving information. One of the captioning services is computer aided real-time translation. This service uses trained stenographers to provide alternative transcripts of the content of the examination question papers. A computer conveys written information to the deaf and hard of hearing so that they can communicate fully. In a quest to continue helping individuals who are deaf and hard of hearing write their examinations fairly, closed captions that have time-texts are displayed on video that includes both speech and essential non-speech sounds or simply sign language.

Oyewumi (2000) observes the closed captions videos help deaf students to comprehend questions that are written in summative examinations. Closed captioned videos help deaf student test takers to maintain concentration which provides a better experience for viewing and following proceedings in an examination paper. With the dominance of reality television, information becomes less articulate and more unscript. Because of that closed captions have

improved comprehension for hearing impaired situation in examinations. The method has further improved comprehension of English language and other languages. Watching a video in an examination is more passive. When deaf students watch a video they receive more information in their visual and auditory centres and information is processed faster for test takers to give answers in an examinations.

The above literature has given different facilitators engaged in assessing learners with hearing impairment applied by Washington University. However, the method of assessing learners with hearing impairment using closed captioned videos and Real-time captioning seem not to be used in our country and it calls for investigations to establish where, and how the methods are used to order to enhance assessment for this group of learners.

Jelinek and Jackson (2001) argue that all deaf and hard of hearing students are unique and may require different accommodations. They may communicate through a sign language interpreter in examinations. Sign language interpreters help bridge the communication gap in examinations by translating examination printed questions into sign language. They strictly translate what is written in the question papers. The interpreter relays the information being presented in examinations to give access to typical hearing impaired students sitting for examinations. Former (2001) asserts that sign language interpreters are used to communicate to deaf students in an examination. Their role is to facilitate communication between written or spoken language. It is believed that sign language increases visual contact because sign language and eye contact is much more important to deaf individuals. Lozanova (2009) projects that choosing an interpreter access means that a student who is deaf or hard of hearing may be able to seat the examinations in an environment that offers equal opportunities to all test takers. Interpreters receptively and expressively interpret accurately, effectively and impartially to convey the message accurately to deaf students in examinations. He/she should avoid standing in front of windows as the glove interferes with sight. If the interpreting situation requires darkening the room to view slides, video tapes or films, auxiliary lighting may be necessary so that the deaf test takers can see the interpreter. Interpreters speak clearly and in a normal tone and do not rush through an examination. The interpreter stands in a place where there is good lighting because students need unobstructed view of the sign language interpreter (Andrew 2000).

Jelinek and Jackson (2001) have raised an important component in the assessment of learners with hearing impairment which has won the support of all the other authors in the passage above. However, the piece literature has not stated at what level sign language interpreters were involved. Also, it appears the approach is not commonly applied here and there is no local literature to support the idea and enhance it can only be established through research. To argue out this idea the researcher intends to carry out an investigation using a questionnaire and interviews with the teachers, ECZ subject officers and standard officers.

Venn (2007) proposed that portfolio-Based Grading being another technique for evaluating students with deafness. Teachers assign portfolio grades based on evaluation of the authentic samples of student work that appear in a portfolio. Rather than emphasizing grades such as test scores, the portfolio approach relies more on holistic grades. This encourages reflective teaching, learning and assessment. As a result, have many opportunities of evaluating their performance, receive feedback during portfolio conference, and think about their learning experiences and progress. Portfolio has the potential for expanding measurement into new and challenging areas. Process portfolios may include a variety of materials such as unfinished work, journals, reflections, notes, independent work, conference reports, teacher evaluations, peer evaluations, self-evaluations, and even test results. However, rather than a random collection of work samples, the process portfolio should contain carefully selected materials that illustrate specific learning.

Mwale, et al (2014) cited development of portfolio of a student's academic work which is analyzed by educators using some rubrics and individual interactive interviews as an effective way of assess learners' real understanding of a body of content and observation of the deaf learners' performance of some presentation or work with the subject matter. Rose et al (2008) reviewed that modification of test items is a good practice because it accommodates the learners with deafness. For example items that reference to use of ipods or cellphones, instead should be deleted or modified to include use of adaptive terminologies to increase examination access for the learners such as video phones or text messages written in language within the vocabulary of deaf or hard of hearing learners.

The above article discusses assessment of learners with hearing impairment using portfolio-based grading that involves grading of a student's academic work and modification of test items

to reflective teaching, learning and assessment. The two writers relate to methods that are probably not practiced in Zambia in the assessment of learners with hearing impairment at grade 9 level of education. Therefore, the researcher intends to embark on an investigation to ascertain the credibility of the proposed assessment methodologies by interviewing teachers in the field and item writers.

Moonga (2013) states that it was established that all examination past papers for candidates with hearing impairment in all learning institutions such as schools, colleges and universities including Examinations Council of Zambia assess learners with hearing impairment in written standard English which demands that test takers understand the meaning of words, sentences and entire texts; understanding relationships. The written examinations also carry questions of analyzing and drawing conclusions from discourse; reason from compositions and perspective; understanding multiple levels of meaning, such as literal and figurative questions. Learners with hearing impaired were examined in the same manner as the ordinary learners.

The piece of literature above elaborately discussed written examinations paper lay out at grade 12 level written by learners with hearing impairment. The text gives a picture of grade 12 examinations as administered by ECZ country wide but it does not relate to examinations written at grade 9 by learners with hearing impairment. With this in mind the researcher intends to investigate the perceived difference and establish if the same principles were applicable at this level or they already being used in grade 9 assessment.

Cooperative Learning Assessment

Cooperative learning an instructional strategy in which students learn together in teams. Experts (Cohen, 1994; Webb, 1995) indicate that students with disabilities who participate in cooperative groups are more likely to make successful transitions into general education classes. Most students with disabilities need social and group skills training to ensure successful participation in cooperative learning groups. Research studies by Pomplan (1997) and Carlson, Ellison, and Dietrich (1988) provide evidence supporting the effectiveness of cooperative learning in inclusive classrooms. These studies suggest that non-routine, open-ended tasks maximize the participation of students with disabilities in heterogeneous cooperative groups. Appropriate assessment is one of the key components in cooperative learning. Further assessing teamwork in cooperative learning is as important as assessing individual student work, Johnson and Holubec

(1998) include ways to assess cooperative learning that are similar to those in assessing any lesson that includes; specifying the objectives, develop the assignment, determine grading criteria then explain the assignment and share the grading criteria with students and monitor the efforts of cooperative groups.

Peer Assessment of class presentations

Venn (2007) observed that Peers can evaluate presentations given by fellow students. One way to encourage group interdependence and to foster peer assessment is to structure class presentations so that all members must learn the material presented. Teachers can accomplish this by assigning students to cooperative groups of four, giving each group a topic and requiring each group to develop a presentation that every group member can give in its entirety. The presentation criteria should include a specific period of active participation by the audience and the group should have sufficient time to prepare and rehearse so that all group members can give the presentation. Assessment involves having the audience rate the presentation using a rating form. The rating form should include items for assessing the quality of the information. Mpofo and Chimhenga (2013) stated that the interest generated by the presentation eases understanding, organization, creativity and originality and audience participation. The students give one copy of the completed rating form to the presenter and one copy to the teacher who observes parts of all the presentations. Finally the group meet to evaluate the effectiveness of the presentations, to celebrate their success and to discuss ways to improve their presentation skills in the future.

The above literature has given various forms of facilitators engaged in assessing learners with hearing impairment that aid the process of examining learners. However, the use of cooperative learning and peer assessment from class presentation to academically assess learners with hearing impairment might seem not to be applicable the assessment regulations of the country and it calls for investigations to establish where, and how the methods are used to order to enhance assessment for this group of learners.

2.3 Barriers to Academic Assessment

The second part of literature review was focused on barriers that were impeding performance of learners with hearing loss in examinations. According to Venn (2007) at the time examination results are released, there are so many measurements which could indicate that examinations

were effective – graduation rates, grades, test scores – quantifiable and ostensible objective. Whether the examination was effective must definitely be measured by how much students' achievements increased over a period of time for learners with hearing impairment although it cannot be the only measurement.

Venn (2007) therefore, recommended that test format for students with deafness or hearing impairments and to an extent content is necessary for successful performance on a test but perform poorly on the test due to problems with the test format. Long, poorly designed, cluttered or distracting tests can negatively affect student performance. Teachers can reduce format problems by giving tests that have features that include; clean and printed darkly on a solid clear background, typed (not hand written) in a familiar style, proper spacing and sequencing of items, avoid separate answer sheets that require students to transfer responses, present questions in a structured, stable, predictable sequence (this helps students make the transition from item to item), provide adequate space for responding to each item and have a reading level that is not too high for students. In addition to these test format considerations, some students may need specialized equipment. Students who are visually impaired, for example may need large print or braille versions of tests. Students with hearing impairments may need the services of an interpreter. Likewise, students with reading disabilities may need audiocassettes of tests and markers to focus attention and maintain their place. (Mitchell 2002)

Sears (2001) states that in some situations, students with deafness may receive poor marks on a test due to difficulty in following the test directions rather than lack of knowledge of the test content. Teacher can minimize this problem by using cues that help students understand and follow test directions. Cues include color coding, font variations, underlining, bolding, symbols and enlarging the print. Cues can highlight key parts of items and emphasize changes in specific items.

The Sears above relates to deaf learners receiving poor marks on a test due to difficulty in following the test directions rather than lack of knowledge of the test content. The context in which the text was written is not specific to any level of education and therefore it cannot be tied up this study.

Response modes

Venn (2007) advises that teachers may need to modify the response mode of test items for students with written or verbal communication difficulties. For example, when the mechanics of written language are not important in grading answer, students can record responses on an audiocassette, or they can take oral exam. Students can also dictate answers to a scribe, review their answers and then direct the scribe to revise grammar, punctuation and word choices in the responses. Word processors, pointers, communication boards, type writers and other adaptive devices also can assist students. Finally some students may need aid such as calculators, word lists or arithmetic tables.

The idea of assessing deaf candidates under the use of response mode aids is a great strategy that should help learners achieve their goal after their responses in an examination are notified by revising grammar, punctuation and word choice responses are taken care of. However, it is not yet clear if such services are provided here to the grade 9 learners with hearing impairment hence need for investigations.

Test items

Further Venn (2007) advances that teachers should consider the needs of their students with deafness or having impairments when selecting the types of items to include on tests. With multiple choice items, for example, teachers can improve student performance by adhering to the following guidelines. Present response choice in vertical format, avoid double negatives, keep the response choices as brief as possible, avoid potentially confusing choices such as all the above or none of the above and limit the number choices to no more than four items. Students who have difficulty recording their answers should have the option of circling their response selection with matching items.

Andrew (2000) postulates that there is need to modify the test setting and timing because some students may need to take in an alternative setting such as alone in a quiet room, in a study carrel, in a small group, or in a resource room. Sometimes students also benefit from extended time to complete a test by giving breaks during testing or by testing over several sessions instead of one long session.

The two writers discuss modification of test setting in the interest of meeting learner individual needs of the deaf. The suggestion however seem to be corresponding with what has been observed on the ground in this study. Therefore, the researcher intends to embark on enquiring to ascertain the possibility of embracing the proposed assessment approach by interviewing teachers and college lecturers.

Test anxiety

Wood (2006) developed guidelines to minimize student apprehension that include; avoid pressuring students by telling them to finish quickly or this counts as half of your 9 week grade, avoid using testing as punishment for students who exhibit behaviour problems, give as many practice test as possible, allow students to take retest as needed, adapted tests for students should be given in a resource room and work with students individually to arrange testing accommodations. Teachers should also consider the impact of testing anxiety and embarrassment on performance. According to Mahwish et al (2012) students with deafness or hearing impairments can benefit from and have a right to testing modifications such as these that enable them to successfully demonstrate their knowledge and skills in general education classes. Reasonable modifications are essential so that capable students with special needs are tested fairly in ways that give them the opportunity to earn good grades. The view however may not be the same under the ECZ system managing examinations of learners with deafness.

Fairness in assessment

Fairness in assessment refers to equity of tests for all students regardless of race, ethnicity, language, disability gender or cultural background. Fairness is required by federal law in the United States of America, but biasness still occurs for several reasons (Macmillan & Reschly, 1998; Murtagh, 2003). The complexities associated with developing fair assessments account for much of a problem. The continuing increase in diversity among school age children is also a key factor. Another consideration according to Murtagh (2003) is the need for psychologists and diagnosticians to continue building their skills in testing students from various cultural and linguistic backgrounds. Because assessment professionals are often not proficient in the languages spoken by the students, they must use interpreters during test administration. Unfortunately, interpreters may not be familiar with assessment procedures. Thus, problems arise

when assessment experts and interpreters are not proficient in the languages. Hence could be one of the resulting factors of poor performance of learners with hearing impairment.

The National Deaf Children Society (2010) reviews that as part of preparing to welcome deaf pupils into schools particular attention to improving the acoustics and layout of the classrooms as well as the communal school areas. Classrooms can be noisy places. Some studies carried out into classroom acoustics highlighted just how far reaching the effects of noise on children can be. The students found that children with special educational needs were particularly vulnerable to the effects of background noise. Acute exposure to noise affected children's performance on academic tasks, with language based tasks being particularly affected by background noise. For deaf children the noise level, acoustics and the layout of classrooms are particularly important.

In addition the presence of competing noise makes listening difficult for all pupils, but the impact is even greater for deaf children (Former 2001). This is because microphones for hearing aids and cochlear implants amplify all sounds and so a deaf child may not be able to discriminate between what is being said by the invigilator, teacher or classmates and background noise. Improving the acoustics within a school needs careful consideration. Some changes may need to be planned over time such as lowering ceilings to installing equipment such as a sound field system (Oyewumi 2008). However, it is also important for teachers and support staff to become noise aware so that they can ensure that classroom listening conditions are good for deaf children. It must be remembered that a proper classroom for students with hearing loss should be a modified classroom. However, conditions in the local examination classrooms where ECZ examinations are conducted may not be equal to the description in the passage. They are not modified to the needs of deaf learners.

The above literature in the study was important because it give highlights on the examination environment materials to be used for learners with hearing impairment are a critical determiner of performance. This literature guided and helped the study to establish what a suitable examination environment and materials are for those learners with hearing loss which indeed may not be the case in the study cite for the present study.

2.4 Gaps Existing In Assessment of Learners with Hearing Impairment

Rose et al (2008) observed that assessment and evaluation are aspects of the current mandates of the educational rights of children including those with disabilities. The law requires at minimum that:

1. Test and other materials are selected and administered in a non-discriminatory manner in terms of race and culture by trained and knowledgeable personnel in accordance with the standards provided by the test developer and if not a description of the extent to which any accommodations or modifications were used in the written report.
2. Test or other procedures must be administered in a learner's native language or mode of communication unless not feasible.
3. Assessment results must be technically valid and reliable.

The projected views above are not in tandem with the current practices of ECZ in this study examinations are administered in a non-discriminatory manner learner mode of communication

Okumbe and Tsheke (2012) observed that what is needed is to translate the curriculum into manageable entities that can be used in the classroom for instruction and for assessment. Curriculum and assessment are key areas in the provision of effective teaching and learning. The modification of a curriculum for learners with special educational needs just like for other learners, should have appropriate instruction and planned assessment. The recommendation is different from ECZ practices because there is no modified curriculum and there for no planned assessment.

Mahwish et al (2012) urged that the reliability and validity of the test scores can be compromised with some special needs learners. The difficulties can be in the form of communication style (for example, the need for sign language interpreters for deaf learners, the length of the assessment, and also intentional problems. Okumbe and Tsheke (2012) stated that in order to overcome these and other problems associated with assessing special education learners, accommodations and modifications in testing procedures is important. such as extending time limit for those with reading comprehension challenges. Individual administration that allows for interaction with the examiner who is in a position to assess the learner's strength and weakness. simplification of the

language used especially useful with hearing impaired and mentally retarded learners. However, according to this study sign language interpreters, assessment length, individual administration and language simplification are not considered in practice. To an extent this situation could be contributing to the low academic achievement rates recorded among deaf learners.

Mahawish (2012) and Rose (200) urged that professional evaluating the learners who are deaf or hard of hearing must be sufficiently knowledgeable in the field of hearing loss. Interpersonal communication skills are a necessary part of the data process as the examiner must be able to communicate well with all relevant information providers. It must be able to address the general overview of issues, policies and principles that are pertinent to evaluation and assessment of young children and school-age learners who are deaf or hard of hearing in a manner that is consistent with legislation policy, rules and best practices. In order to make assessment results technically sound by having them valid and reliable. IDEA (2004) argued that assessment and evaluation of progress among children who are deaf or hard of hearing is a complex process. Challenges often go undetected by individuals unfamiliar with the hidden impact of hearing loss. Challenges to professions in the field of deaf education are particularly notable in the areas of information access, communication modalities, language selection and application of assessment tools, technology and access to high qualified personnel.

The above literature focuses on legislation for the hearing impaired learners and IDEA alludes to the communication challenges, limited access to information and the assessment tools used as being the factors at play influencing assessment. Contrary to this version, there are possibilities that issues of educational policy and the other named factors may not be responsible in the Zambian setting. Reasons being that there appears to be no sufficient literature to substantiate these claims. It is therefore, in order to investigate this phenomena from the curriculum specialist officers, teachers and item writers to establish the correct position.

Moore (1996) presented that many qualifications are required of examiners who work with deaf or hard of hearing learners. These include but not limited to:

1. Fluency in the learners primary language or mode of communication (sign language).
2. Understanding the interaction between child development and hearing loss.
3. Experience with measures that can be appropriately used with the deaf or hard of hearing learners.

These skills support the examiner who plays a crucial role in test selection , administration, scoring and interpreting of results.Mounty (2002) postulated that reading is a fundamental skill that underlies success in all academic areas . deaf students who experience difficulty reading likely will also experience difficulties in academic subject areas. ECZ (2013) observed that the level of language in question papers that were phrased in ordinary language proved too difficult for learners with hearing needs, especially those with hearing impairment, who take considerable time to comprehend and respond to questions appropriately. There are also times when the language found in examination question papers set by ordinary teachers is offensive for learners with special educational needs. Reading is a complex behaviour that is composed of many skills, thus no single child can have positive assessment results without good reading skills. Four components of text comprehension as described by Estabrooks and Estes (2007). These are the ability to rapidly decode and attach meaning to new words, the syntactic and morphologic competence to gain collective meaning from the decoded words, the ability to hold the meaning in working memory while processing new words, and the ability to apply text processing strategies for the purpose of figuring out unfamiliar words and passages. The above discussion points to obstacles encountered in the process of conducting assessment for deaf learners that may be a draw back on the performance of learners with hearing impairment.

The piece of literature seen above portrays an impression that low performance among learners with hearing impairment is as a result of inappropriate language used in examination papers, poor reading skills and use of examiners who have no skills in hearing impairment and learner poor reading skills (Moore 1996 and Mounty 2002). The suggestions of the two writers cannot be accepted without being proven scientifically because the writing was based on different contexts in the education systems and levels and some maybe considered foreign. It is therefore, imperative that scientific methods are applied to explain the assertions if they are helpful in examination administration or not.

The above pieces of literature focused on gaps the examination administration and processing criterion that could be applied in the assessment of learners with hearing impairment to better their results. It has been observed that the discussions are not being centred on any particular level of education. As it is it cannot be taken for granted that the methods may apply to the deaf at Grade 9 unless scientific investigations are carried out to establish the context and application.

2.5 Best Practices in Assessment of Learners with Hearing Impairment

This section of literature review focused on discussing examination best practices used by ECZ and schools in the administration of assessment to learners with hearing impairment.

According to Okumbe and Tsheko (2012) assessment consists of an assortment of techniques and procedures for evaluating, estimating, appraising, testing, and drawing conclusions about individual students. The goal is to adapt the process to fit individual needs rather than to fit students into particular assessment procedures.

University of Cambridge (2007) reviews that there is need to identify barriers in assessment that may prevent the deaf or hearing impaired students from demonstrating their knowledge and skills or competence by considering the provision of special arrangements or exemptions. Change the nature of the task requiring the student to demonstrate skills rather than write an explanation of them. After the procedures of a task allow the student to listen to a live presenter rather than listening to an audio tape, allowing the student to sign an oral presentation. There should be the provision of specialized equipment such allowing the students to use Telecommunication Devices, Captioned Video Type (CVP), and Frequency Modulation (FM) system. It is also important to vary the conditions for a task by awarding students with extra time or alternative seating arrangements. Cambridge (2007) can provide papers with a simplified carrier language for certain syllabuses. This means the complex sentences are broken down into simpler sentences. The question and answer remains the same as for any other candidates and technical vocabulary remains unchanged. Centres may request such papers on a modified paper application. Invigilators may use sign language to help the candidates read any questions written in English except where reading is one of the competent standards being tested.

The literature above shows that nature of the task covered in examinations and alluded to lack of simplified carrier language for certain syllabuses as factors that influence assessment for deaf learners. The writer of the text is bias towards the United Kingdom and all the discussions are jointly connected to the practices of that country and the local practices are not anywhere near in the picture. To ensure that the perceived facts are established the researcher intends to do an inquiry into this body of knowledge.

University of Cambridge (2011) refers to access arrangements as a process that allows candidates with substantial and long term disabilities access to the examination and the opportunity to demonstrate their attainment. Access arrangements include extra time allowance, the provision of specially adapted papers and assistance with reading or writing. Cambridge (2011) emphasizes the need to assess all candidates according to the same marking criteria so that grades and certificates have the same validity and do not mislead users of the qualification about the candidates' attainment. Centres may give candidates with hearing impairment an extra time allowance of up to 25% if literacy difficulties reduce the speed at which they are able to read and comprehend written questions. In language listening tests, access arrangements may be made for candidates with hearing impairment. They may be allowed to sit the examination in a separate room. They may be allowed headphones; they may be allowed to use computers.

ECZ (2011) states that ECZ makes the provision of access arrangements and special consideration so that candidates are able to receive recognition of their attainment, so long as valid and reliable examinations or assessments can be provided. ECZ (2011) states that special consideration may be given to a candidate who has a temporary illness, injury or indisposition at the time, is given some compensation, after an examination or assessment. Centres or schools entering candidates for access arrangement need to ensure that they base any request on behalf of a candidate on firm evidence of a barrier to assessment of attainment. ECZ further reports that the Head teacher of the school/Principal of the college presenting candidates with special educational needs for examinations shall ensure that details of the nature of special needs of their candidates are submitted to the Examinations Council of Zambia at the time of registration.

The ECZ (2011) document is essential to this study because it has outlined the different categories of available access arrangements such as extra time, use of scribes and readers and sign language interpreters for examination instructions interpretation for various disability groups. The literature above give clear definitions to the accommodation arrangements available and category entitled to deserving persons.

Mahwish et al (2012) observed that deaf students tend to have particular difficulties with constructions that depend on keeping track of meaning across multiple events and grammatical structures in text. Examinations need to use shorter sentences, simple subject verb objective sentences. It should be emphasized that few adverbs, conjunctions and auxiliary verbs are used in

a text. They also face challenges with unfamiliar basic punctuation principles for example capitals, quotation marks and periods (full stops). Once these elements are observed examination accessibility can improve thereby making examination papers user friendly.

Andrew (2000) emphasizes that there is need to consider the practice arrangements relating to the assessment such as venue auditory and sitting arrangement. The venue should be acoustic and visual conditions should provide optimal opportunities for the students. Plan the seating arrangement for students who need to sit close to the front to see and hear the presenter clearly, and provide enough extra time for the student to overcome language barriers. Mahwish et al (2012) state that deaf students tend to have particular difficulties with constructions that depend on keeping track of meaning across multiple events and grammatical structures in text. They also face challenges with unfamiliar basic punctuation principles for example capitals, quotation marks and periods

The reviewed literature piece in the article above is essential that it reviews the very typical characteristics of good assessment model for learners with hearing impairment. The passage is extremely important because it provides insight to the study on developing an appropriate test for learners with hearing impairment.

In addition, De Vito (2005) states that school management need to be aware of the effect of environmental noise on deaf/hearing impaired students. Minimize environment noise by using curtains or pictures on windows, book bags on chairs, carpets, felt or rubber tips on the legs of chairs and hanging mobiles of students work. There should be a sound field amplification installation to cut down background noise in the classroom. Glare or light behind students should be avoided and examination invigilators should not stand in front of windows when speaking to the students.

The above literature was decided to be discussed in this study because it give highlights on the examination environment for learners with hearing impairment which is a critical determiner of performance. This literature guided and helped the study to establish what a suitable examination environment is for those learners with hearing loss.

2.6 Summary of the Chapter

This Chapter has highlighted literature that has explained how quality assessment for learners with hearing impairment at grade 9 level of education can be achieved. This chapter has also discussed areas of concern that pose challenges in the process of assessment such as reading and writing. It has further reviewed several methodologies of assessment and environment adaptations done to increase accommodation in the examination venue. The chapter has brought out serious knowledge gaps which include examination strategies and inappropriate communication mode used in examinations which seen as the biggest obstacles in the assessment of learners with hearing impairment. It is believed that the chapter will be form a basis for data collection and justification to many findings that lie ahead in the course of study.

CHAPTER THREE: METHODOLOGY

3.1 Overview

The aim of the study was to identify facilitators and barriers in the assessment of learners with Hearing Impairment at Grade 9 level of education. This chapter was exclusively intended to provide descriptions of the research methodology. It included explanation of the research design, followed by the sample, data collection tools and the procedures used to analyze the data as well as ethical consideration.

3.2 Research Design

The study adopted case study research design to investigate trends in the assessment of learners with Hearing Impairment at Grade 9 in order to have rich and holistic accounts of the phenomenon (Creswell 1994). The research used the case study because it offered means of investigating complex social units in specific tendencies (Brooke 2006). In this study qualitative method was adopted as it centred on individuals and opinions. Kombo and Tromp (2009) revealed that qualitative research involves observing and asking and aims to describe events and persons in detail to achieve a deeper, holistic understanding of the phenomenon being studied.

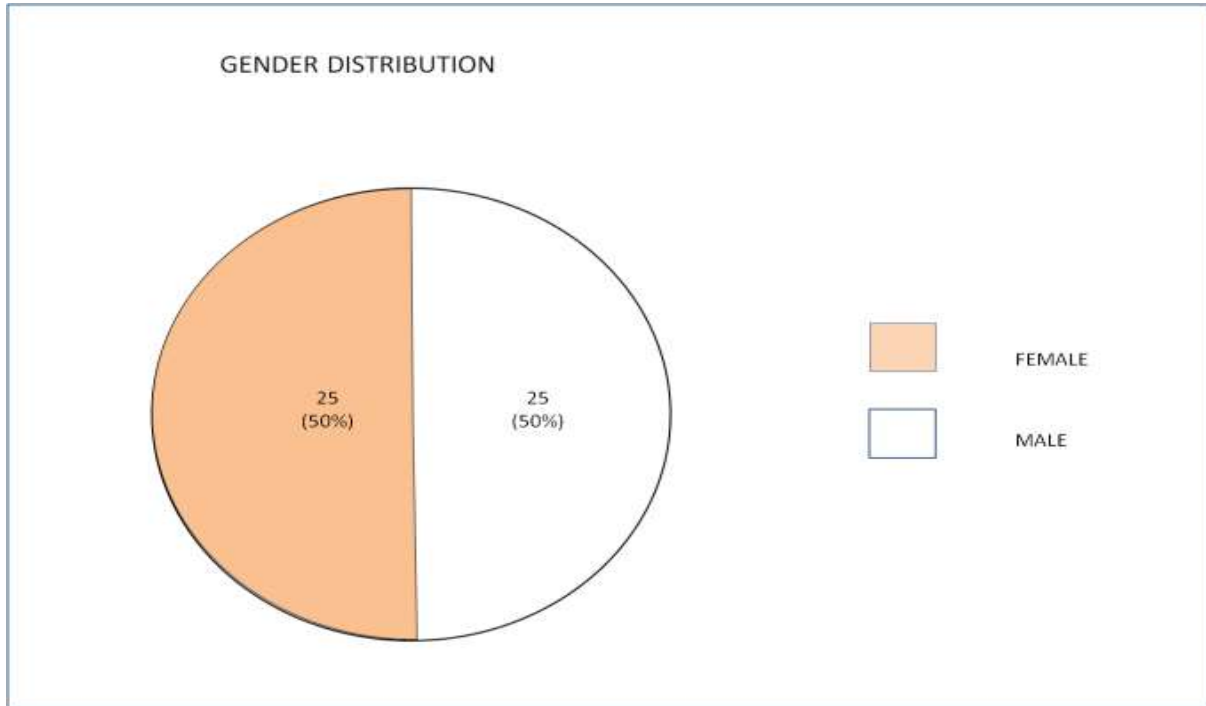
3.3 Target Population

The target population is the total group of individuals from which the sample might be drawn (Brooke 2006). The target population of this study was consisted of Item Writers, ECZ-Subject Specialist Officers, examiners/markers, HI specialist teachers, lecturers' Standard Education Officers (ESO), and Curriculum Specialists Officers.

3.4 Sample Size

Sample size refers to the number of participants selected from the universe to constitute a desired sample (Bless and Graig 2005). The total sample for the study comprised 50 participants (10 Item Writers, 5 Subject specialist officers, 10 Examiners/markers, 10 Teachers, 7 Lecturers, 5 Standards Officers, 3 Curriculum specialists), representing a sample size of 21.3%.

Figure 1: Gender characteristics of the Sample



The pie chart in **figure 1** above shows the number of participants in a gender order out of a sample population of fifty (50), twenty five (25) were female and the other twenty five (25) were male.

Table 2 Gender characteristics of the Sample by category

Category	Gender		
	Female	Male	Total
Item writers	4	6	10
Subject Specialist Officers	3	2	5
Examiners/ markers	6	4	10
Teachers	5	5	10
Lecturers	4	3	7
Standards Officers	1	4	5
Curriculum specialists	2	1	3

Table 2 above shows gender characteristics of the sample by category. The study involved ten (10) Item writer 4 females and 6 males, out of the five (5) ECZ Subject specialist officers three (3) were females and 2 were males. From the ten (10) Examiners 6 were females and 4 were males, five (5) Teachers were females and five (5) were males. The category of Lecturers

included four (4) females and 3 males, while four (4) among the Standard officers were males and 1 was female. Lastly though not the least, the sample category of Curriculum specialist officers comprised two (2) females and 1 male. The sample size was limited because of the few numbers of specialist teachers in hearing impairment and in addition the study was qualitative.

3.5 Sampling Procedure

A sampling method is a procedure for selecting sample members from a given selecting sample members from a given population (Brooke: 2006). The researcher then used simple random sampling to select teachers, examiners, item writers and lecturers to take part in the survey. Ogula (1998) states that simple random sampling is used to select participants from a large population in order to give the members of the sampling frame equal chances of being participants thereby, obtaining genuine representation of the target population and eliminating biases. Additionally, purposive or judgmental sampling was used to select Education Standards Officers in charge of special education, Curriculum Specialists and Examinations Council of Zambia Subject Specialist Officers. Purposive sampling was found appropriate because respondents were chosen based on their knowledge in the area of study and the purpose of the study (Ashley 2014).

3.6 Research Instrument

According to Marshall and Rossman (1999) a research instrument is a tool designed to obtain data on a topic of interest from a given phenomenon. In this study two research devices were used namely interviews guide and questionnaire.

3.6.1 Interviews Guide

An interview guide was used by the researcher to get information from teachers, lectures, Curriculum Specialist Officers, ECZ Subject Specialist Officers and Education Standards Officers for Special Education. Individual structured interview guides were administered to all participants. Interview guides included close and open ended questions. Questions on the interview guide were semi-structured to permit the respondents provide the much needed information in their own words. Bless and Graig (2005) state that an interview has an advantage over the questionnaire because the language of the interview can be adapted to the ability or

educational level of the person being interviewed and such misinterpretation concerning questions can be avoided.

3.6.2 Questionnaire

Structured questionnaires were administered to Lecturers, Item writers, Teachers and Examiners. The questions were clearly numbered and clearly grouped by subject. Then clear instructions were given and headings included making the questionnaire easier to follow. Open-ended and closed- ended questions were used to give room to respondents to express themselves fully without any restrictions because the researcher had no possible answers to the research questions. The questionnaire was administered face- to- face with the respondents.

3.7 Data Collection Procedure

After getting a letter of introduction from the Directorate of Post Graduate at the University of Zambia, the researcher visited Zambia Institute of Special Education (ZAMISE) a special education teacher training institution in Lusaka province. Following permission from the Heads of the participating schools, the researcher visited Munali Special unit and UTH Special school. The researcher went on and had interviews with ECZ Subject Specialist officer. The researcher went to the copper-belt later on during grade 12 marking and distributed the questionnaires to the examiners at Ndola Technical School. The researcher proceeded to Luapula where Education Standards was involved and some identified item writers. The last province to be visited was southern province where lecturers from David Livingstone College (DALICE) of Education participated, teachers and item writers. The state colleges of education were chosen on the basis that they offer teaching programmes to learners with special educational needs. The researcher went on and had interviews with ECZ Subject Specialist officer. During the interviews and before the questionnaire was distributed the researcher explained the purpose of the research to the stated why it was important that they participate.

Participation in the study was voluntary and consent was sought from the participants. Also participants were assured that the information given was kept anonymous as no person details such as names and place of residence were included on the questionnaire. The data collection processes took approximately thirty minutes. Of the thirty seven questionnaires distributed, all of

them were completed giving 100% return rate. The researchers ensured that she was always present when the participants completed the questionnaires.

3.8 Validity and Reliability

Research results must be more than a one-off finding and be inherently repeatable if other researchers must be able to perform exactly the same study given the same conditions and generate results (Marshall and Rossman 1999). To ensure validity and reliability of the study, a number of measures were taken into consideration. There was transparency in the data collection system from participants. Further, an audit trail documenting clearly the flow and processing of data was introduced. Member checking to ensure the approach was reliable was conducted with a few selected participants. To also check validity, a focus group with a sample of participants who happened to be teachers reached a consensus on whether the data collected represented what it was supposed to.

3.9 Data Analysis

Data collected was analyzed qualitatively using inductive content analysis method. This involved coding and categorizing the merging themes in relation to the study. Stemler (2006) states that inductive content analysis is a qualitative method of content analysis that researchers use to develop theory and identify themes by studying documents, recordings and other printed and verbal material. As the name implies, inductive content analysis lies on inductive reasoning, in which themes emerge from the raw data through repeated examination and comparison.

The question items in the questionnaire questions were open-ended and were read through carefully. Then a coding scheme was developed with different themes for the question categories. Once data had been coded and categorized an explanation about the subject themes was done. After analyzing the responses and identifying the major patterns and trends, a summary was written.

3.10 Ethical Considerations

Ethical concerns were key in the provision of a conducive atmosphere required for participants to answer questions with free and open minds. The researcher got consent from each and every participant through the administration of a consent form. To facilitate smooth collection of data as per requirement in research, permission to conduct this study was sought from relevant

educational authorities in all places where the study was conducted. Further the researcher explain to all respondents that the research was for academic purposes only and that they did not need to write down their names on the research tools. Participants were also assured of high confidentiality for information they were going to provide.

3.11 Summary of the Chapter

The chapter explained in detail the research design, target population, sample size of the study, sampling, and the research instruments adopted in the study stated as interviews and a questionnaire. The chapter further discussed the data collection procedures and also highlighted clearly on issues of validity and reliability. The chapter thoroughly tackled data analysis and ethical considerations.

CHAPTER FOUR: PRESENTATION OF THE FINDINGS OF THE STUDY

4.1 Overview

This chapter presents the findings of the study which sought to investigate facilitators and barriers in the academic assessment of learners with Hearing Impairment at Grade 9 education level. The study questions were as follows:

- a. What facilitators are put in place in the academic assessment of learners with Hearing Impairment at grade 9 level.
- b. What barriers are there in the academic assessment of Grade 9 learners with Hearing Impairment effective?
- c. What gaps exist in the current academic assessment process involving learners with Hearing Impairment at Grade 9 level of education?
- d. What are the best practices in the assessment to learners with Hearing Impairment at Grade level of education 9?

4.2 Facilitators in the Academic Assessment of Learners with Hearing Impairment

The first question administered to all respondents aimed at exploring facilitators in the assessment of learners with Hearing Impairment in examinations by ECZ. The study revealed that the assessment methods ECZ used over the years to academically assess learners with hearing impairment involved written examinations in the usual written standard British English language. The teachers responded that examinations were administered in written standard British English and practical in selected learning areas. One female teacher participant had this to say:

“I think for me ...eeee...examinations are administered in a three faced approach being written, sign language and practical examinations”.

Participants were asked to state the commonly methods used to assess deaf learners during formative assessment in classrooms. The participants indicated that during classroom assessment (formative assessment) teachers used both written and sign language (oral) to ensure clarity. A teacher from school A said that,

“you know I have always thought that ...aaaa...it is more comfortable to triangulate the assessment methods in classroom assessment being sign language, practical and modified English”.

Participants were further tasked to differentiate summative from formative assessment. In response Item writers, lecturers, curriculum specialists jointly echoed that the two assessment approaches were not very different in the sense that because teachers considered the ECZ format of question papers as a standard and followed the set standards during classroom tests. However, formative approach used an inclusive arrangement in test administration (recognition of individual learner needs) whereas; summative had a standard format and strict instructions followed by all test takers. In the process of differentiating summative from formative assessment a male teacher from School B said the following:

“mmm...in classroom assessment, deaf pupils are assessed ...aaa...based on day to day performance through homework, holiday assignments and class exercises. I know ..ooo.. communication is done in simple English and sign language while ECZ assessment has standard instructions and language.”

The study asked participants if written standard British English was the only mode of communication used in Grade 9 assessment for the learners with hearing impairment. Examiners and item writers reported that communication was only done in written British Standard English. The response was also supported by Subject specialists, standard officers and teachers. While still lecturers said captioned video and sign language were used as mediums of communication in Grade 9 assessment for learners with deafness. A male Item Writer from School D for the Deaf responded with emphasis that:

“Oh yes! written Standard British English is not profitable to deaf learners ...aaa... you need know ...because it does not take into account challenges deaf learners have ..mmm...of spoken and written language components and other areas that determine competence levels.”

Another female teacher from School A for the Deaf emphatically said that,

“In fact the language is not very familiar to the deaf learners ...whooo...because in classrooms, sign language is used as a medium of communication as .eeee...a result learners with hearing impairment find it difficult to understand the written standard British English unless it is modified.”

Yet another male teacher from school C supported the use of written standard British English in examinations that,

“you know what? It is not debatable ..aaa..the idea of using written standard British English for communication in examinations is good because it createds uniformity in communication globally in the sense that the language is used by most print media.”

A male ECZ Subject Specialist Officer in social science had this to say:

“yaa! It seems there is problem with deaf learners you know something noticed from the that unclear and distorted manner in which they present their responses in examinations ...mmm....the impression one gets from this kind of writing is that ...aaaa....there is poor communication in examination question papers.”

Participants were asked to make an evaluation on the use of modified (adapted) English in examination question papers as a mode of communication for learners with hearing impairment. Participants approved the use of adapted English as fair because it would carry vocabulary which is within the context of the learners (carrier language). All the teacher respondents acknowledged the idea of using adapted English in examination papers as a mode of communication. A male teacher from School D said the following:

“mmmm... clearly the use of adapted English would help learners with hearing impairment understand the concepts ...aaa...because the language in examination papers would then be within the set of their own language context you can see improved performance in public examinations. Further I think that ...aaa...adapted English would help learners to understand questions fully in order to give correct responses.”

A male item writer from School A for the Deaf had this to say,

“The use of adapted English as a mode of communication in the grade 9 assessment of learners with hearing impairment ..mmmm.... I think...aaa..would create a limitation in the operational language because deaf learners need to acquire Standard English skills to be able to communication effectively in society.”

The study requested participants to express their opinion on the use of sign language as a mode of communication in examinations. All participants said sign language would be the most appropriate mode of communication because learners with HI would be able to understand questions clearly. . One Examiner from School C responded with emphasis that,

“well, well...the use of sign language as a mode of communication in examinations to assess learners with hearing impairment would obviously ensure ,,aaa,, some continuity of the language used in classroom experiences and would foster learner performance and progression in high school education.”

One male teacher from School E responded by saying that:

“from experience the use of sign language would be good because learners understand easily when examinations are administered in sign language.”

A female lecturer from college of education A had this to say:

“mmm.. I mean there are two things here, that is if sign language examiners are conversant with sign language and also exposed to the sign language learners use it would be good as it avails them a chance to use their first language.”

A male lecturer from College of Education B had this to say:

“yes, in my opinion it can be fair to use sign language because it is the language deaf learners use in their day today living hence they are conversant with it.”

The study further requested participants to express their opinion regarding the use of portfolio based assessment (Continuous Assessment) as a final means of grading learners with hearing impairment for their learning achievements at Grade 9. Participants reported that portfolio based assessment would be good because it would reflect the actual performance on learning tasks done by a learner over a long period. Further, examiners stated that this approach was appropriate because of its flexibility to accommodate learner needs. While still female ECZ Subject Specialist Officers observed that,

“I am doubtful, Portfolio based method of assessment can create inconsistencies and gaps to the system because aaa...there were no guidelines to standardize and direct examinations conducted through portfolio based assessment. I feel if the situation is left unchecked it would eventually give rise to poor quality assessment.”

One examiner from School F stated that,

“oh yaa! Portfolio based assessment would work well because it takes into consideration all the divergent needs of learners and make accommodative environments for all.”

A female lecturer from College of Education C had this to say,

“Portfolio based method of assessment mmm.. so to say, can be the most fair way of assessing learners with hearing impairment because ..eee... from experience shows that such learners have short memory hence immediate assessment on newly learned concepts will be helpful to them because assessment will be done before they start forgetting.”

The study asked participants to express their opinion regarding the use of captioned video as a way of assessing deaf learners. Responding to the question participants said that learners with Hearing Impairment perceived things using visual hence the use of captioned video would increase their level of understanding. A female Curriculum Specialist Officer complained that:

“ you know madam, even though the use of captioned video can be enriching and enhancing learner visual comprehension in examinations ...eee..there is a danger that learners might get disoriented because schools do not have. ..Mmm...there is unfamiliarity to the facility and that administering an examination using captioned video may bring about unaffordable expenses to the Ministry of Education and ECZ.”

4.3 Barriers in the Academic Assessment of Grade 9 Learners with Hearing Impairment

Participants were asked to evaluating the suitability of the assessment methods used by ECZ to assess learners with Hearing Impairment, Item writers explained that the current method of assessment had a language barrier that affected learner performance. A female examiner from School E responded emphatically:

“Experience has taught me that ...aaa... written examinations in standard British English downgrades performance of learners with hearing impairment ..mmm... deaf learners have writing, reading and comprehension challenges.”

One female teacher from School D added her voice that:

“..aaa.. I mean..written examinations in standard British English are an effective way of assessing learners with hearing impairment because one examinations are ..aaa...based on an approved syllabus and two examinations are standardized for all learners.”

Participants were asked to rate the reading skills of learners with Hearing Impairment six examiners said it was poor, two examiners said good. Generally the responses show that majority of learner with hearing impairment had poor and very poor reading skills. A female examiner from School A had this to say:

“It was observed during marking that learners with Hearing Impairment failed to follow instructions in answering examination questions and presented work haphazardly because they were not able to read and understand written English.”

One male teacher from School E clearly pointed out that,

“In terms of reading skills, many deaf students lag several years behind compared to hearing students and they also have challenges to grasp what they read. “

Another female examiner from School E reported that:

“learners with hearing impairment had difficulties understanding words or sentences in examination question papers because their responses missed out on addressing the question demands.”

Participants were asked to state if sign language interpreters were allowed to give explanation during examinations to enrich learner comprehension of questions and if not to give reasons why. Teachers and lecturers reported that sign language interpreters and invigilators were not allowed to give supportive explanation during examinations for reasons that ECZ feared that learners could be given cues to the answers.

A female examiner from School B had this to say,

“The use of sign language in examinations is not allowed by ECZ because they feel that examination quality can be compromised adding that sign language interpreters can be tempted to advantage the learners in the process of giving supportive information.”

Participants were asked explain if Hearing Impaired specialist teachers were trained in item writing. Out of the ten teachers who took part in the study four were trained in item writing while six were not. This represents 20% of teachers stating that they were trained in item writing, while six teachers representing 60% of teachers said they were not trained in item writing. A male teacher from School A complained that:

“lack of Item Writing training made me and many other teachers who are not trained in item writing to develop cheap quality classroom test items that do not meet the set benchmarks of ECZ recognized tests.”

A male item writer from School E also complained that:

“Despite being trained in item writing ECZ did not trained us to modify the language or rather to write test items in adapted English to accommodate hearing impaired learners.”

Another female participant from School A had this to say:

“lack of attending Item Writing training has made the system to develop unfavourable test items for learners with hearing of impairment because those who do have no specialised skills to accommodate the deaf learners.”

Participants were asked to state if the trained item writers were also trained to write test items in adapted English. Item writers, examiners, lecturers and teachers all said they were not trained and added that they did not even understand the use and meaning of adapted English.

One female teacher from School D said with emphasis that:

“The school did not have any trained hearing impaired specialist teachers in adapted English or item writing.”

Participants were asked to state whether specialist teachers for the Hearing Impaired were trained to mark examinations. One college lecturer was trained in examination marking out of seven. This represents 14% of lecturers stating that they were trained in examination marking while 86% of lecturers were not trained in examination marking. Additionally only one teacher was a trained examiner out of a sample of ten. This represents 10% of teachers stating that they were trained to mark examinations while 90% of teachers said they were not trained in examination marking. A male teacher from school A argued that:

“Training in examination marking seemed mmm... some how aa impossible because there was no deliberate policy by ECZ to encourage training of Special Education Specialist Teachers in marking.”

Participants were asked to state whether examinations for learners with Hearing Impairment were marked by Hearing Impaired specialist teachers or not. In response participants said examinations for learners with Hearing Impairment were not marked by Hearing Impaired specialist teachers because only handful were trained to mark examinations. In fact a female teacher from School A responded with emphasis that:

“ It is clear that examinations for deaf learners have been marked by people who are not qualified in hearing impairment because there are absolutely no trained examiners among the specialist teachers”

Participants were asked to state if examinations for learners with Hearing Impairment were invigilated by sign language fluent invigilators. Standard Officers and teachers said that most cases there were sign language fluent invigilators assigned to invigilate examinations in classes and schools for deaf pupils. A male examiner from School C also had this to say:

“The issue of invigilation could only work out to the satisfaction of the deaf minority only if Ministry of Education can create policy because in the absence of policy we have seen Hearing Impaired specialist teachers being directed to other school to go and invigilate leaving their schools unattended to”

Commenting on the use of fluent sign language invigilators to invigilate examinations for the hearing impaired, a female experienced teacher from School E had this to say:

”In inclusive schools it was difficult to provide hearing impaired learners with fluent sign language invigilators to invigilate their examinations because sometimes there was no qualified personnel and usually there was compromise.”

4.4existing Gaps Exist in the Academic Assessment

Respondents were asked to identify other gaps in the process of assessing learners with hearing impairment at grade 9. Responding to the gaps in assessment, Subject Specialist officers suggested that there was need for Ministry of General Education to deliberately create an adapted curriculum, syllabus with its own approach. A female item writer and a male teacher had this to say:

“Questions are mostly not friendly to learners with Hearing Impairment as they are written in complicated language. Examinations rooms are not caustically treated and Invigilators were usually unable to use sign language during examination invigilation. It was also observed that there was poor lighting system in classrooms where deaf learners wrote examinations from which made it difficult for them to see the signs clearly form the invigilators”

ECZ officers added that some gaps were created because the special education field did not have teachers with subject content qualifications who can train as Item Writers and Examiners. A specialist officer from organization P also made the following observations:

“Some of the major gaps observed in the assessment of deaf learners at grade 9 are that the curriculum, syllabus and teaching materials are not tailor made or modified for deaf learners. No supportive explanations are given during examinations by sign language experts and there is limited extra time. During marking of examinations there is a challenge of finding Hearing Impaired specialist teachers to mark all the subjects e.g Mathematics, Science and Biology due to lack of specialization in teaching subjects among specialist teachers.”

A female lecturers from college of education A made the following contribution on gaps:

“There is urgent need to standardize sign language national wide for purpose of creating uniformity in the language such that when examinations are written in a modified language it works out for all. There is need to improve coordination between ECZ and Curriculum Specialist to see a modified curriculum. Teachers are not involved in examination development and syllabus.”

A male Education Standards Officer for special education from town K had this to say:

“Written practices give deaf persons a tough time as they process written information in picture form (sign language) before they convert it into written and give responses. He also stated that reading with comprehension is a complicated process which many never be attained by the majority hence the need to introduce flexible ways of assessment such a continuous assessment and the use of sign language interpreters.”

4.5 Best Practices in Academic Assessment

The first question in this section asked participants to give suggestions on the best examination practices that could help to improve test administration for learners with hearing impairment. In response the ECZ Subject Specialist officers observed that there was need for stakeholders such as Standards Curriculum Specialists Officer, Lecturers, and ECZ to collaborate to promote equity in examination administration for learners with hearing impairment. A male lecturer from college A made this suggestion:

“Examinations for the deaf need to be administered using captioned videos or in modified language to increase access.”

A female teacher from school C stated that:

“Written adapted/modified examinations need to be supported by the use interpreters of sign language to bring in supportive explanations during examinations for better results.”

One male education Standard Officers also added that:

“The best practices of assessment to be employed included Modified curriculum, Modified question papers, introduction of Hire of sign language experts and training of item writers and examiners. This would then enable ECZ to prepare appropriate examinations for deaf learners”

One female Curriculum Specialist Officer suggested best practices that could be included in assessment as follows:

“Continuous Assessment to be introduced because it will give a correct reflection of learners’ performance than summative currently practiced and increased extra time be given to candidates.”

A female ECZ Subject officers proposed that:

“Examinations needed to be administered in objective type of question format and supportive portfolio based based assessment because there was an experience deaf learners performing better in objective tests than the case is with subjective tests.”

4.6 Summary of the Chapter

The purpose of the study was to explore facilitators and barriers in the academic assessment of learners with hearing impairment at grade 9 level of education. The study questions were to explore facilitators in assessment, assess barriers in assessment, determine the existing gaps as well as suggest good assessment practices in the assessment of learners with hearing impairment at Grade 9. The key findings revealed that examination administration strategies were rigid and the communication mode used in the assessment of deaf learners by ECZ was poor. The findings showed that Sign language and Sign language interpreters were critical in the assessment of learners with hearing impairment. Further, the study revealed that examination invigilation, marking and setting of question papers was done by people who had no training in hearing impairment.

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.1 Overview

This chapter discusses the findings of the study. The discussion of the study focuses on establishing the facilitators and barriers in the academic assessment of learners with Hearing Impairment at grade 9 level of education. The discussion has concentrated on findings, taking into account the literature reviewed. The findings of the study have been also discussed in line with the research objectives. The following were the objectives of the study:

- a. To explore facilitators of academic assessment of learners with Hearing Impairment at Grade 9.
- b. To assess barriers to academic assessment of learners with Hearing Impairment at Grade 9.
- c. To determine existing gaps in the assessment of learners with Hearing Impairment at Grade 9 level.
- d. To suggest best practices in the assessment of learners with Hearing Impairment.

5.2 Facilitators of Academic Assessment

It is evident from the results that the strategies utilized by ECZ to assess learners with Hearing Impairment at Grade 9 level of education in academic assessment were limited to written examinations set and administered in Standard British English with a bit of practical in few subject areas such as Agricultural science, Integrated science and Home economics. Participants indicated that during classroom assessment or rather formative assessment teachers used different methods such as objective tests, oral questions and continuous assessment to assess deaf learners. The findings were consistent with those of Moonga (2013) which discovered that all examination past papers for candidates with hearing impairment in all learning institutions such as schools, colleges and universities including Examinations Council of Zambia assess learners with Hearing Impairment in written Standard British English which demands that test takers understand the meaning of words, sentences and entire texts including understanding relationships. The written examinations also carry questions of analyzing and drawing conclusions from discourse; reasoning from compositions and perspective; understanding multiple levels of meaning, such as literal and figurative questions which are quite difficult for

learners with Hearing Impairment to comprehend. This therefore limits access to the content of the examinations itself.

Generally the study revealed that participants had a negative perception of written Standard British English examinations administered to learners with Hearing Impairment. The learners with Hearing Impaired resented ECZ written examinations because they were taught in Sign Language and examined in written Standard Written British English. Thus most learners were not able to produce texts which were free of grammatical, vocabulary and morphological errors. During examinations when written Standard British English was used as a medium of communication learners with Hearing Impairment found it difficult to read and understand. These findings were supported by Forman (2001) who pointed out that assessment for evaluation of progress among children who are deaf or hard of hearing was rather a complex process. Deafness often led to linguistic problems. Difficulties manifest themselves most obviously in written work, where mistakes were found with sentence structure, verb tenses word omissions related problems in the examination scripts.

However, a few participants supported written examinations in Standard British English on account of deaf and hard hearing children learning and developing perfect communication skills to be able to communicate and integrate in the whole community and society at large. Therefore teaching them in Adapted English would create a limitation in communication which would mean confining them to their own little world. These findings do not agree with what Botswana Examinations Council (2009) stipulates that in examining learners with hearing impairment in certain syllabuses questions papers can be provided with a simplified carrier language for example complex sentences can be divided into shorter and simpler sentences. The researcher also feels that focus should be on the bigger picture which in this case was to ensure that learners progress in education to achieve education objectives rather than to facilitate communication to serve their future integration in society.

Classroom teachers used sign language, modified English questions, practical and continuous assessment in summative assessment. The use of several methods enhanced comprehension of assessment items. The use of Sign Language and Interpreters and modification of English enhanced understanding of test questions by learners with Hearing Impairment. The perception of teachers about the use of written examinations in Standard British English was negative.

Teachers felt that the language of British English was unfamiliar to learners with Hearing Impairment because learners found it difficult to read and comprehend the questions in examination question papers. Their perception was supported by Jelinek and Jackson (2001) who argued that all deaf and hard of hearing students were unique and may require different accommodations. They may communicate through a Sign Language Interpreter in examinations. Sign Language Interpreters help bridge the communication gap in examinations by translating examination printed questions into sign language.

The study also found that learners with Hearing Impairment had challenges of writing responses in examinations in that their presentations were not clear it was often distorted, and examiners had a hard time to comprehend what they write. These finding tied up with those of Sears (2001) which found that in some situations, students with deafness may receive poor marks on a test due to difficulty in following the test directions rather than lack of knowledge of the test content. In support of this Venn (2007) observed that test format for students with deafness or Hearing Impairments are not appropriate and contributed to deaf students performing poorly on the test tasks due to problems with the test format. The tests were long, poorly designed and cluttered all distracting tests can negatively affect performance of deaf students.

On differentiating summative from formative assessment, the study revealed that the two assessment formats were not very different in the sense that teachers considered the ECZ format of questioning in examination papers as a standard set for benchmarking such that during formative assessment the system provided guidance. These findings were not inconformity with what Venn (2007) said who pointed out that teachers should consider the needs of their students with deafness or having impairments when selecting the types of items to include on tests. It was found that formative assessment was flexible to consider the individual needs and the learning style of every test taker more than was the summative examinations. It was seen as necessary for ECZ to provide much more flexible strategies in summative assessment of learners with deafness.

The findings showed that many of the participants were in agreement with the use of Portfolio Based Assessment (Continuous Assessment) to academically assess progress of learners with deafness. Participants emphasized that Portfolio Assessment could help in making assessment fair in the sense that it would reflect the actual picture of performance based on daily, weekly

and monthly learned activities. They added that it would be more logical to use portfolio assessment because learners with Hearing Impairment usually had short memory. The findings were in consistent with Venn (2007) who proposed that portfolio-Based Grading was another technique for evaluating students with deafness. Teachers assign portfolio grades based on evaluation of the authentic samples of student work that appear in a portfolio. Rather than emphasizing grades such as test scores, the portfolio approach relied more on holistic grades. This encourages reflective teaching, learning and assessment. As a result, teachers had many opportunities of evaluating student performance, receiving feedback during portfolio conference, and learners think about their learning experiences and progress. Portfolio had the potential for expanding measurement into new and challenging areas in the learning of the deaf. It was observed that ECZ would do well to consider use of portfolio based assessment in arriving at the learners' academic position at grade 9 level of education.

Concerning the use of modified English (adapted English) in test administration for learners with Hearing Impairment, many of the participants indicated that adapted English would have vocabulary which was within the context (the known language) of the learners with hearing impairment. The findings were in conformity with what Sear (2007) who said that practice showed that deaf people generally had problems in understanding for various reasons. Therefore, it was appropriate that proper ways of communication were adopted for learners' success in examinations and education at large. Jelinek and Jackson (2001) also argued that all deaf and hard of hearing students were unique and may require different accommodations in their assessment.

It was evident that the use of sign language in assessing learners with Hearing Impairment was widely accepted according to responses collected from participants. The idea was supported by sentiments that, “ the use of sign language was good because it would make deaf learners understand easily when examinations are administered in sign language adding that deaf learners are always comfortable when communication is down in a language they are conversant with”. These findings were supported by Moore (1996) who revealed that professionals evaluating the learners with Hearing Impairment or hard of hearing must be sufficiently knowledgeable in the field of hearing loss. Interpersonal communication skills were a necessary part to facilitate

learning in the environment for example an examiner must be able to communicate using familiar language.

Responses from many of the participants show that captioned video assessment was popularly accepted as an alternative assessment tool in the progress assessment of deaf children. The study revealed that captioned video would be enriching and enhancing learner visual comprehension in examinations bearing to the fact that deaf children are more often than not visual learners. These findings were in conformity with what Andrew (2000) wrote who postulates that there is a variety of live captioning video services available to support students with hearing and hard of Hearing Impairment in writing examinations founded on the fact that people who are deaf or hard of hearing often use vision to receive information.

On the centrally, participants on the other hand, were careful to mention that there was a danger that learners might get disoriented because of unfamiliarity to the captioned video facility and that administering an examination using captioned video may bring about unaffordable expenses to the Ministry of Education and ECZ. These findings were consistent with those of Simate (2016) which reported that teachers needed to train hearing impaired children to follow instructions whenever a video caption was presented to be able to make sense out of pictures and the sign language symbols made in video captions that may be provided during assessment.

5.3 Barriers to Academic Assessment

The purpose of the second objective was to find out the assessment barriers to the academic assessment of deaf learners. From the findings, the majority of participants disclosed that the current method of administering examinations to deaf children using written standard British English was not correct and it negatively affect the performance of learners. The study revealed that deaf learners had challenges of reading, comprehension and writing of which results are seen in the manner they haphazardly present their work, thereby indicating that the applied method was fault. Forman (2001) attributed the loss to the fact that sign language was entirely visual, deaf students did not have a written or spoken language on which to pin their second language learning hence making it rather difficult to adequately establish their academic progression through assessment.

On evaluation reading skills of deaf learners, findings revealed that majority of the learners with hearing impairment did not know how to read and in fact some never even acquire the reading skill. Previous research by Andrew (2000) indicated that reading remains a very laborious task for deaf students as their vocabulary was usually considerably restricted in comparison with their hearing peers. A deaf student will not have heard many of the words that fill the classrooms and lecture rooms around them. Deaf students have limited number of familiar words because they are not exposed to spoken language and language spoken through television, radio, music and overhearing conversation which indeed impeded negatively on the academic progression of such learners.

The study sought to find out if sign language interpreters were allowed to give explanation during examinations to enrich learner comprehension of questions. All the respondents reported that sign language interpreters and invigilators were not allowed to give supportive explanations during examinations for reasons that ECZ feared that learners could be given cues to the answers a situation that could compromise the quality of examinations. These findings were in contrast with the findings of Format (2001) who stated that deaf and hard of hearing learners must be visually attended to because the deaf rely on speech/ lip reading, amplification using hearing, finger spelling and sign language assistance in explaining the meaning of words and sentences. The researcher felt that there was therefore a mismatch between the current approach to assessing learners with Hearing Impairment and the findings of Format (2001).

With regards to training of specialist teachers of learners with Hearing Impairment in item writing and adapted English, it was discovered that only 20% of the teachers who took part in the study were trained item writers while none was trained in adapted English writing. Participants revealed that lack of attending Item Writing training and adapted English writing training made the system to develop unfavourable test items for learners with Hearing of Impairment because those who prepared did not have skills to accommodate the deaf learners. In support of the findings Jelinek and Jackson (2001) argued that there were a range of inclusive teaching strategies that could assist all students to learn but there were some specific strategies that were useful in teaching a group which includes students with Hearing Impairment considering alternative forms of assessment and equal opportunities in assessing the contents of the assessment tools such as examination question papers.

With regards to training of specialist teachers of learners with Hearing Impairment in examination marking. The study revealed that 14 percent of college lecturers and 10 percent of teachers were trained in examination marking by ECZ. Further participants mentioned that training of teachers and lecturers in examination marking seemed impossible because there was no deliberate policy by ECZ to encourage training of Special Education Specialist Teachers. Consequently, because of not providing training for Hearing Impaired specialist teachers in marking of examinations for deaf and hard of hearing learner; their examinations were marked by ordinary teachers who had no communication skills for the deaf. To a large extent it was agreed that lack of qualified examiners was the source of poor results for deaf candidates due to poor marking or poor assessment of such learners. These findings were in consistence with what Venn (2007) observed who recommended that professionals evaluating the learners with Hearing Impairment must be sufficiently knowledgeable in the field of hearing loss. Interpersonal communication skills of the education providers remain necessary in the facilitation of learning as well as assessment in the educational environment.

Regarding invigilation of examinations by sign language experts in classrooms of deaf learners, the study discovered that special education schools were doing fine whereas, inclusive schools had challenges. Inclusive schools usually failed to provide sign language experts who could invigilate deaf learners during examinations because sometimes they did not have any qualified teachers among their members of staff. In other schools the scenario was different, the situation was aggravated by the school managers who had a perceived negative attitude towards special education. They opted to send away the only Hearing Impaired specialist teachers they had to invigilate in other neighbouring schools leaving the deaf candidates unattended to because the service of interpretation was not appreciated. It was mentioned that to correct the situation Ministry of General Education together with ECZ needed to consider formulating policy which could guide invigilation in institutions where deaf learners were found because in the absence of policy deaf learners will continue being disadvantaged. Mpofu and Chimhenga (2013) support the findings that students with Hearing Impairment were experiencing challenges in most learning institutions of Zimbabwe. Most schools that enrolled them in the majority of cases did not cater for their special needs, the Hearing Impaired were not given equal opportunities to learn in a normal school set up.

5.4 Gaps in Assessment

Participants were asked to identify gaps in the process of assessing learners with Hearing Impairment at grade 9. The study revealed suggested that there was need for the Ministry of General Education to deliberately create an adapted curriculum, syllabus with its own approach. An adapted curriculum and syllabus would help to enrich learning and performance of learners with Hearing Impairment. These findings are in conformity with Ministry of Education (2012:21) which postulates that there shall be an adapted curriculum for learner with educational needs which will focus on addressing their various educational needs.

On another account participants observed that examination Question papers were written in a non-user-friendly language for the deaf a practice that caused lower learner performance achievement in examinations. In view of these findings Sohn and Way (2006) suggested that due to the hearing problems deaf students required highly specialized facilities, curriculum and equipment to help them learn efficiently, such can be assessed involving using deaf language that is understood by all to enable them access the content of the questions in examination papers. In addition examination rooms were not caustically treated and invigilators were usually unable to use sign language during examination invigilation for lack of sign language skills. It was also observed that there was poor lighting system in classrooms where deaf learners wrote examinations from a situation which made it difficult for the deaf to see the signs clearly form the invigilators which consequently impacted negatively on the performance of the deaf in examinations. These findings were in consistence with The National Deaf Children Society of America (2010) which discovered that as part of preparing to welcome deaf pupils into schools particular attention to improving the acoustics and layout of the classrooms as well as the communal school areas is done.

With regards to having qualified specialist examiners and test developers the study discovered that the problem was partly caused by the none availability of qualified specialist teachers for learners with Hearing Impairment in the various teaching fields such as science mathematics and industrial arts and other related subjects. The findings were in consistence with what Venn (2007) wrote who stated that at the time examination results are released, there were so many measurements which could indicate that examinations were effective – graduation rates, grade test score quantifiable and ostensible, However, an effective test must be measured by how much

students achieve over a long period of time. Further, the researcher observed that the problem of lack of qualified examiners and item writers in the field of hearing impairment was caused by the way the Special Education Teacher Programme was previously designed. The programme encouraged enrolment of teachers who did not have any subject content specialization in any teaching field up to degree level. As a result this made it difficult for ECZ to find the right candidates for examiner and item writing training in specific subject areas.

Another noticeable gap revealed in the findings was that the sign language used in schools and around the country was different and unstandardized. Participants emphasised the urgency to standardize sign language national wide for the purpose of creating uniformity of the language such that when examinations were written in adapted/modified English it could be in one common acceptable language. The findings conformed to what IDEA (2000) observed that one fact remains true: for Deaf people, linguistic access was the key to participation and access towards an inclusive multi-linguistic society for all. For the deaf and hearing-impaired the mother tongue or the first language was the sign language which needed to play a more significant role in their assessment as opposed to current practice where use of standard British English language was a key factor. ECZ (2011) revealed that the Hearing Impaired candidates were provided with sign language experts who invigilated examinations and were allowed to read examination-instructions in sign language for the deaf. These experts were not supposed to interpret or give supportive explain in sign language to the candidates of the question demands as ECZ believed that doing so would amount to examination malpractice.

5.5 Best Practices in Assessment

The study sought to find out the best examination practices that could be employed in examination administration for learners with hearing impairment at grade 9 level of education.

The study findings portrayed that modified/adapted written examinations would be one of the best practices if supported by the use of sign language and interpreters of sign language who can bring in supportive explanations during examinations to improve access to give better results. The findings conform to the ideas of Lozanova (2009) who asserts that after papers of the regular learners are written a team of specialists in Hearing Impairment was invited to adapt the test papers and Mahwish et al (2012) urged that the reliability and validity of the test scores can be compromised with some special needs learners. The difficulties can be in the form of

communication style (for example, the need for sign language interpreters for deaf learners, the length of the assessment, and also intentional problems. Adaptation comprised modifying the language in view of the learner language needs

The study further revealed that examinations administered in objective type of question format awarded high performance rate to learners with Hearing Impairment. Hence the need for examinations to be administered in objective test format following the experience deaf learners performed better in objective tests than subjective tests. These findings are complemented by Venn (2007) who recommended that test format for students with deafness or hearing impairments and to an extent content is necessary for successful performance on a test. . In addition continuous assessment needed to be introduced because it would give a correct reflection of learners' performance holistically. These finding were supported by Venn (2007) who proposed that portfolio-Based Grading was another technique for evaluating students with deafness.

Participants had a lot of misgivings about the practice of standard British English written examinations. The study revealed that assessment for the deaf needed to be developed and administered in captioned videos to increase caption of the test takers through visual. These findings were supported by Mitchell (2002) who pointed out that deaf people often used vision as a primary means of receiving information. Deaf students had limited number of familiar words because they were not exposed to spoken language spoken through television, radio, music and overhearing conversation. The study indicated that these limitations has a negative impact on their ability to comprehend the contents of questions as well as write responses during examinations.

The study revealed that the curriculum needed to be modified so that its content suit the learning needs of deaf learners arguing that some topics were wrongly placed for learners with such a disability. These findings were supported by Okumbe and Tsheke (2012) who suggested that what is needed is to transnaslate the curriculum into manageable entities that can be used in the classroom for instruction and for assessment because curriculum and assessment were key areas in the provision of effective teaching and learning. Okumbe and Tsheke (2012) said that the modification of a curriculum for learners with special educational needs just like for other learners, should have appropriate instruction and planned assessment.

Participants further revealed that public examinations needed to have flexible time duration to allow learners with hearing impairment finish writing their examinations properly. These findings were in consistence with Okumbe and Tsheke (2012) who stated that in order to overcome these and other problems associated with assessing special education learners, accommodations and modifications in testing procedures are important. such as extending time limit for those with reading comprehension challenges.

5.7 Summary of the Chapter

The study revealed that there were limited facilitators and several barriers and gaps in the process of assessing learners with Hearing Impairments at Grade 9 level of education. Lack of triangulation in strategies used by ECZ to assess learners with Hearing Impairment was attributed to their poor performance in Grade 9 examinations. The absence of pictorial/visual strategy of assessment of learners with Hearing Impairment was also seen to be lacking from ECZ assessment system which further deprived HI learners. The prohibition of interpreters and invigilators to provide supportive explanations during assessments conducted by the ECZ to learners with Hearing Impairment alleging that candidates could receive cues to the answers was a big drawback on the part of learners.

The facilitators discovered included administration of high quality internationally accepted standard examination papers, provision of extra time and the establishment of a special education section at ECZ. The gaps included inappropriate strategies of test administration, assessment tools, communication mode, time limitations and lack of qualified specialist teachers to set items and mark examinations as well as invigilate examinations in some cases.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Overview

This study investigated facilitators and barriers in the academic assessment of learners with Hearing Impairment at Grade 9 level of education. The barriers and gaps discovered in the study encompassed inappropriate methods of test administration and assessment tools. The study therefore, recommended a significant improvement by ECZ in the assessment of learners with Hearing Impairment. Therefore, this final chapter of the study presents the conclusion, recommendations and direction for future research.

6.2 CONCLUSION

The study revealed that there are few facilitators and several barriers and significant gaps in the process of assessing learners with Hearing Impairment at Grade 9 level of education. In terms of facilitators the study discussed that ECZ has created a department to take care of assessment of learners with special educational needs with one officer working in their in the interest of improving assessment for them. The study showed that learners with Hearing Impairment are given 30 minutes extra time during examinations to afford them enough time to finish writing their examination papers successfully. The study further discovered that ECZ allowed examination invigilators to communicate examination instructions in sign language to deaf learners during an examination session to provide clear guidance. The findings also revealed that the examination question papers administered to deaf learners in assessment that are used as assessment tools were of acceptable levels of toughness, length of content and weightage that were of international standards.

However, there were several barriers and gaps which including; the inappropriate techniques of test administration, inappropriate assessment tools, inappropriate communication mode, time limitation, lack of qualified specialist teachers to set test items and mark examinations as well as handle invigilation related challenges of examinations. Arising from these findings the study recommended as strategies to improve the assessment of learners with Hearing Impairment, use of adapted or modified English alongside Sign Language Interpreters; increased use of objective tests and continuous assessment (CA) be used to academically assess learners with hearing impairment.

6.3 Recommendations

1. There is need to adapt the curriculum for learners with Hearing Impairment at junior secondary school by Ministry of General Education Curriculum Development Centre.
2. There is need to choose user-friendly topics to include in the syllabus by Curriculum Development Centre.
3. There is need for Ministry of General Education to standardize sign language.
4. There is need to emphasize the use sign language fluent invigilators during examinations by ECZ.
5. There is need to use objective tests in assessment to academically assess deaf learners by ECZ.
6. There is need to introduce continuous assessment for improved results among LHI by ECZ and MoGE.
7. There is need to emphasize the use sign language interpreters in examinations for LHI by ECZ.
8. There is need for ECZ to train specialist teachers for learners with hearing impairment in examination setting and marking.
9. There is need to use modified or adapted English to improve communication in examination question papers by ECZ
10. There is need to emphasize to examination centers to have user-friendly examination rooms that are acoustically treated by ECZ and MoGE.

6.4 Direction for Future Research

Future research can focus on exploring effective accommodation practices in the academic assessment of learners with hearing impairment. In addition it can also be interesting to investigate the use of sign language as a communication mode during examinations of deaf learners. Other possible research areas include an investigation on the use of adapted English, objective tests and continuous assessment in the academic assessment of learners with hearing impairment by Curriculum Development Centre.

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APPENDICES

Appendix A: Questionnaire for Teachers, Item Writers and Examiners (Makers)

Dear respondent,

I am a master's student at the University of Zambia (UNZA) carrying out a study on Facilitators and Barriers in Academic Assessment of Learners with Hearing impairment at Grade 9 Level of Education: A Case of Examinations Council of Zambia. Therefore, I am collecting information concerning the Assessment of learners with hearing impairment. This study is part of the fulfillment for the award of a Master's in Education, the information that will be collected is purely for research purpose only and will be kept strictly confidential. Please spare a few minutes to answer this questionnaire. Your cooperation is highly appreciated.

INSTRUCTIONS TO RESPONDENTS

Do not write your name on the questionnaire.

Tick the appropriate answer in the box provided.

Where you are asked to explain give a clear explanation that possibly qualifies your response.

Thank you very much for your help.

SECTION ONE

SOCIO - ECONOMIC STATUS

Tick in the appropriate box:

1. Gender: 1 Male 2. Female

2. What is your role in examination development and processing?

Examiner Item Writer

(b) What is your designation?

3. Are you trained in teaching or assessment of learners with hearing?

YES NO

4. For how long have you been involved in academic assessment of learners with hearing impairment?

- 0 to 5 years
- 6 to 10 years
- 11 to 15 years
- 15 years and above

SECTION TWO

METHODS OF ASSESSMENT

11. What method (s) of assessment administration are used in the assessment of learners with HI by ECZ?

Tick all applicable answers

- (a) Written examinations
 - (b) Oral/Sign Language
 - (c) Practical examinations
 - (d) Field Work
- (b) What methods are used in classrooms (formative assessment) by teachers to assess learner with hearing impairment?
- (a) Written examinations
 - (b) Oral/Sign Language
 - (c) Practical examinations
 - (d) Observation method
- (c) Are there differences between summative (ECZ) and classroom assessment (formative)?
- YES NO

12. Give reasons to support your answer?

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.....

.....

13. What medium of communication is used in the assessment of learners with HI by ECZ in

Public examinations.

- (a) Visual/Captioned video
- (b) Written standard British English
- (c) Sign language (oral) / interpreters
- (d) Adapted (modified) English

14. What is your comment on the use of written standard British English as a mode of communication in the assessment of learners with Hearing impairment at grade 9?

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15. What is your comment on the use of sign language (oral) as a mode of communication in examining learners with Hearing impairment at grade 9?

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16. What is your opinion on the use of portfolio (continuous assessment) based examinations for learners with Hearing impairment at grade 9?

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17. What is your opinion on the use of adapted (modified) English to assess learners with
Hearing impairment at grade 9?

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.....
.....

18. What is your opinion on the use of visual captioned video assessment to examine learners
with Hearing impairment at grade 9?

.....
.....
.....

SECTION THREE

EFFECTIVENESS OF ASSESSMENT METHODS USED BY ECZ

19. Do you think method(s) used by ECZ is/are suitable enough to bring out the achievements
of the learners? YES NO

20. If your answer for question 17 is YES, why do you think methods are not effective?
.....
.....
.....

21. If your answer for question 17 is NO, why do you think methods are not effective?

.....
.....
.....

22. How do you rate the reading skills of learners with hearing impairment at grade 9 level of
education?

- A. (a) Very Good
- (b) Good
- (c) Very Poor
- (d) Poor

B. Give an explanation to support your response.....

23. How do you rate the writing skills of learners with hearing impairment at grade 9 level of education?

- A. (a) Very Good
- (b) Good
- (c) Very Poor
- (d) Poor

B. Give an explanation to support your response.....

24. Do pupils with hearing impairment have difficulties understanding words or sentences presented to them in examinations? YES NO

25. If YES how does this affect the outcome of their assessment?

.....

26. How do you rate performance of learners with hearing impairment in grade 9 public examinations?

- (a) Very Good

(b) Good

(c) Very Poor

(d) Poor

27. What would you attribute the current performance to?

.....
.....
.....

SECTION FOUR

GAPS IN ASSESSMENT OF LEARNERS WITH HI

28. What do you think about the language communication used in examination papers at grade 9?

(a) Very appropriate

(b) Appropriate

(c) Very inappropriate

(d) Inappropriate

29. Give a reason for your answer in question 28

.....
.....

30. How would you describe the examination environment for grade 9 learners with hearing impairments in your subject area?

(a) Very appropriate

(b) Appropriate

(c) Very inappropriate

(d) Inappropriate

31. Give an explanation to your response

.....
.....

32. Are sign language interpreters or invigilator allowed to give supportive explanation during examinations?

Yes No

33. If no, why are they not allowed to provide support to learners assessment?

.....
.....

34. Are special education hearing impaired specialist teachers trained in item writing for learners with hearing impairment at grade 9? Yes NO

35. If no how low are they supported during test preparation to develop appropriate item for hearing impairments?

36. If the answer is yes, are hearing impaired trained item writers also trained in item writing using adapted (modified) English? Yes NO

37. Has ECZ trained specialist hearing impaired teachers as examiners/makers at grade 9? YES NO

38. If no, why?

.....
.....

39. Are examination answer scripts for learners with hearing impaired marked by trained hearing impaired specialist examiners?

Yes NO

40. Give a reason for your response.....
.....
.....

41. Do examination invigilators for learners with hearing impairment use sign language?

Yes NO

42. What measures do school put in place to prevent interference of candidates with hearing impairments during examinations?.....
.....
.....

43. What other gaps have you identified in the current approach to assessing grade 9 learners with hearing impairments?.....
.....
.....

SECTION FIVE

SUGGESTED BEST PRACTICES IN ASSESSMENT OF LEARNERS WITH HI

44. Do you think Examinations for learners with hearing impairment at grade 9 should be written in adapted (modified) English?

Yes NO

45. Why do you think so?

.....
.....

46. Do you think Examinations for learners with hearing impairment at grade 9 should be administered in written standard British English?

Yes NO

47. Give explanation to support your answer

.....
.....

48. Do you think visual captioned video examinations/assessment would help improve performance of learners with hearing impairments?

Yes NO

49. Do you think portfolio (continuous assessment) based examinations could be effective in the assessment of learners with hearing impairment?

Yes NO

Why do you think so?

50. Suggest any assessment methods you think can best be used to assess learners with hearing impairment at grade 9?

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THANK YOU FOR YOUR COOPERATION

Appendix B: Interview Guide For Sesos-Sen, ECZ Subject Specialist Officers, Curriculum Developers – Sen And Sesos - Examinations.

SOCIO - ECONOMIC STATUS

Tick in the appropriate box:

1. Gender: 1 Male 2. Female

2. What is your role in examination development and processing?

Examiner Item Writer

(b) What is your designation?

3. Are you trained in teaching or assessing learners with hearing impairment?

YES NO

4. For how long have you been involved in academic assessment of learners with hearing impairment?

A. 0 to 5 years

B. 6 to 10 years

C. 11 to 15 years

D. 15 years and above

1. What methods of assessment are applied to assess learners with hearing impairment at school level (teaching area)?

2. What challenges do you have with the method(s) of assessment used by ECZ at present in grade 9 assessment?

3. What other assessment methods can be appropriately be used on learners with hearing impairment in grade 9 assessment?

4. How suitable are the methods used by ECZ in the assessment of Grade 9 learners with hearing impairment?

1. Why do you think so?

5. What best accommodation arrangements should be put in place by ECZ to enhance assessment of learners with hearing impairment at Grade 9?
6. Make suggestions of best practices of assessment that can be employed to assess learners with hearing impairment more effectively by ECZ?

Appendix C: Schools Involved in the Study

I. SCHOOLS INVOLVED IN THE STUDY

- SCHOOL A: ST Josephs School for the Deaf
- SCHOOL B: Chibote Girls Secondary School Unit for the Deaf
- SCHOOL C: Munali Girls Secondary School Special Education Unit
- SCHOOL D: University Teaching Hospital Special School
- SCHOOL E: ST Mulumba Special Education School
- SCHOOL F: Maamba Special School

II. EDUCATION INSTITUTIONS INVOLVED IN THE STUDY

- EDUCATION INSTITUTION A: Zambia Institute of Special Education
- EDUCATION INSTITUTION B: David Livingstone College of Education
- EDUCATION INSTITUTION C: Kitwe College of Education

III. PROVINCES INVOLVED IN THE STUDY

- REGION A: Copperbelt Province
- REGION B: Luapula Province
- REGION C: Lusaka Province
- REGION D: Southern Province