

EMERGING FACTORS AFFECTING ACADEMIC PERFORMANCE OF LEARNERS WITH HEARING IMPAIRMENTS AT GRADE TWELVE EXAMINATION LEVEL

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Abstract:

The study sought to examine emerging factors affecting the academic performance of deaf and hard of hearing learners at Chileshe Chepela Wansongo Special Secondary School, Kasama, Zambia. A case study research design was employed in order to have an in-depth understanding of the problem under investigation. Qualitative and quantitative research methods were utilised in the collection and analysis of data. The sample was 30 distributed as follows: 12 teachers, 2 school managers, 15 HI learners from the special secondary school and 1 Education Standards Officer in charge of Special Education in Kasama district, Northern Province of Zambia. The instruments used to collect data from teachers were semi-structured interview schedule, questionnaires and observation checklist. Data from administrators and HI learners was collected through questionnaires and focus group discussions respectively.

The research investigated how the mode of classroom communication, curriculum content coverage and level of literacy affect the academic performance of learners with hearing impairments. The results of the study revealed that teachers of learners with HI had limited skills in the appropriate mode of communication and so the teaching and learning processes were negatively affected, thereby leading to poor performance of the learners in the final examination. Besides this, learners with HI were also reported to have faulty reading comprehension and writing skills. Teachers indicated that pupils with HI tend to have challenges in understanding examination questions and this contributes to their underperformance. The study also found that the curriculum currently being offered to learners with HI in most special schools was unsuitable for them in the sense that it was too bulky. Based on the findings of the study, the following recommendations emerged: teachers handling learners with HI should use variety modes of communication both in teaching and assessing the learners order to meet their diverse needs; teachers should ensure that the content in syllabus is covered extensively through the use of extra lessons, giving of homework regularly and individualized education; colleges of education should ensure that trainee teachers are well trained in various classroom communication modes for the deaf pupils; government should revise the school curriculum in order to make appropriate for HI learners; and Examination Council of Zambia should use other formats of assessing HI learners.

Keywords: Academic performance, deaf, hard of Hearing,

1. INTRODUCTION

1.1 Background

Hearing impairment is a generic term denoting hearing disability which may range from mild to profound (Hallahan and Kauffman, 1980). It is used to refer to a condition in which a person's sense of hearing diminishes partially (hard of hearing) or completely (deafness) as a result of damage to the outer, middle, inner or hearing control centers of the brain. From educationist's perspective, hearing impairment is described as either a temporal or permanent impairment of the ability to hear, which negatively affects a child's educational performance.

Historically, education for children who are deaf in public schools originated from Europe in the eighteenth century. In about 1778, a man by the name of Samuel Heinicke founded the first school for the deaf in German based on teaching using the oral language (Enerstvedt, 1996). In the United States of America, education for learners with hearing impairments emerged in 1817 when the first deaf school was opened by Thomas Hopkins Gallaudet and Laurent Clerc. In Zambia, the foundations of education for children with hard of hearing and deafness goes far back as the year 1955, when the Dutch Reformed Church Missionary nurse and teacher Dr. Ella S. Bates opened the first school for the deaf at Magwero, Chipata district of Eastern province (Kanyanta, 2003). The school received financial support from the government in form of grants. It is interesting to note that Magwero School for the Deaf provided education for deaf pupils from Malawi as well and so it was considered as an international school (Kanyanta, 2003). It remained an international school until the Malawian government established its own school in 1971.

In 1971, the government assumed the responsibility of running schools including those catering for the needs of the disabled pupils such as the deaf (MOE, 1977). Since then, the Ministry of Education (MOE) has made a number of strides in expanding education for children with disabilities such as the establishment of Zambia Institute of Special Education (ZAMISE) in 1971, introducing a degree programme at the University of Zambia in 1996, formulation of a good number of laws and policies on special education and opening several special units and schools.

With the increase in the number of children with hearing impairments in need of secondary education in the country in general and Northern Province in particular, the government decided to upgrade

Chileshe Chepela Special School to Secondary education status in 2007. Hitherto, the school accommodates pupils with deafness and hard of hearing from various parts of the country. In 2010, the school presented the first cohort to senior school certificate examination. From that time, the performance of candidates with hearing impairments at this school has been acutely poor. For instance, in 2013 and 2014, Chileshe Chepela Special Secondary School was ranked at 48.60 % and 36.36% respectively in terms the number of candidates who obtained school certificates. Therefore, majority of the learners with hearing impairments have ended up being destitute after completing school. Most of them tend to have no aspirations to go to institutions of higher learning due to poor academic results. It is against this background that the study investigated emerging factors affecting the performance of the hearing-impaired pupils at grade twelve examination level, at Chileshe Chepela Special Secondary school.

1.2 Statements of the problem

Despite the government's efforts to provide education for all learners regardless of the disability (Ministry of Education 1992; Ministry of Education 1996), pupils with hearing impairments have continued to underperform at grade twelve examination level. However, little was known with regard to the factors that led to their underperformance, hence the researcher embarked on this study.

1.3 Objectives of the project

1. To ascertain the mode of communication used in the teaching and administration of examination to the learners with hearing impairments.
2. To assess the extent to which the mode of communication affects academic performance of learners with hearing impairments at grade twelve examination level.
3. To find out the extent to which the literacy levels of hearing impaired pupils affect their academic performance at grade twelve examination level.
4. To determine the impact of emerging curriculum factors on academic performance of learners with hearing impairments at grade twelve examination level.

1.4 Literature Review

Factors affecting the academic performance Hearing Impaired pupils in Secondary School Certificate examination

1.4.1 Influence of Classroom mode of communication on academic performance

A study was conducted in America by Braswell-Burris (2010) that investigated factors affecting the educational success and personal success of deaf and hard of hearing individuals in America. The study utilized qualitative grounded theory design and data was collected from Caucasian, African-American and Latino deaf pupils using semi-structured interviews. Her study sample comprised four females, and three males who ranged in age from 27 to 60 years of age. Brasswell-Burris (2010) discovered that exposure of deaf pupils to English language and not sign language frustrated the learners due to their inability to communicate effectively with teachers and peers and contributed to poor academic performance.

Raga (2014) conducted a study which sought to investigate the implications of using sign language and English on examination performance of deaf pupils at Kuja secondary school in Kenya. In this study, the researcher employed a qualitative study design and the sample of 16 respondents. The findings of the study revealed that the use of foreign languages in delivering the subject matter to deaf learners contributed to poor performance in school leaving examinations. The study also found that the language policy makers stressed English as the national medium of instruction and examination, which mainly disadvantaged students with hearing impairments in terms of performance in national examinations. Raga (2014) discovered that the language discrepancies between Kenyan Sign Language and English contributed to low performance of students.

Another study was conducted by Kamonya (2008) on factors hindering teaching and learning activities for hearing impaired students in Kenya. He used a descriptive research design and the study sample of seven respondents out of the total target population of 190. The findings of his study revealed that English and Kiswahili were most preferred over sign language for instructional purposes irrespective of its users. Kamonya further discovered that teachers were not conversant with Kenyan Sign Language and this hindered teaching and learning.

Omutsani (2012) carried out another study in Kenya at Maseno, Nyanyoma, Kuya and Nyangwero schools on factors affecting the performance of pupils in the Kenya Certificate primary education examination. In this study, the researcher used the ex-post facto research design which did not allow the researcher to have direct control of the independent variables. The

sample size was 125 including hundred pupils, twenty one teachers and four Headteachers who were purposively selected. The data was collected using questionnaires, interviews and observation checklists. The results revealed that learners with hearing impairments preferred that teachers use sign language when teaching, followed by total communication. On the other hand, the majority teachers and Headteachers, representing 92% of the sample, ranked total communication as the most used mode of communication. However, the study also revealed that over fifty percent of teachers were not very conversant with sign language and so opted to use other modes of communication and this could have been one of the contributing factors to low academic performance of deaf students in the Kenya Certificate of primary education examination.

1.4.2 Literacy skills and performance of the Deaf

Literacy is a salient goal of schooling and is required in the performance of daily activities such as sending an email, withdrawing money at a bank, making a phone call to a friend and so on. Howell and Lucker (2003) state that many students who encounter difficulties in learning how to read and write tend to fail to fully take part in classroom learning activities, underperform in final school leaving examinations and fail to find skilled jobs. Research has revealed that for children with complete or partial hearing loss reading is one of the major challenges they encounter. Spiral et al (2005) have also stated that children who have challenges in learning how to read and comprehend texts tend to have difficulties having high academic achievements.

Conrad (1979) indicated that the average deaf high school graduate is only able to read at a fourth-grade level. Qi and Mitchell (2011) have also argued that children with deafness exhibit delays in developing reading comprehension abilities which make them leave school with reading comprehension skills commensurate to those of 9-year-old children of normal hearing. This view is supported by the research study of Kyle and Cain (2015) that compared the reading comprehension abilities of the deaf with that of children with normal hearing. In this study, it was found that pupils who are deaf demonstrated reading comprehension skills that were lower than both chronological age and reading age matched controls, but their skills corresponded with poor comprehenders of normal hearing. It should be noted however that despite performing poorer in reading comprehension tests as compared to the children of normal hearing, deaf children did well in

comprehending literal questions as opposed to inferential questions.

1.4.3 Curriculum content coverage

Maina, Oracha and Indoshi (2011), conducted a study on curriculum factors affecting the performance of deaf learners in the secondary school Kenyan examination. It was revealed that Kenyan children with special needs are exposed to the general curriculum which proves to be inflexible and quite demanding. The rigidity of the general curriculum made it impossible to make the necessary adaptations. Additionally, the time allocated to complete the curriculum content was unrealistic for deaf students (Maina, Oracha and Indoshi, 2011). The study revealed that deaf students end up being examined on many uncovered topics due to the slow processes involved in teaching them.

1.5 Establishment of the gap and Personal critique summary

Firstly, in as much as the above scholars looked at factors affecting the academic performance of the hearing-impaired pupils, the following questions still remain unaddressed especially from the Zambian context:

“how does the mode of communication in classroom teaching and administration of examinations affect the performance of learners with hearing impairments at grade twelve examination? to what extent do literacy levels of hearing impaired learners affect their performance at grade twelve examination? what is the impact of curriculum factors on the performance of learners with hearing impairments at grade twelve examination?”

Additionally, Raga (2014) focused specifically on finding out the influence of grammatical discrepancies between medium of instruction and language examination (English) on performance of students with hearing impairments in KCE. However, the current study looked broadly at the influence of level of English literacy skills (encompassing writing, reading and reading comprehension) of HI learners on performance in examination. Moreover, Raga (2014) used only qualitative approach and a small sample but this study used both quantitative and qualitative approaches and a relatively bigger sample.

Kamonya (2008) studied factors that hindered the teaching and learning of the hearing impaired and found out that teacher’s inability to use sign language effectively affected teaching and learning negatively. He did not however, study how English literacy skills

of the HI and the use of English language in settings examination questions influenced performance.

2. RESEARCH METHODOLOGY

2.1 Research Design

The study adopted a case study design. A case study design helped in gaining in-depth understanding of the emerging factors affecting the performance of learners with hearing impairments at grade twelve examination level in detail and holistically.

2.2 Target populations and Sample size

The total target population was one hundred (100). This comprised Education Standards Officer for special education from Kasama district, special education teachers and children with hearing impairments from Northern Province. The study sample constituted thirty (30) respondents and this included fifteen (15) learners with hearing impairments, twelve (12) teachers, two (2) school managers (1) Special Education Standards Officer for Kasama district.

2.3 Sampling procedure

The researcher used purposive sampling technique was used to select the Headteacher, Deputy Headteacher and Special Education Standards Officer. The Special Education Standard Officer and Headteacher were included in the study because of the pivotal role they play in procuring teaching and learning materials, monitoring the teaching and learning processes and implementing the management strategies designed to enhance the academic performance of the learners.

Teachers and learners were recruited into the study by using the simple random sampling technique. To select the sample, the researcher obtained the names of teachers at Chileshe Chepela Special Secondary school who were engaged in teaching the deaf pupils at senior level. The researcher also obtained a list of grade twelve learners with hearing impairments at the school. After the sampling frames had been constructed, excel was used to generate random numbers by using the following formula: =RANDBETWEEN (0,50). The random numbers generated were then used to pick participants with the corresponding numbers on the sampling frames.

2.4 Instruments of data collection

The following instruments were used to collect data: a questionnaire, structured interview guide, Focus group discussion and observation checklist. Questionnaires were used to collect data from special education teachers, the Heateacher and the district

Education Standards Officer in-charge of special education.

Structured interview guides were used to elicit in-depth information from the teachers on emerging factors affecting performance of deaf pupils at Chileshe Chepela Special Secondary school.

Focus group discussion enabled the researcher to collect data through face to face interaction with deaf and hard of hearing learners.

Classroom Observation Checklist helped in collecting primary data by observing 6 lessons in grades ten, eleven and twelve classes of the deaf pupils. Each lesson observation lasted forty minutes. The researcher was able to evaluate the classroom modes of communication teachers used in delivering lessons and ascertain how the modes influenced learner's performance.

2.5 Data analysis techniques

Data was processed using Rhemaforms which made it possible to extract data in an excel file. After entering the data on Rhemaforms, it was then exported into excel for further analysis using a statistical package called STATA. STATA helped to produce analysis trends in form of percentages, frequencies, pie charts and bar graphs

Qualitative data obtained from interview schedules and classroom observation was analysed using thematic analysis. Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data.

2.6 Ethical Considerations

The informed consent was obtained from the respondents before interviewing whose names remained anonymous. Further, respondents were assured of confidentiality and questions that would cause psychological harm to the learners with hearing impairments were avoided. The other ethical considerations included respecting respondent's right to withdraw from the study at any time and treating them with respect.

3. Presentation of research findings

3.1 Background information of respondents

Table 3.1 Distribution of respondents by Gender

The table below shows that there were more male teacher respondents in the study than females.

GENDER	PUPILS		TEACHERS		ADMIN.	
	Freq.	Per (%)	Freq.	Per (%)	Freq.	Per (%)
MALES	8	53	6	75	2	67
FEMALES	7	47	2	25	1	33
TOTAL	15	100	8	100	3	100

Source: Field Data 2017

Table 3.2 Respondent's highest level of education

The table below indicates that the majority of the respondents representing 87.5% had undergraduate degrees. All the respondents were trained teachers for children with special needs.

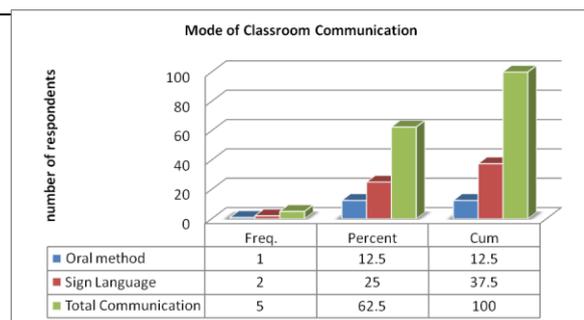
Level of education	No. of respondents	Percentage
Primary teacher's diploma	1	12.5%
Primary teacher's degree	0	0%
Secondary teacher's diploma	1	12.5%
Secondary teacher's degree	6	75%
Master's degree	0	0%

Source: Field Data 2017

3.2 Effects of classroom mode of communication on HI pupil's performance

Figure 3.1 - Percent distribution teacher's preferred mode of classroom communication

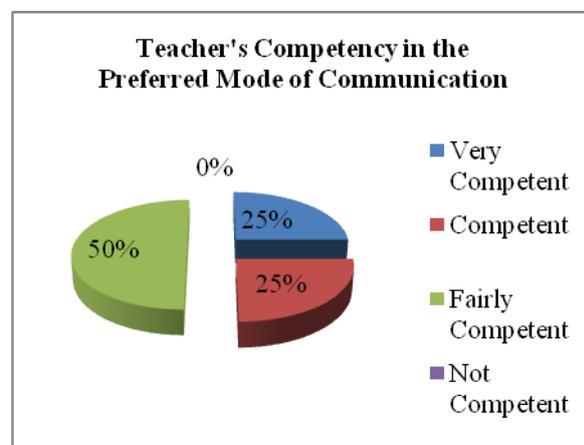
The figure below reveals that the majority of the teachers [62.5%] preferred to use Total communication in teaching learners with hearing impairments. The second preferred classroom medium of instruction was sign language.



Source: Field Data 2017

Figure 3.2 - Teacher's Competency in using the preferred mode of communication

In the figure below, 50% of the participants were not competent in using their preferred mode of communication. This implies that the content was not effectively transmitted to the learners because of the language barrier between the teachers and learners.



Source: Field Data 2017

The learners with hearing impairment indicated that the reason they did perform well in most public assessments is that the majority of the teachers who handle them are not competent users of sign language. One of the learners had this to say when asked how conversant their subject teachers were in sign language:

“Almost all our class teachers do not know sign language except the teachers of Mathematics and English. The rest of them just like writing notes on the chalkboard without explaining the meaning of the notes. Others just talk throughout the lesson without making any attempt of using sign language.”

The teachers also attributed pupil's underperformance to failure by many teachers to competently communicate concepts to the deaf in sign language.

For example, in response to an interview question, one of the special teachers said this when asked how competent the teachers were in sign language and total communication:

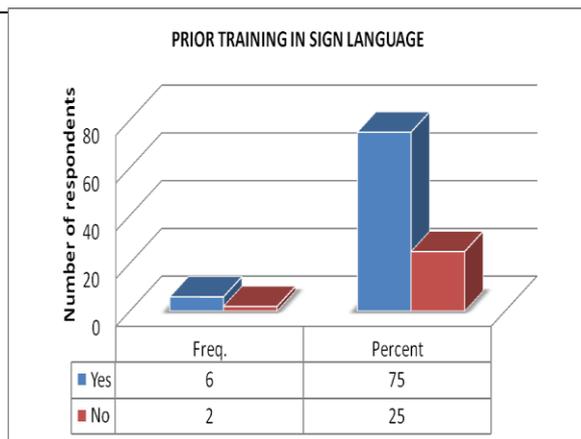
Most of the teachers at this school are not familiar with sign language and as a result they avoid attending to learners with hearing impairments even when it is their time to go and teach. Sometimes they use the pupils who are good at sign language to help them explain the concepts to their classmates. Teachers spend more time in class trying to look for signs for certain words than they do when explaining the subject matter.

Figure 3.3 – Teacher's prior training in Sign language

The figure below shows that the majority [75%] of the special education teachers had prior training in sign language from their teacher training institutions.

However, in response to one interview questions, the school Headteacher said this when asked if the teachers had prior training in sign language before being deployed to the school:

“Only a few teachers have had specialized training in special education and sign language in particular. Most of the teachers who are posted to this school especially in mathematics and natural sciences are usually those trained as ordinary teachers. As a result, these teachers tend to encounter challenges in communicating and teaching the hearing impaired. Some are even rejected by the pupils because of heavily relying on oral communication when delivering the subject content. As a school, we try to help them by teaching basic sign language through CPD programs.”



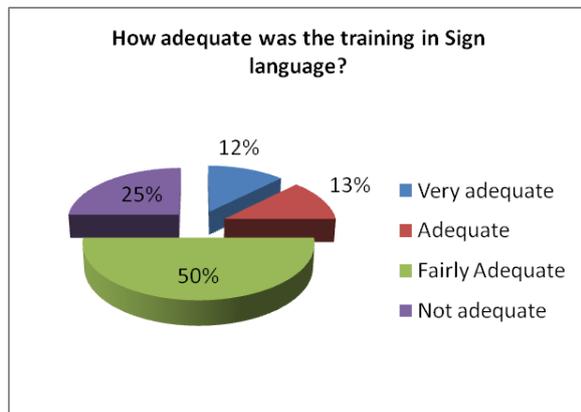
Source: Field Data 2017

Figure 3.4 - How adequate was the training in sign language?

The figure below shows that of the [50%] teacher respondents who indicated the sign language training they had from teacher training institutions was fairly adequate.

In line with the above, the ESO special said this when asked how adequately trained the special teachers were in sign language from their institutions of teacher training:

“Universities and Colleges of teacher education just offer basic training in sign language and this is not properly done. Most of the pre-service special teachers at Chileshe Chepela Special School who did their training at the University of Zambia for example, graduated without having adequate skills in sign language due to the limited time allocated to teaching sign language.”



Source: Field Data 2017

Table 3.3 - Influence of modes of Communication on performance in Examination

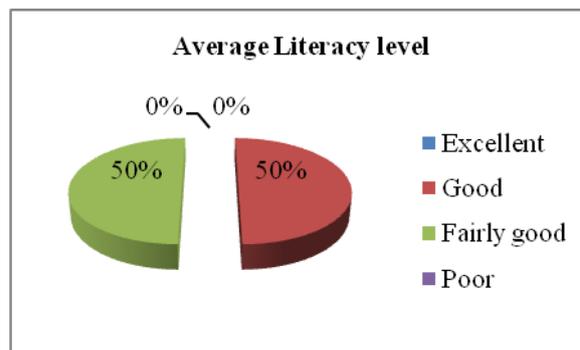
From the table below, we can see that total communication was rated to have a positive impact on the performance of learners, seconded by sign language.

Mode of Communication	Influence of performance in examinations	
	Positive	Negative
Oral approach	1	1
Sign Language	4	
Bilingualism	1	
Total Communication	7	

3.3 Impact of English literacy on Performance

Figure 3.5 - Percent distribution of average English Literacy skills of HI

The figure below shows that 50% of the respondents rated the literacy skills of the HI pupils as good and fairly good respectively.



Source: Field Data 2017

Table 3.4 – Percent distribution of estimated levels of Literacy of HI pupils

The table below shows that the majority of learners with HI [75%] had poor English literacy skills (below 60%).

ESTIMATIONS	FREQ.	PERCENT (%)
0-20%	1	12.5
20-40%	1	12.5
40-60%	4	50
60-80%	2	25
80-100%	0	0
TOTAL	8	100

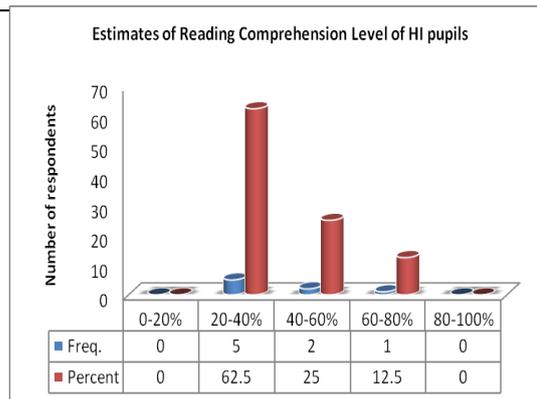
Source: Field Data 2017

Figure 3.6 Reading Comprehension skills of HI pupils

The figure below indicates that the majority of the teacher respondents [62.5%] ranked the reading comprehension levels of HI pupils at 20-40%. Both the administrators and the teacher respondents that were interviewed agreed that poor reading comprehension skills among hearing impaired learners affected their performance in grade twelve examination.

In one of the open ended questions, the Deputy headteacher had this to say when asked how the reading comprehension skills of pupils with hearing impairments affected their performance in the final school leaving examination:

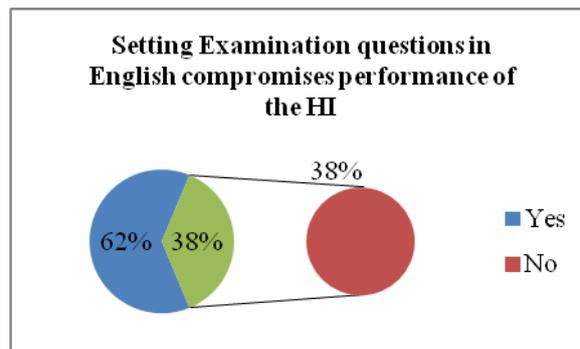
HI pupils find it difficult to understand clearly the meaning of sentences that are written in English. Generally, HI pupils do well in mathematics and practical subjects because these subjects do involve much of textual information. However, they tend to underperform in subjects that have a lot of textual information such as English, RE e.t.c which require them to read sentences, interpret the meaning of the sentence and respond in prose form.



Source: Field Data 2017

Figure 3.7 - Influence of setting Examination questions in English on performance

The figure below shows the percent distribution of the how using English language in setting grade twelve examinations influence performance of HI learners. It can be seen that 62% indicated that assessing HI pupils using English negatively affected their final examination results.

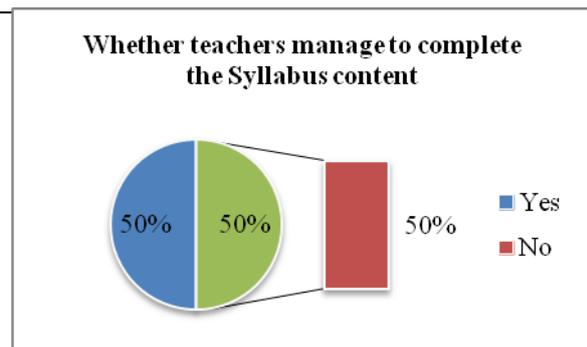


Source: Field Data 2017

3.4. Effects of Curriculum factors on performance of learners with HI at grade twelve examination.

Figure 3.8– Percent distribution of syllabus content coverage by teachers of HI learners

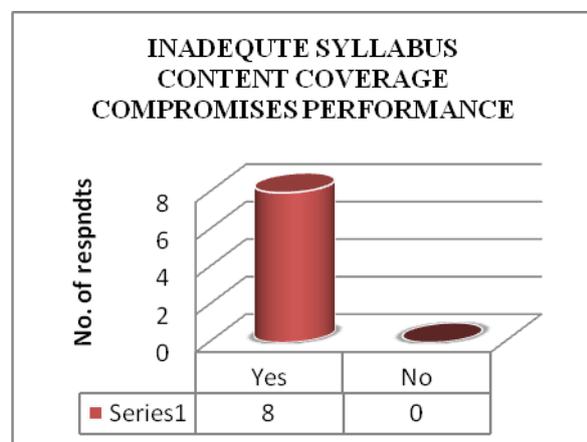
Figure 3.8 show that 50% of the respondents indicated that they managed to cover the syllabus content within the stipulated period. The other 50% indicated they could not cover the content adequately.



Source: Field Data 2017

Figure 3.8 – Influence of syllabus content coverage on performance

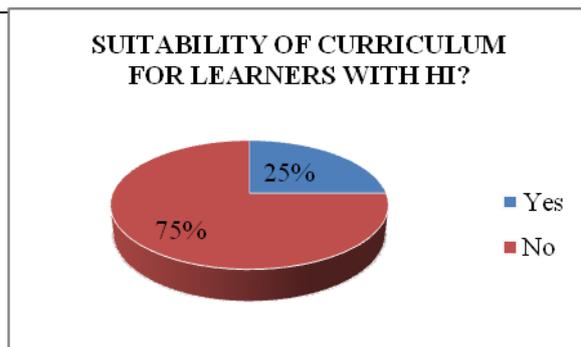
The figure below shows that all the respondents [100%] indicated that failure to cover the syllabus content negatively affected the performance of HI learners in grade twelve final examinations.



Source: Field Data 2017

Figure 3.9 – Is the Curriculum offered suitable to the learners with HI?

The figure below shows percent distribution of how many respondents thought that the school curriculum was suitable to HI learners and it can be seen that 75% thought the curriculum is unsuitable.



Source: Field Data 2017

Table 1.4 - Reasons why the curriculum was considered unsuitable for learners with HI

REASONS WHY THE CURRICULUM WAS CONSIDERED UNSUITABLE FOR LEARNERS WITH HI
The current curriculum content in all subject areas is too bulky.
Some subjects such as Literature in English and History are not suitable for learners with HI
The content in many subjects is not task analysed and modified to suit the needs of learners with hearing impairments.
Learners with HI learn at a slower pace as compared to the ordinary pupils therefore exposing them to the mainstream curriculum and examination is an injustice.

Source: Field Data 2017

4.0 Discussion of Findings

The study was guided by three objectives which included the following: to ascertain the influence of mode of communication in classroom teaching and administration of examination on the performance of learners with hearing impairments; to find out the extent to which the literacy levels of hearing impaired pupils affect their performance at grade twelve examination level; and to determine the impact of curriculum factors on the performance of learners with hearing impairments at grade twelve examination level.

With respect to objective one, the researcher found that the majority of the teachers [62.5%] preferred to use Total Communication in teaching learners with hearing impairments in senior secondary grades. The teachers used an integrated approach of classroom communication which involved speech lip reading, cued speech reading, writing, sign language and gestures in order to meet the needs of diverse group of hearing impaired pupils. It is also important to note

that Zambian Sign Language was the second preferred mode of classroom communication. This finding is in agreement with Omutsani (2012) who found that total communication was the most frequently mode of communication used in teaching learners with hearing impairments; this was followed by sign language. This finding is to a certain extent not consistent with Skrebneva (2010) who found that Bilingualism was the method most teachers utilised in communicating with learners with hearing impairments in the classroom. Bilingualism is a communication tool which involves the combination oral language and sign language. According to Skrebneva (2010) educators maintained that although deaf learners should be exposed to sign language, their main means of communication must be oral language as this will assist their successful integration into the hearing community. The finding of this study is however consistent with Skrebneva (2010) in terms of the importance attached by educators on the need for all teachers of deaf learners to know sign language which could be used to assist them to explain new concepts to their learners, especially those who cannot benefit from oral language.

The present study discovered that the majority of teachers were not conversant with sign language. This finding is consistent with Yabbi (2013) who found that most teachers were not sufficiently skillful in sign language.

Furthermore, teachers were given the opportunity to state the influence of the various modes of communication on the performance of learners with hearing impairments in the Zambian Senior Secondary School Certificate Examination. The results presented indicate that 87.5% and 50% of the teachers reported that total communication and sign language had positive influences on the performance of learners with hearing impairments respectively. This finding correlate with the finding of Omutsani (2012) who discovered that both total communication and sign language were ranked first and second in terms of their influence on the academic performance of learners with hearing impairments.

Influence of Literacy skills on pupil's performance

Learner's ability to read, write and comprehend textual information has been found to be a very crucial component of any academic success. In this regard, the second objective of the study aimed at measuring the literacy levels of hearing impaired pupils in English language and to establish the extent to which the levels of literacy affected the performance of HI in the Zambian Senior Secondary

School Certificate Examination. The results of the study showed that generally the English literacy levels of learners with hearing impairments in senior secondary classes ranged from below average to average. It was found that pupils with hearing impairment recorded poor results at grade twelve due to poor literacy skills. This finding concurs Bickham (2015) who stated that the lack of literacy skills in students who are deaf or hard of hearing leads to their struggle in the secondary grades as well as throughout their college careers or in the post high school job market, unlike their hearing peers.

The study went further and examined the influence of two aspects of literacy on performance of the hearing impaired pupils in the final examination. One aspect of English literacy that was considered in this study was the learner's ability to read and comprehend textual information. The majority of the teachers (62.5%) rated hearing impaired student's English reading comprehension levels to be between 20-40%. The teachers further said that poor reading comprehension skills contributed to the underperformance of learners with hearing impairments because most of them failed to understand examination questions. As a result of failing to comprehend the meaning of the questions, learners ended up giving wrong responses to most of the examination questions. This finding is in line with Kyle and Cain (2015) who compared the reading comprehension abilities of the deaf with that of children with normal hearing. In their study, it was found that pupils who are deaf demonstrated reading comprehension skills that were lower than both chronological age and that their skills corresponded with poor comprehenders of normal hearing.

The study also found that setting all examination questions in the English language contributed greatly to underperformance of candidates with hearing impairments in the school leaving examination. This finding is in agreement with Case (2005, p. 3) who stated that "students who are deaf or severely hard of hearing are precluded from understanding speech and aural communication without some type of accommodation. Students born with hearing loss or who lose hearing at a very early age miss out on crucial developmental milestones and experiences that benefit students without hearing loss. The result is that they enter school developmentally delayed in learning English, lagging in language development, and lacking knowledge of English. Because high-stakes tests have a highly verbal aspect, students who have restricted language skills are at a distinct disadvantage. Those learning sign language are, in essence, learning English as a second language.

When one also considers the expressive and receptive modalities of deaf or hard of hearing students, which differ significantly from those of English-based hearing students, the need for accommodations becomes even more apparent.”

The study revealed that there are various curriculum factors that negatively affected the performance of learners with hearing impairments in senior school certificate examination in Zambia. The factors that were associated with poor performance of the HI pupils in the Zambian School Certificate Examination included the following; non-suitability of the school curriculum to the HI learners, inadequate teaching and learning materials and failure to complete the syllabus content.

Firstly, the results of the study indicated that the majority of the teachers (75%) felt that the General School Curriculum was not suitable to learners with hearing impairments and that this contributed to their underperformance in the school leaving examination. This finding is in agreement the results of the study conducted by Mwanyuma (2016) who found that the majority of the respondents (48.2%) reported that the school curriculum was not suitable for learners with hearing impairments. The finding is also in conformity with the Omutsani (2012) who discovered that the curriculum was irrelevant for children with hearing impairments.

Secondly, the study revealed that some of the teachers (50%) were not able to cover the syllabus content within the learning period stipulated by Ministry of General Education. The study has presented that teacher respondents and Headteachers attributed failure to complete the syllabus content in HI classes the wideness of the content, limited number of periods allocated to teaching the various subjects in a week, slow pace at which learners with HI assimilate the subject matter and shortage of teaching and learning materials.

From this, we can clearly see that the curriculum plays a pivotal role in influencing the performance of learners with hearing impairments. Therefore, it is very imperative to have an appropriate curriculum in order to ensure that learners with hearing impairments produce examination results at grade twelve that are comparable to their hearing counterparts and provide education that is meaningful to them. From the classroom observations conducted, the study also revealed that teachers could not adequately cover the syllabus content because of

failure to interpret the content in sign language as a result of having limited signs to explain the concepts.

The finding of the study on the reasons for not completing the syllabus content mirrors that of Omutsani (2012) who found that failure to finish the syllabus content was attributed firstly to lack of teacher's efficiency in sign language, followed by the curriculum content being too wide and finally short time stipulated in which to cover the content.

Shortage of teaching and learning materials/aids was also one of the curriculum factors associated with poor performance of learners with hearing impairments. Through observation of the lessons, the researcher found that teachers delivered lessons to learners with hearing impairments without any visual aids such as charts, pictures, real objects and diagrams. As a result, it was found that it was learners who had difficulties comprehending most of the subject matter teachers delivered to them. The majority of the teacher respondents (75%) reported that failure by school management to supply them with adequate teaching and learning materials contributed to the inability to complete the syllabus content and subsequently led to pupil's underperformance in the final examinations.

This finding is in agreement with Omutsani (2012) who discovered that teachers of learners with hearing impairments failed to complete the syllabuses in various subject areas prior to the final school certificate examination, thereby contributing to the poor performance of learners. Mwanyuma (2016) also found that availability of teaching and learning materials affects the achievement of Deaf learners. Mwanyuma (2016) found that the government did not provide sufficient support in ensuring that teaching and learning materials were available to the school.

5.0 Conclusion and Recommendations

The study concluded that most of the teachers preferred to use total communication in teaching the HI and this was seconded by sign language. However, the study revealed that half of the teachers were not conversant with the total communication approach. This implies that most of these teachers faced difficulties in transmitting the subject matter to the learners with HI thereby impeding their preparedness for grade twelve examinations.

Another conclusion was that low English literacy skills among HI learners, especially reading comprehension skills, contributed to their underperformance in the final examination. The study

also found that the use of English as mode of administering examinations negatively affected the performance of the HI in the final examination.

Additionally, the study concluded that the curriculum provided to learners with hearing impairments was unsuitable for them because it was too bulky. The 50 percent of the respondents indicated they could not manage to finish the syllabus content because it was too bulky and that little time was allocated to teaching learners with hearing impairments despite being slow learners.

Recommendations

1. Teacher training institutions should ensure that the trainee teachers are adequately trained in various modes of classroom communication for learners with hearing impairments.
2. The government should introduce in-service training programs in sign language and total communication approach for teachers handling learners with hearing impairments.
3. The government, through Examination Council of Zambia should consider changing the language used to set examination questions from English to appropriate mediums such as sign language.
4. The government should consider introducing sign language as a subject for learners with hearing impairments at senior secondary level.
5. The government should revise the school curriculum to suit the needs of hearing impaired pupils.
6. The special teachers in collaboration with school management should ensure that they have more contact with HI learners so that the syllabus content can be covered adequately.

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APPENDIX

CLASSROOM OBSERVATION CHECKLIST

1. Preferred mode of communication.
2. Teacher's competency in using the preferred mode of communication.
3. Teacher's ability to explain concepts clearly to the learners using sign language.
4. Teacher's ability to complete the planned content within the stipulated time.
5. Usage of instructional materials in delivering the lessons e.g. books, models, charts e.t.c
6. Whether methods used effectively assist the teacher to cover the content adequately.
7. Is the time allocated to the subject adequate to cover the syllabus content?
8. Are pupils interested in the lessons?
9. Pupils ability to respond to the teachers' questions.

INTERVIEW SCHEDULE

1. What mode of communication do you prefer to use when teaching learners with hearing impairments (HI)?
2. How conversant are you with sign language?
3. Did you have training in sign language during your teacher training program?
4. Do you think you were adequately trained in sign language?
5. What do you think is the influence of the classroom mode of communication you use on the performance of the deaf pupils?
6. How can you describe the literacy skills of learners with HI at your school?
7. How can you describe the reading comprehension skills of learners with HI?
8. Do you think setting examinations questions in English affects the performance learners with HI?
9. Are you able to complete the syllabus content within the specified academic period?
10. Is the general school curriculum suitable for learners with HI or not?
11. What suggestions can you give for the improvement of HI learner's performance in grade twelve examinations at your school?