



**PERCEPTIONS OF TEACHERS AND PUPILS  
ON FACTORS AFFECTING ACADEMIC PERFORMANCE  
OF PUPILS WITH HEARING IMPAIRMENT IN  
PRIMARY SCHOOLS IN ZAMBIA**

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**Abstract:**

The academic performance of learners with hearing impairment has continued to decline far below their hearing counterparts. Comparison of academic performance in various subjects between pupils with hearing and non-hearing indicate that hearing impairment (HI), was lagging behind in schools. The study, therefore, explored perceptions held by teachers and pupils on factors affecting the academic performance of pupils with hearing HI in selected schools in Zambia. A qualitative approach supported by a case study research design was employed in the study. The sample size was 22 consisting of 10 pupils with HI, 10 teachers of pupils with HI and 2 head teachers. An expert purposive sampling technique was used to select participants. Data from pupils was collected using a focus group discussion guide (sign language used as a mode of communication) while data from head teachers and teachers were collected with aid of face-to-face interview guides. Qualitative data were analyzed thematically and results were presented descriptively. The study revealed that the use of sign language as a mode of communication significantly impaired the exchange of knowledge and skills at the classroom level. It was also found, that pupils with HI faced many challenges such as; a negative attitude towards their academic work, poor pre-academic readiness skills, insufficient resources, clouded school curriculum, inappropriate instructional methodologies and assesmmnet approaches that had affected their academic performance. It was further evident, that teachers were ill-prepared in sign language as a language of instruction to positively impact on academic and social life with HI pupils in schools. Although schools were seen to be making efforts to address the observed challenges, pupils with HI, continued to academically perform lowly. The study recommends, upgrading teachers' competence in sign language, and providing an

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enriched learning environment, instructional resources as vehicles for improving academic success among pupils with HI in the study schools.

**Keywords:** hearing impairment, perception, sign language, Zambia

## 1. Introduction

The aim of this study was to have a deeper understanding of the perceptions held by teachers and pupils on factors affecting the academic performance of pupils with hearing impairment (HI). Hearing impairment (HI) itself, has been defined by the Individuals with Disabilities Education Improvement Act of 1990 (IDEA, 1990) as an impairment in hearing whether permanent or fluctuating and adversely affecting a child's educational performance. Alberti (1993) observes that education, in general, is a tool through which an individual can fight poverty. For this reason, persons including those living with hearing impairment, require access to quality education and training for them to be able to effectively fight poverty (UNESCO, 2007).

Mayaka (2012) believes that, through education and training, individuals with HI, are likely to have opportunities for employment and the ability to fend for themselves long after school life. Pupils with HI, however, seem not to have opportunities to access learning as evidenced by continued low performance well as compared to hearing peers. As such, education offered to children including those with a hearing impairment must play a pivotal role in their personal development, community progression and indeed the nation as a whole. MoE (1996) states that education increases human capabilities and improves productivity in labour and national growth. Because of this, increased access to quality education by all children matters, as it has the potential of improving the quality of life for all children (UN, 1994). Through the Education Policy of 1996 (*Educating Our Future*) in Zambia, the government has committed itself to the provision of education of quality through special and inclusive school practices (MoE, 1996; MoE, 2013). As a result, the government has set up special education schools, and special education units and allowed the inclusion of children with disabilities including those with HI in the mainstream of education.

## 2. Review of Related Literature

Sumbu, Otube and Bunyasi (2018) conducted a study aimed at assessing the academic performance of learners with hearing impairment (HI) in Kenya. The study found that the use of Kenyan Sign Language to instruct learners with hearing impairment had led to an improvement in their academic performance unlike the use of oral communication. Headteachers and teachers felt that learners' performance after the official introduction of Kenyan Sign Language (KSL) in 2004 helped to improve learner retention and provided a better opportunity for pupils with HI to learn while KSL as a move was necessary, the overall performance in certain subjects, such as science, mathematics and

Social Studies remained low as compared to their hearing peers. The low performance was attributed to several factors included; variations in signs used in sign language, teachers' incompetence in sign language and rigidity in the school curriculum. These significantly affected academic performance among pupils with HI.

A related study by Mwanyuma (2016) conducted in Kenya investigated elements in Kilifi County, specifically at Sahajanand School for the Deaf in the south coastal region of Kenya reported that sign language enhanced education of the deaf. The additional elements affecting the learning of pupils with HI that, included: socio-cultural factors, curriculum factors, the language of instruction and availability of teaching and learning resources. The findings further, revealed negative community and societal attitudes towards the education for the Deaf. This affected to some extent, the academic success of pupils with HI in the classrooms. Additionally, the curriculum did not cater for all learners more so those with deafness sufficiently enough to make them succeed in the school system besides teachers being not familiar and fluent in using Kenyan Sign Language to teach. Further, it was evident that most of the schools offering education to children with deafness lacked adequate instructional resources a situation likely to be the same in Zambia.

Aseery (2016), equally, conducted a study in Saudi Arabia on teachers' attitudes toward including Deaf and hard of hearing students in regular education classrooms. The study employed the "Opinion Relative to Integration of Students with Disabilities" (ORI) online survey to collect responses from 196 teachers. On the whole, the results showed that teachers in Saudi Arabia held a negative attitude toward teaching D/hh students in regular education classrooms. They felt that the presence of learners with hearing retarded progress of hearing peers besides low academic achievement exhibited. Further, results indicated that the presence of such learners did not seem to influence the teachers' attitudes toward teaching D/hh students in regular education classrooms in Saudi Arabia, a situation which might be the same in Zambia.

Mandyata & Kamukwamba (2018) noted that the education of children with hard of hearing and deafness in Zambia emerged quite late as compared to that of the blind which started in 1905. It was until 1955 that the Dutch Reformed Church Missionaries decided to add to the education of the blind, the education of the deaf at Magwero near Chipata although their involvement in education continued to be on a low pace. The study, however, appreciated the increasing number of learners with hearing impairment since a Zambian presidential decree of 19971, which allowed the Ministry of Education to take responsibility for education for learners with disabilities including running schools (MoE, 1996). The presence of learners with hearing impairment has, however, remained low and the few present, retentions in the Zambian education system continue to be a challenge (MoE, 2013).

Despite efforts by the Zambian government to provide education to children with disabilities, MoE (2013) reports that children with hearing impairment (HI) have not been doing well in their academic work. Their learning outcome continued to be low. The majority of pupils with HI are hardly in schools beyond the fourth grade. Similarly,

Mwendalubi, *et al.* (2020), support this observation by stating that, pupils with HI are consistently trailing behind their hearing counterparts in their academic performance evidenced by current results in public examination. For example, ECZ, Examinations Report, (2019), shows that in the national examination, the pass rate for pupils with HI in Grade 9 in 2018 and 2019 ranged between 27.01% and 31.04% (ECZ, 2019). Further, grades 9 and 12 pass rate percentages in 2018 and 2019 were between 23.01% and 29.07%. The low academic performance of pupils with HI at both grade 9 and 12 levels in Zambia has some time continued to raise concern, hence, the attempt through the present study to establish factors that may be contributing to the low academic success among pupils with HI in the Zambian school system. In South Africa, Bell (2013), reports that despite the various pupils with HI receiving necessary support for learning, academic success in public examinations, still remains poor, a situation similar to Zambia.

Some studies conducted in other parts of the world however have reported on hearing loss and academic success have on the contrarily, to what has been observed in Zambia and South Africa. Pupils with HI have been seen to experience more academic success rather than failure as compared to Zambia. In Israel, for example, a study conducted by Shamai (2008) found that learners with hearing impairment performed just as better as their hearing peers. Success was attributed to increasing involvement of parents, flexibility in the curriculum and use of responsive or accommodative assessment approaches. Other support services reported include counselling, varied instructional approaches, use of sign language interpreters provision of necessary school requisites, parents participating in homework, and sign language clinics for parents and children. Parents equally got involved in the provision of a healthy home environment, a situation which might be quite different in Zambia. This study conducted by Shamai (2008) however, did not evaluate the assessment practice which in the Zambian case might have contributed to low academic performance exhibited by pupils with HI.

In the quest to improve the education of children with hearing impairment, the Government of Zambia has made deliberate efforts to increase the enrolment of pupils with HI by introducing special education units for the hearing impaired in regular schools. As a result, this has led to an increasing number of pupils with HI. However, retention of such learners and academic performance has continued to be low. Given this background, this study sought to explore perceptions held by teachers and pupils on factors affecting the academic performance of pupils with HI in public schools in Zambia.

### **3. Problem**

Hearing Impairment (HI) is one of the disabilities found among pupils in the education system (Hallahan, Kauffman and Pullen, 2013). The presence has not, however, correlated with their academic performance and retention (MoE, 2013). In Zambia, in 2020 Grade 12 public examination, HI pupils pass percentage was 31.51% while that of the hearing was 74.63% (ECZ, 2021). Meanwhile, the pass rate for pupils with HI in Grades 9 during the same year, was 27.01% while, for hearing learners it was 84.23%

respectively (ECZ, 2020). This trend has been reasonably low in the cited and subsequent years. Consequently, raising a question as to how teachers and pupils perceive factors affecting the academic performance of pupils with HI in Zambian schools.

However, it is less known of the perceptions held by teachers and pupils on factors affecting the academic performance of pupils with HI in schools in Zambia. In light of the above reported low academic performance of HI, the present study embarked on exploring perceptions held by teachers and pupils on factors affecting academic performance of pupils with HI in selected schools in Muchinga and Northern Provinces in Zambia.

### **3.1 Objectives**

- 1) Establish factors affecting the academic performance of pupils with HI in public examinations.
- 2) Explore perceptions held by teachers and pupils on identified factors affecting the academic performance of pupils with HI,
- 3) Describe efforts schools are making to address the diverse perceptions held by teachers and pupils on factors affecting academic performance of pupils with HI.

### **3.2 Significance**

It was hoped that the findings of the study might help to enhance the understanding of how teachers and pupils perceive factors affecting the academic performance of pupils with HI. Additionally, the study would help to establish knowledge gaps in the learning of pupils with HI (if any), requiring attention of education of pupils providers. Further, it was hoped that teachers, head teachers, education managers and indeed cooperating partners involved in education of HI, in the study districts might find the outcome of the study more beneficial thereby, contributing to the improvement of academic learning outcomes of pupils with HI in Zambia.

## **4. Theoretical Framework**

This study was guided by the instructional model by Frew and Klein (2009). Instructional model centres on how to improve the learning outcomes of learners with diverse learning needs in the classrooms. It proposes the use of multiple-purpose instructional approaches and resources that offer alternatives to knowledge and skill acquisition with stress on the use of varied senses in learning. The model proposes the use of approaches that helps to identify pupils' relevant predispositions, specify objectives and sequence learning. The model is seen to be relevant to the study in that, it centres on the use of multiple senses in learning and provides alternatives to learning. In the case of this study, limitations imposed on pupils due to hearing loss, are accommodated by the use of alternative approaches which increases the accessibility of curriculum content. Therefore, the theory was perceived to be relevant to the study, with the potential of contributing to

understanding of perceptions held by the teachers and pupils on academic success among pupils with HI in Zambian schools.

## **5. Materials and Method**

The study employed a case study research design supported by qualitative approaches. The selected research design allowed an in-depth study of the perceptions held by teachers and pupils on factors affecting the academic performance of pupils with HI in selected schools of Muchinga and Northern provinces in Zambia. Creswell and Plano (2007: 58) define a research design as the “*procedures for collecting, analyzing, interpreting and reporting data in research studies.*” It is viewed as an overall plan for connecting the conceptual research problems with the pertinent (and achievable) empirical data. In other words, the research design sets the procedure for the required data, the methods to be applied, and to collect and analyze the data to answer the research question (Grey, 2014). The study, therefore, adopted a case study design in which a qualitative approach was used. A case study research design was chosen for this study because it enabled the researchers to gain an in-depth understanding of perceptions held by teachers and pupils on factors affecting the academic performance of pupils with HI in schools.

### **5.1 Population**

The target population comprised pupils with hearing impairment, head teachers and pupils with hearing impairment in two purposively selected special secondary schools and provinces, namely: Muchinga and Northern provinces in Zambia.

### **5.2 Sample and Sampling Procedures**

The sample consisted of 22 participants, broken down as follows: 10 pupils with HI were selected from special schools offering secondary education. 10 teachers of pupils with HI and 2 head teachers, were purposively selected to participate in the study. These have been selected because of their wide experiences in the learning and assessment of pupils with HI. The researchers felt that these categories of participants had the ability to bring to the study valid contributions.

The study applied a expert purposive sampling procedure in the selection of participants. This approach entailed that specific participants with adequate knowledge and experience be the target to provide information as opposed to those randomly selected. Expert case sampling was used in which the sample included the most expert cases of pupils with HI and teachers of pupils with HI and supplemented by voices of headteachers. The headteachers further, played an important role in the identification of pupils with HI to participate in FGD and indeed teachers of pupils with HI to participate in the study.

### 5.3 Instrumentation

Interviews were used in order to get generate the required information from participants. According to Hall (2017), interviews use an interview guide with questions developed in advance to guide discussion while others were a product of prompts. The instrument used allowed the researchers to stray from the interview guide, asking follow-up questions as the interview progressed in order to get more information. Interviews provide an opportunity for the researchers to carefully interact with the participants. This helped to create some level of trust as well as maximized the information generated in the process. This type of interview was chosen because it is easy and reliable as both persons can see each other and if the participant does not understand the question, it provided time and space for the researchers to rephrase the questions. The nature of questions asked during interviews was inquisitive, exploratory and analytical with a clear focus on the knowledge and experiences of participants on the study subject. During the interviews, the researchers used a voice recorder with permission from the participants. The recorded information was, transcribed into writing ready for coding of data.

Document analysis was also used in this study, this technique is a form of qualitative research in which documents are read and relevant information is interpreted to give voice and meaning to the study topic (Cresswell, 2014). In the analyse of documents, relevant information was got and coded where applicable leading to themes similar to how focus group or interview transcripts were analysed. In order to arrive at a convergence, researchers often use two resources that is, data sources and methods. The purpose of using triangulation in this study was to provide some kind of confluence credibility in the data generated (Cresswell, 2014). The approach equally, helped to reduce the impact of the potential of biasness in the data. This was achieved by examining information collected through different methods. This study used document analysis in order to check on pupils with hearing impairment academic records available in schools.

The study also employed a focus group discussion in the collection of data. A focus group discussion is an interactive event guided by an interviewer to stimulate participants. It guides the discussion and set a tone for probing in order to obtain highly detailed and specific group data that meet the set objectives (Shedlin and Schreiber, 1994). It allows for richness and flexibility in the collection of data as well as allowing for the extensive exploration of the research problem (Creswell, 2014). In this study, a focus group discussion guide was designed and used to collect qualitative data from teachers and pupils with hearing impairment. This tool was chosen because it enabled the researcher to collect data through face-to-face interaction with pupils with HI. A focus group discussion guide was used to pupil participants in order to obtain the required information. This instrument (focus group discussion guide) enabled participants to freely express themselves beyond the guided instrument. One major weakness of this instrument was shyness of some of the participants especially female pupils with hearing impairment. Nonetheless, the researcher motivated the participants to avoid being shy and participate actively, this was achieved.

#### **5.4 Data Analysis**

Analysis of data generated from interviews and focus group discussions were informed by a thematic analysis approach which considered participants' subjective interpretation of their considered perceptions of the academic performance of pupils with HI. During analysis, the narratives from the participants were thoroughly read through to get the general meaning and then sorted manually to identify the codes and near codes. These codes and near codes led to the identification of the emerging and recurring themes to form categories which guided the narratives provided as findings.

#### **5.5 Ethical Considerations**

Ethical clearance procedures were followed. The participants were informed of the voluntary nature of the study, the anonymity of their responses and indeed, the purpose of the study. Considering that the issues of individuals with a disability are quite sensitive in Zambia, the researchers had to get ethical clearance from the University of Zambia, Humanities and Social Sciences Ethical Committee. Before interviews and focus group discussions were conducted, the participants were required to sign a consent form. Further, the researchers, also ensured that all the participants were notified of the voluntary participation and assured that confidentiality and anonymity would be observed.

#### **5.6 Trustworthiness**

In order to ensure the trustworthiness of the data generated, a pilot study was conducted using developed research instruments with 4 pupils with hearing, one teacher of pupils with HI and one headteacher. Based on recommendations arising from the pilot study, the interview guide and focus group discussion were further adjusted in readiness for actual data collection. In a bid to enhance the trustworthiness of the data, the 4 aspects pointing to trustworthiness were taken into account. These were credibility, dependability, confirmability and transferability. The researchers' aim was to enhance, the credibility or plausibility of the data generated. The effort was made to align the interview guides with the theoretical framework and through the pilot study strengthened the research tool used in the study. In order to enhance the dependability or replicability of the study, the same instruments were employed by the researchers. Further, the use of a small, non-probability sample in the study, still allowed transferability or generalization of the results to the wider population.

### **6. Results**

We now present the results of the study conducted from 2021 to 2022 on teachers' and pupils' perceptions on factors affecting the academic performance of pupils with HI in selected primary schools in Muchinga and Northern provinces in Zambia.



### 6.1 Factors Affecting Academic Performance of Pupils with HI

One of the set objectives was on factors affecting academic work of pupils with HI, Arising from the study, several factors affecting the academic performance of pupils with HI were identified. The study identified; limited academic readinees among HI, or poor academic background, insufficient resources, clouded school curriculum, variations in sign language, ill-preparation of teachers in sign language, lack of sign language interpreters, poor learning environment and negative attitudes toward education among pupils with HI themselves as well as teachers. These factors are perceived to have contributed to pupils lowly learning outcomes. In support of these results, a participant (T3) had this to say:

**Excerpt 1:** *“So, my experience as a teacher for special learners like those with hearing impairment has been very bad, teachers are not competent enough in sign language hence, pupils, are not able to do well.”* (T3: 26-02-20)

Contributing to the discussion during FGD, one participant (P4) observed that:

**Excerpt 2:** *“I believe that it is not an easy thing teaching pupils with hearing impairment because we have no materials to use in teaching and we are made to repeat almost everything for them to understand. No wonder these children do not do well in classes.”* (P4: 02-02-20)

In the course of the interview, one participant (T5) echoed:

**Excerpt 3:** *“You find that even after putting in so much effort to make them understand others still don’t do well when it comes to academic work. So, I now perceive them hard to teach pupils, that is why their performance has been very bad. But because I chose to be a teacher and am passionate about my job, I love teaching them despite it being tiresome sometimes. That’s what I can say about my experience.”* (T5: 24.02.2020)

These results were supported by another participant (P8) during FGD, who had this to say:

**Excerpt 4:** *“I perceive pupils with HI to have a very poor educational background. From my experience, usually the pupils with hearing impairments underperform as compared to other hearing pupils because of their poor educational background.”* (P8: 27-02-20)

Contributing to the same issue during an interview, one participant (T2) observed that:

**Excerpt 5:** *“I feel some of the reasons could be ill-preparation of teachers in the use of sign language, poor educational background and insufficient instructional resources which*

*contribute to the low academic performance of pupils with hearing impaired.” (T2; 03-03-20)*

Additionally, one participant (P9), during FGD, noted,

**Excerpt 6:** *“...teachers do not seem to have interest in learning of pupils with hearing impaired in that they hardly pay attention to unique learning needs of the pupils as lesson are presented, sometimes they don’t understand what teacher teaching and no attention is given” (P9: 5-3-20)*

With regards to the attitude of pupils with hearing impairment towards education, one participant (T1) reported that they tended to look down upon themselves as evidenced in:

**Excerpt 7:** *“I feel like these pupils most of the time they look themselves down to the point that they even convince themselves that even if they work hard nothing can happen in their academic work” (T1; 26.02.2020)*

This view was supported during FGD by one participant (P8) who observed:

**Excerpt 8:** *“We have the same abilities in academic achievements just like with every child. We are very much capable of doing extraordinary things that even our hearing counterparts cannot do, just that they have a hearing advantage and self-confidence over us. If only we could learn through sign language.” (P8: 28.02.2020)*

Contributing to the same discussion during, an interview one participant (HT2) reported:

**Excerpt 9:** *“From my experience as an administrator since I was transferred to this school which has a special unit, it is like the pupils with hearing impairment feel much more comfortable interacting amongst themselves than when they are with the hearing peers. This seems to reduce on chances of learning from others hence, the poor performance we continue to see.” (HT2: 02.03.2020)*

From the above results, it is clear that some teachers have a preconceived belief that pupils with HI are difficult to teach because of their condition. It is also evident from the results that pupils with HI have difficulties in accessing the curriculum content resulting in their not performing well in school. The study has cited several factors contributing to school failures among pupils with HI including; failure to pay much attention to academic work, poor academic background, insufficient resources, lack of sign language interpreters and exposure clouded school curriculum. It was equally noted that variations in sign language, ill-preparation of teachers (inadequate sign language

skills,) unfriendly learning infrastructure and negative attitudes toward learning, all contribute to observed low academic achievement among pupils with HI. The low performance in academic work stands as a product of a combination of negative factors surrounding the learning of pupils with HI.

## 8.2 Teachers' and Pupils' Perceptions of Factors Affecting Performance

It was evident from the study that teachers and pupils with HI held diverse perceptions of factors affecting the academic work of pupils with HI. While few participants did not agree with identified factors affecting the academic work of the pupils with HI, the majority of them, support the view of them having negative effects on the learning outcomes. It was clear, that teachers and pupils with HI believe their presence in schools was a waste of time for peers; pupils lacked self-esteem hence, were not able to experience unintentional learning interaction with peers. Teachers worrying about how to communicate with pupils with HI in class also emerged as a sign of inadequate sign language skills to interact with HI. Other feelings about performance among participants included; the presence of a rigidity school curriculum and poor assessment practices-teachers' in-competences in communication with pupils with HI. These results were evidenced by points put forward during FGD such as one participant (T5) who noted:

**Excerpt 10:** *"I have been at this school now for two years. The experience has somehow been not good for us pupils who have hearing problems, feel it is a waste of time for them to learn certain subjects like mathematics since can't pass them, that is they have already given up."* (T5: 23.02.20)

Adding to the results, during FGD one participant (P1) observed:

**Excerpt 11:** *"The time I came to this school in grade eight my fellow pupils used to avoid me because it was difficult to communicate with each other, that made me start worrying. Even in class it used to be difficult for teachers to interact with me hence, used to concentrate on hearing pupils in class."* (P1: 19-02-22)

In support of the above findings, three participants noted:

**Excerpt 12:** *"In our views, the performance of pupils with HI has been poor because of unfriendly school infrastructure, inappropriate resources, unclear school policies and lack of hearing devices. These negatively affected performance of pupils with HI."* (T6: 28.02.2020).

This view was further echoed by one participant (T10) who believed:

**Excerpt 13:** *"I am not a special education teacher and I don't know sign language but teach an inclusive class. So, what helps me is that, the pupils who have the idea of sign*

*language assist their hearing impaired peers..... it takes time for hearing impaired pupils to get the concepts of the lesson because the pupils who help them are not competent in sign language, just like me, no wonder their poor results.” (T10; 25.02.2020)*

Arising from these findings, is evident teachers and pupils hold different perceptions on factors affecting the academic work of pupils with HI. Some feel it had more to do with communication, lack of self-esteem, and weak partnerships while others believe it had more to do with uninstitutional readiness for learning of pupils with HI. They felt that institutions accommodating pupils with HI are not quite ready to provide quality education for such learners as they are short of meeting basic learning needs of such pupils.

### **8.3 Efforts Being Made to Address Diverse Perceptions**

On efforts being made to address varied perceptions among teachers and pupils on the low performance of pupils with HI, the study noted: the promotion of school-based teachers’ professional meetings; allowing hearing peers to learn sign language; regular supply of instructional resources; teaching of sign language as an academic subject to both hearing and non-hearing pupils in the schools to improve communication. This is evidenced in the contribution made by one participant (T4) who said:

**Excerpt 14:** *“The teachers observed pupils with HI, more time was being given to teaching on the time table.” (T4: 20-02-20)*

Adding to these results during an interview one participant T3 reported:

**Excerpt 15:** *“...of late, the school administration has been making efforts to provide some of the basic teaching and learning materials. I am happy about this development it will improve the quality of our work.” (T3: 23-02-2020)*

In support of the results, one participant (P8) in FGD noted:

**Excerpt 16:** *“more and more hearing peers have developed an interest in sign language, am sure this will help to increase interactions with our peers.” (P8: 28-02-2020)*

It appears that school administration is increasingly becoming aware of the plight of pupils with HI and why performance in academic work continues to be low. In response to the challenges, more and more school-based teachers’ meetings on how to teach pupils with HI are being conducted. It is noted of the interest among hearing peers is to learn sign language with a view to improving in and outside classroom communication with peers. Besides these efforts, an attempt is being made to improve on supply of basic instructional resources hoping to raise the academic success of pupils with HI in the study schools.

## 9. Discussion

### 9.1 Factors Affecting Academic Performance of Pupils with HI

In the results under objective one, it was found that teachers reported several factors believed to have affected the academic achievement of pupils with HI. It was found that pupils had difficulties accessing the curriculum content. It was also found that the school curriculum was very wide and rigidity. Further, pupils are found to be slow in grasping concepts making it difficult for teachers to teach sufficient content for pupils to face, for example, public examinations. Other factors included; failing to pay attention to their academic work; insufficient instructional resources and a clouded school curriculum. Additionally, it was found that teachers were ill-prepared in sign language (ie; had inadequate sign language skills, unfriendly learning environment and negative attitudes toward learning to have equally led to low school success among pupils with HI. Further, learning subjects such as mathematics and science due to their abstract nature contributed to low academic attainment among pupils with HI. This is compounded by the language demands of mathematics and science instructions. The low academic performance in the academic work stands is, therefore, believed to be a product of a combination of factors surrounding the learning of pupils with HI and not just an issue of lack of competence in the use of sign language.

These results were in line with Manchishi (2015), who reported challenges in the use of total communication instead of purely sign language in classroom instructions. For example, in mathematics and science, instructional techniques rely on the use of verbs, and adverbs; areas where the pupils with HI have constant challenges. Additionally, some topics are complicated, with long formulas for pupils with HI to follow instructions. Some words are difficult to comprehend thereby affecting the chance of acquiring knowledge and skills required of them to perform better in daily academic work. Manchishi (2015) equally, notes inadequacies in teacher competence in sign language which contributed to low performance. Kumatongo & Muzata (2021), reported that teachers with HI had mixed feelings towards the academic success of Pupils with HI and perceived their academic performance as being influenced by factors such as the inability to understand concepts as well as limited classroom interactions.

### 9.2 Teachers' and Pupils' Perceptions

On objective two it was found that teachers and pupils with HI held varied perceptions of factors resulting in low academic success. Some teachers and pupils believe pupils with HI, are just like any other pupils with the potential to academically succeed when the right learning environment was provided. Other teachers and pupils however believe low academic performance, was significantly a product of communication barriers, lack of self-esteem, and weak partnerships. Other participants believe low performance had more to do with the institutional readiness of schools and teachers, they were not just prepared for such learners. Teachers and pupils' participants, further, believe- especially those who showed confidence in the HI pupils of them succeeding, that with increasing

support pupils had the potential of succeeding academically. These perceptions imply that the majority of teachers and pupils believe pupils with HI have the same abilities to experience educational achievements if only supported by the school environment. They are capable of doing extraordinary things like their peers given a chance to learn.

On additional factors leading to the perception held by teachers and pupils over the academic performance of pupils with HI, some participants felt that pupils with HI cannot do well no matter what the teachers do, and their presence in the classroom was a waste of learning time for more-able peers. As a result, some teachers and pupils tend to refuse to academically and socially interact with pupils with HI. This limit the chances for unintentional learning necessary for academic readiness. Further, teachers were of the view, that required diverse teaching methods to meet the learning needs of pupils with HI. The participants' conversational approaches such; as question and answer, teacher exposition, demonstration and observation methods were not supportive of the learning of pupils with HI. They felt that such approaches did not contribute much to academic readiness among pupils with HI. Pupils with HI continue to be less engaged in the academic life of the schools.

These results agree with Bell (2013) who reported, that pupils with HI prefer to learn through blended approaches built on a diversity of senses made available to aid learning. The teachers in the study delieved in total sign language as a better language of instruction than total communication used in classroom interaction. Use of total communication is believed to negatively affect learning thus contributing to poor performance among HI learners as echoed by Kanyanta (2003). Teachers and pupils perceive, teachers' lack of competence in total sign language, failure to localize the curriculum, inadequate learning resources as well as negative self-image of pupils with HI as major contributors to low academic success.

### **9.3 Efforts Being Made on Diverse Perceptions**

On objective three, it was evident from the results, that schools are becoming increasingly aware of the plight of pupils with HI regards academic work, especially the low performance in public examinations. As a result, more school-based capacity-building meetings on how to teach pupils with HI, on sign language coomunication, how to build self-confidence in them and motivate pupils with HI to learn are encouraged. The increasing desire among the hearing peers to learn sign language is appreciated as it has the potential of contributing to academic interactions, an avenue for academic success. The study noted the improved schools' commitment to the supply of instructional resources to support the learning of pupils, a stepping stone to academic success. Schools have also recorded upward adjustments in the budget allocated for school activities yearly. For example, provisions for the education of pupils with HI. Additionally, it was found that schools were providing more assessment time than before likely to contribute to improved performance. The results equally, revealed that pupils who did not have hearing aid devices were being referred to nearby medical facilities for assessment and possible assistance with devices, necessary for academic and social interactions.

Although there were few qualified teachers in the teaching of pupils with HI, regular teachers were being oriented in the use of sign language through teachers' group meetings as an aspect of developing staff in sign language.

In line with these results, Hallahan et al. (2013) felt that pupils with HI need more learning time to understand concepts and be able to do well as compared to their hearing peers. Additionally the present study, calls for the reduction in language barriers to enable Learners with HI effectively interact with the school curriculum and succeed in school. This view is in agreement with Agyire-Tettey *et al.* (2017) who show that challenges which hinder pupils with HI academic success emanate from different systems and factors including pupils themselves, their parents and other institutional barriers that exist in deaf education. The study feels these barriers can be addressed using teamwork with other stakeholders such as parents and the local community. Also in support of these findings, Ntinda *et al.* (2019) note limited teachers' experience and gaps in professional competencies to teach the mainstream curriculum involving pupils with HI. The present study calls for further increased competence in sign language among teachers for them to help pupils with HI experience school success.

These results are also supported by a study by Kalya (2020) from Kenya which aimed at establishing the effect of Kenyan Sign Language (KSL) on the academic performance of hearing impaired learners in Kedowa Special School, Kericho Country, Kenya. The findings indicate that KSL was not used in the schools due to a lack of teaching materials and resources like books. The teachers who teach in KSL did not have adequate training in Kenya Sign language. This was seen as a big setback and called for the provision of adequate teaching and learning resources for special schools for the deaf for successful implementation of KSL and improvement of academic achievement of pupils with HI.

In line with the results of the present study, a study by Ntinda, Thwala and Tfungi (2019) reported that the experiences of teachers of the deaf and hard-of-hearing students in a special needs high school for the deaf in Eswatini contributed to the improvement in learning of pupils with HI. Its findings showed that teachers experience gaps in professional competencies to teach the mainstream curriculum for which they needed further education and training. Based on present study, variations in sign language signs, does impact differently on learner engagement thereby hindering teachers' communication with the hearing impaired and hard-of-hearing students in schools. It further revealed that teachers had started attending in-service professional training which included collaboration, consultation, assessment instruments and language skills as a way of improving education delivery to pupils with HI. It is against this that the present study believes schools are aware of challenges affecting the academic achievement of pupils with HI and are working towards a better practice to support the academic progress of such pupils in selected primary schools in Muchinga and Northern provinces in Zambia.

## 10. Conclusion

By considering the results of this study, though they may be not generalizable due to narrowness in scope, it is fair to argue that the results present a significant portion of the perceptions held by teachers and pupils on the academic achievement of pupils with HI in selected primary schools in Zambia. It is evident from the outcome of the study, that teachers and pupils feel pupils with HI face numerous challenges ranging from; shortage of learning resources, lack of competence in the use of sign language by teachers, clouded school curriculum to insufficient learning time which needed to be resolved for them to experience academic success. It is clear that schools have not been able to provide sufficient support to pupils with HI for them to effectively benefit from their presence in the school learning environment. It can on the whole be said that, teachers and pupils, are under pressure in their attempt to improve the academic performance of pupils with HI by adopting appropriate strategies supportive of the academic life of pupils with HI in the study schools.

## 11. Recommendations

Based on the results cited above, the following recommendations are made:

- 1) Schools, parents and the community work together to provide a conducive learning environment, supply learning resources and allocate more learning time.
- 2) The Ministry of Education and schools should provide adequate training to teachers in sign language for them competently support academic work of pupils with HI.
- 3) Schools should ensure teachers and pupils develop a positive attitude towards the academic work of all learners including those with HI.

## Conflict of Interest Statement

The authors declare no conflicts of interest.

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