ACADEMIC PERFORMANCE AMONG STUDENTS OF HEARING IMPAIRMENT: A CASE STUDY OF WAKISO SECONDARY SCHOOL FOR THE DEAF

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHELOR OF SPECIAL NEEDS EDUCATION DEGREE OF KAMPALA INTERNATIONAL UNIVERSITY

SEPTEMBER 2008

DECLARATION

I, Theresa. A. Akorimo, declare that this work has not been submitted for the award of a degree in this or any other University.

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APPROVAL

This is to certify that this work has been submitted for examination with my approval as supervisor.

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15-09-08

Date

Signed:

DEDICATION

This work is dedicated to my parents, the late Ernest Ebukali Okwi, my mother the late Zerida Akol, my dear husband Mr. Sam S. Akorimo and my dear children Frida, Isaac, Joseph, Michael and Grace. Finally, but not least I dedicate this work to all the teachers of Wakiso S.S for the Deaf, who even under tough conditions have continued to serve the deaf children of this nation. Without the teachers there would no leaders of tomorrow. May the Almighty God, reward the work of your hands. Amen.

ACKNOWLEDGEMENT

I would like to express my sincere heartfelt gratitude to a number of people and organisations whose assistance and co-operation enabled me to complete this programme.

The very best of my appreciation goes to Mr. Laaki Samson who earnestly supervised my work to the very successful end. You made the course a possibility.

Special tribute goes to Prof. Jethro. A. Opolot who introduced to me to the study of research and statistical methods, his efforts are greatly appreciated.

To Kampala Internal University, for introducing Special Needs Education Course in its programmes without which I would not have had the opportunity to undergo this study.

I wish to extend my heart full appreciation to my parent Ministry of Education and Sports for establishing Wakiso S.S for the Deaf and posting me there as a Head-teacher. This exposed me to Special Needs Education which has led to this study.

I must pay special tribute to Wakiso S.S. for the Deaf, Board of Governors for economically facilitating my study.

I would like to specially thank every one else who helped with the data collection.

Finally, Praise, Glory and Honour are to the Almighty God. For with God things don't just happen, but with Him everything is planned and it is the reason that I am what I am in Special Needs Education.

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ABSTRACT

The purpose of this study was to investigate factors that determine the academic performance of students with hearing impairment.

Student class reports were studied for term one and term two of 2008. And multiple observation sessions were carried out during the same period.

The research questions were:

- 1. What is the nature of H.I. suffered by H.I. Students?
- 2. What difficulties do students of H.I. face with academic learning?
- 3. What are the teacher's qualifications and training?

The study was an exploratory qualitative case study design and the instruments used for data collection were documents of any evidence of students past results, and an observation guide. The data was analyzed both qualitatively and quantatively using frequency counts, percentages and tables.

The results of the study were as follows.

- a) The nature of hearing impairment determines the academic performance of H.I.
- b) Students of H.I. have difficulties in their academic learning as a result of H.I.
- c) The teachers' qualifications and training determine the academic performance of students with H.I.

Recommendations

1. Educational institutions of students with HI should employee both visually based mode of communication and encourage the HOH children to use hearing aids so that the auditory oral mode can be used in the

class rooms. It is through audition and not vision that English language development can be developed most effectively and thus can serve as the basis for English literacy. And it is reading capability that is the key to educational accomplishments and vocational success in our modern age. The implication of this point of view is that in educating HOH children, it is first necessary to ensure the optimum use of their residual hearing. Only after this is accomplished should other remediation services be used. In no case, should any of these other services be offered as substitutes for an optimal auditory management programme

2.Ministry of Education and Sports should support the teachers in acquiring skills in the monitoring of hearing aids and auditory training systems so that HOH children can be helped to develop speech and language skills primarily through the auditory mode and employs a primarily auditory system of communication. Educationally, when HOH children are treated as deaf children, the visual channel receives the primary educational emphasis rather than the auditory channel thus the emphasis in the use of sign language in many educational institutions with students of HI.

3. The Ministry of Education and Sports should work hand in hand with the Ministry of Health to formulate deliberate programs to create awareness on the causes of hearing impairment and how to prevent them just like malaria programmes are being disseminated with the communities

4.Preligually Deaf students in particular have some difficulties in English and may find difficulty to understand the meaning of questions in a typical examination paper particularly when they communicate in sign language which a non-grammatical language. Questions should therefore be phrased clearly and the students understanding of them should be checked at the outset. Invigilators must also ensure that spoken instructions are available in written or in signed form.. For some of them sign language may be their first language and where oral or written communication is difficult the problem must be regarded as one of understanding. Assignments should be outlined in clear jargon free, short sentences.

5. Ministry of Education and Sports to fund all the activities in HI schools to enable the schools procure the necessary instructional materials for effective learning and teaching of HI students.

Areas of Further Research.

More research regarding factors that determine students of H.I. academic performance should be carried among others on the following:

- a) Whether these findings pertain to other H.I. educational institutions.
- b) Students' performance and availability of special educational services in the HI educational institutions.
- c) Students socio-economic status, syllabus coverage, the setting of examinations and their marking,

CHAPTER ONE

INTRODUCTION

1.0 Background

Academic performance is being able to study and see how facts fit together and form a larger pattern of knowledge, being able to think for yourself in relation to the facts and thirdly being able to communicate your knowledge verbally or down on paper(www .wikipedia,org/telecentre).

Academic performance is measured by examinations which have been endorsed in the field of education. Examinations in fact form an important part of society's mechanisms for allocating labour among professions and jobs. In this country as it may be the case elsewhere examinations are held in high regard. The results are seen as a screening device that helps to determine the allocation of human resources in the economy. Arising from this belief in respect of examinations those who have engaged in them have no alternative but to show good performance. It is in view of this concern that this study is designed to look at the academic performance of the Hearing Impaired (HI) students.

HI is a term that refers to any degree or type of hearing loss. Hearing loss occurs when something impedes the translation of sound waves into natural impulses which the brain processes as information Mayer. (1990). It results from any damage or mal-development of any part of the hearing system on which the sensory mechanism of hearing depends on.

Hearing is a sense that most of us take for granted. And yet a growing child from the beginning of life adapts to his environment on the basis of experiences he perceives through his sense modalities of hearing, sight, touch, taste and smell. However, of the five senses the two most crucial ones needed for acquiring information about the world are hearing and vision.

Of this two, the sensory deprivation of hearing results in more serious education handicap.

It begins to function as soon as we are born and we use it continuously thereafter for a multitude of purposes. We use it for warning signals and above all else we use hearing for communication. We learn to understand speech and to use speech through hearing for example children all over the world are busy learning the language of their culture and they do this through the use of their ears. A child with hearing loss is like a block is thrown in the path of the development of speech and language that affects the child's total functioning and thinking.

Furthermore, before children learn to read, they learn sounds of their language by listening and speaking. These skills provide the foundation for later literacy. Thus, a child with hearing impairment has trouble processing or expressing language and is likely to have difficulty learning to read and write. Thus, the significant consequence of hearing impairment is being cut off from the means of acquiring and transmitting language that most people enjoy, affecting the development of speech, language, communication and learning Asha (2005).

A look at the academic performance of HI students at National Examinations shows that generally they are below that of their hearing peers.

TABLE 1: PLE RESULTS OVER OF THE STUDENTS IN WAKISO S.S FOR THE DEAF.

YEAR	DIV.1	DIV.2	DIV.3	DIV.4	DIV.4	X	TOTAL
1999	00	02	02	05	00	01	10
2002	00	00	05	02	07	00	14
2005	00	02	01	04	26	01	34
2007	00	00	00	01	10	00	11
Total	00	04	08	43	43	02	69

Source: UNEB result slips issued to PLE candidates in the school

Of the 69 primary HI candidates presented for national examinations in the four years under study 62% failed, 17% passed in division four, while 11% passed in division three, 5% passed in division two and none passed in division one. This clearly indicates poor academic performance of the HI students meaning they will not compete favourably for jobs in the open market.

1.1 Statement of the Problem

To teach children who hear only partially or not at all is truly an educational challenge. The continued depression of academic achievement in HI students is of serious concern to all educators and professionals in the field of deafness. One need only watch a television *programme without the sound or with very faint and distorted sound to* gain some realization of what hearing impaired students experience in the classroom. It is therefore imperative that a study to understand the factors that determine the academic performance of the HI students is carried out.

1.2 Purpose of the study

This study is designed to understand the factors that determine the academic performance of the hearing impaired students.

1.3 Objectives of the study

This study is designed to establish

- The nature of hearing impairment of HI students and how it affects the academic performance.
- The difficulties faced by HI students in their academic performance
- The qualifications and training necessary for the teachers of HI students.

1.4 Scope of the study

The study will be restricted to Wakiso Secondary School for Deaf while focusing on the factors that determine the academic performance of HI students in general.

1.5 Significance of the study

It is hoped that the findings of this study will be of some value to:

- The management, the teachers , the parents and students of Wakiso S.S. for the deaf
- HI students learning and teaching which may presumably improve and so will their academic performance.
- To other schools of HI Students
- To policy makers in education especially those involved in special needs education that include Ministry of Education and Sports officials, District Education Officers and Inspectors of Schools.
- Any other researcher since the findings will contribute to new knowledge in HI students' academic performance.

1.6 Definition of key terms

A number of terms have been used in this study and each of them is defined. However, if should not be taken to imply that any other definitions are of less importance.

ACADEMIC PERFORMANCE

In this study refers to:

- Ability to study and see how facts fit together to form larger patterns of knowledge,
- Ability to think for yourself in relation to the facts, and
- Ability to communicate your knowledge verbally or down on paper.

Age of onset is the age at which the hearing loss occurs.

Auditory disability exists when there a defect in one or more parts of the ear and its associated nerve part ways reading from the ear to the brain that to prevents the child from adequately hearing, perceiving, or attending to faint speech, ordinary conversational speech or loud speech. **Causal factors** are the various causes of hearing impairment. They include diseases, accidents and genetic factors.

Communication disability is the limitation in process of speech or hearing which impedes educational process and necessitates the procurement of supportive services or programmes.

Deafness is the limitation in the process of hearing which in impedes the educational process and necessitates the procurement of supportive services or programmes. Students in this category usually require oral or sign language interpreters.

Degree of hearing impairment is the extent of the hearing loss.

Endogenous refers to causes which have their origin in the genetic characteristics of the individual. The hearing loss is hereditary which means that it is passed from parent to child.

Exogenous refers to the hearing loss causes that are from external agents such as disease, drugs, accidents, or loud noises.

Hearing impairment is an umbrella term that refers to all types and degrees of hearing loss.

Hearing loss is the absence of the hearing sense.

Impairment is damage to any part of the body through accident, disease or genetic factors or other causes that leads to the loss or weakening of the part affected.

Nature of hearing impairment refers to the classifications of hearing impairment, namely age of onset, degree of impairment and causal factors.

Post lingual period is the age after a child has established speech and language.

Pre-lingual period is the before the first two to three years of age when children acquire language.

Qualification is a special skill that fits a person for some work or position.

Student is one who engages in any learning activity. In this study, it refers to a secondary school child.

Teacher is a person who facilitates learners to learn.

The deaf are those whose hearing loss is so severe at birth and in the pre-lingual period that it precludes the normal spontaneous development of spoken language.

The partially hearing are those whose hearing loss in the pre-lingual period, or later, is not of sufficient severity to preclude the development of some spoken language and those who have normal hearing in the pre-lingual period but acquired hearing loss later.

Training is the process of helping teachers acquire attitudes, knowledge and skills that they need so as to carry out their duties and responsibilities as teachers.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews some related literature on the factors that influence the academic learning of the students with hearing impairments, namely:-the nature of the hearing impairment (HI), the difficulties faced by the HI students, the HI students teachers' qualifications and training.

2.1 Theoretical Framework

Historically, there have been a variety of perspectives regarding the impact of deafness (HI) on the development of intellect, learning and brain organization in pre-lingually deaf children.

This perspective unfortunately was linked to a broader view of deaf people as not only different but also cognitively deficient relative to hearing people. In a large number of studies, HI and hearing subjects were compared using measures designed for and normed on hearing populations without consideration of communication needs or the possible effects of early language deprivation in hearing households. While deaf people as a group often did score lower on such measures, there were multiple confounding factors that could have explained the differences without having to assume any inherent deficiencies in the deaf populations' intellectual or cognitive functioning.

HI people in fact, have been found to yield the same distribution of intelligence scores as hearing people on tests in which language skills are less directly integral to the success or failure of the task. Therefore, deafness per se does not make one "deficient."

While the deficiency model is not very useful in understanding differences between hearing and HI people, more recent, better

conceptualized research, and increased understanding, and sensitivity to assessment biases, have provided documentation that differences do exist between HI and hearing populations). Results demonstrate that deaf people possess superior skills in some areas and hearing people *perform better in others. Differences between the populations are also* evident in studies of brain organization, localisation of language functioning, visual perception of language, and compensatory cognitive functioning as a function of sensory deprivation (Corina, et. al, 1992; Neville, 1990). Thus, there appears to be clear evidence that hearing and HI people do perceive and interpret their world experiences somewhat differently. What is less clear is how these differences affect HI children's development and what implications they may have for promoting HI children's optimal achievement.

Perhaps, not surprisingly, changes in views of cognitive functioning among HI people have been accompanied by changes in how HI children are educated. Instructional methods thus have undergone significant transformation over the last 25 years moving from the widely accepted oralist approach in which children were taught in and required to learn only spoken language to the "revolution" of Total Communication (TC), combined spoken language, sign which language and sound amplification. The TC approach to education has led to some improvement over oral approaches resulting in moderate increases in academic achievement and language scores as well as social adjustment. However, their achievement scores continue to lag behind those of hearing children.

The continued depression of achievement in deaf students is of serious concern to all educators and professionals especially in the field of deafness. It raises multiple questions and concerns not only regarding their ability to find appropriate teaching methods for HI children, but also how we can identify those students who may be falling behind in school because they have additional learning problems that are undetected, unaddressed and possibly unrelated to children's hearing losses and possible language deprivation.

This study is therefore designed to critically study and understand the factors that come into play in the academic performance of the hearing impaired students with a view of finding answers to the problem.

2.2 The nature of the hearing impairment (HI)

According to Mayer (1990), HI is an umbrella term covering all types of hearing loss ranging from mild to profound. It can either be partial or complete hearing loss. Several factors are involved in describing a hearing loss and understanding the implications such loss will have. These factors include: the age at which the loss occurs (age of on set), the extent of the loss and the causes of the loss.

Age of onset

The age of onset simply means the age at which the hearing loss occurred. It is of critical importance because children acquire language during the first three years of life. Normally the loss of hearing which occurs at or before birth or in the first year or two of life before language develops is most handicapping of all because of the effects on language acquisition.

The relevance of the age of onset in relation to ability to speak and to hear in classifying the hearing loss is observed by Silver-man. and Lane (1990). They speak of the congenitally deaf as those born deaf and in whom the sense of hearing is non functional, the pre-lingually hearing impaired as the hearing loss which is either present at birth or occurs before language has been established. And the post -lingually hearing impaired as the hearing loss that occurs after the establishment of speech and language. The other term that means the same is the



adventitiously deaf as those born with normal hearing but in whom hearing loss occurs later through accident or illness.

Degree of hearing impairment

The other factor of greatest importance to the educator is the degree of hearing impairment. This simply refers to the extent of hearing loss. It can either be partial or complete hearing loss. To clarify the difference in the degree of hearing impairment, two terms are used; the partially hearing impaired and the deaf.

Partially hearing or Hard of Hearing (HOH) is a hearing loss in the prelingual period or later that is not so severe to pre-clude the development of spoken language and those who have normal hearing in the prelingual period but acquire hearing loss later. The term "partially hearing" is used in the United Kingdom (UK) while the term hard of hearing (HOH) is used in the United States (US) but the two terms are used interchangeably.

The term deaf on the other hand is the hearing loss that is so severe at birth and in the pre-lingual period (before two to three years of age) that it pre-cludes the normal spontaneous development of spoken language.

Causal factors

Hearing impairment may also be categorized according to causal factors by use of the terms endogenous and exogenous. McConnell (1999) defines endogenous as the conditions which have their origin in the genetic characteristics of the individual. That is to say the hearing loss is *transmitted from parents to child as an inherited trait. For example* otosclerosis is a disease of the middle ear causing bony taxation of the stapes foot plate. This disease is known to be hereditary but it rarely occurs before young adulthood.

The sensory process of hearing depends on an intact peripheral mechanism which is the normal functioning of the three parts of the ear

- outer, middle and inner ear and its associated nerve pathways leading the ear to the brain. Any damage or mal-development of any part of this hearing system prevents the child from adequately hearing, perceiving, attending to either faint, speech, ordinary conversational speech or loud speech.

On the other hand, the term exogenous refers to acquired hearing loss due to disease, toxity, accident or injury, which inflicts damage on any part of the auditory system affecting its capacity to receive and transmit sound. Examples range from external agents; such as a disease of the mother during pregnancy e.g. German measles virus (rubella which affect the unborn child's hearing system at birth (congenital but exogenous). Such impairment is acquired by tacklers outside the genes. A viral disease contracted by the child of all diseases, spinal meningitis, has the most serious impact on hearing, but any of the child load disease such as measles, mumps, chicken pox, can result into permanent hearing loss.

Hearing loss to a lesser extent can be caused by administration to the child of certain mycin drugs and occasionally a severe blow to the head sufficiently strong to damage the bony structure of both ears e.g. during delivery using forceps to pull out the child through the birth canal loud noise can also lead to hearing loss e.g. a bomb blast.

2.3 The difficulties faced by students with HI

Asha (2005), notes that hearing impairment affects children in four ways, namely:-it causes delay in the development of receptive and expressive communication skills of speech and language thus it is a communication problem which is a serious limitation. A child with any limitation in communication is obviously a high risk in our society because we are a nation of communicators. We talk, look, listen, feel and taste as well as

read. The communication difficulties of the HI children often lead to social isolation and poor self concept.

These social problems appear to be more frequent in children with mild or moderate hearing losses than in those with severe or profound loss. They may be withdrawn, or aggressive, socially adjusted or maladjusted, quiet or outspoken. Some of them may exhibit behavioural problems, but so do many normally hearing children. However, as the children get older and become peer dominated just like other adolescents their personal and social problems may increase.

Hearing loss leads to the language deficit which causes learning problems that result in reduced academic achievement. While language refers to what we say, vocabulary refers to the words we use and syntax is the code we use to convey meaning. Vocabulary develops more slowly in children who have hearing loss and their vocabulary usage is very limited, "They know and use many fewer words in their utterances than do normally heavily children". HI children often learn or are taught a single meaning for a word or conversely a single word to express some general concept. For example, the word "**run**" may mean an act of rapid bipedal locomotion but not striving for a political office.

Children with hearing loss comprehend and produce shorter and simpler sentences than children with normal hearing. Besides, HI children have difficulty with more complex sentence structure. They often have difficulty understanding and writing complex sentences such as those with relative clauses "The teacher whom I have for math was sick".

It may be difficult to understand the speech of HI children. Speech is concerned with how we talk, voice quality, rhythm, pitch, intonation, phrasing and articulation. In general, the poorer or the more problematical speech perception is the poorer and more deviant will be the child's hearing loss.

According to Elfentein et al (1994), the academic performance of HI children is lower than those of normal hearing. Their level of academic performance is related to parental involvement and the quantity, quality and timing of the support services children receive. Thus, the academic failure of HI children is not preordained. These children display the same range of intelligence as do normally hearing children. The fact that they do poorly academically is more a commentary on the nature of remediation and the programs provided to them than it is the inherent limitations imposed by the hearing loss.

2.4 Teachers' qualifications and training

Teaching is the transmission of skills, knowledge, positive attitudes and useful values by the teacher to the learners. Renyi (1996) states that, in order for teachers to effectively perform this role, they need to equip themselves with solid core knowledge of their subject content. We can *not expect our students to achieve their fullest potential unless the* people leading them in that effort are bringing a high level of knowledge and experience to the classroom. She further emphasises that, it is what teachers know and can do that crucial to students' success.

Aguti (2003) states that, teachers are central in the school system and for them to carry out their duties and responsibilities as teachers', teacher education is essential. Further more, the White Paper of the American Association of Colleges for Teacher Education (2002) advances that, for general educators to work effectively with children with special needs, there is need for significant shifts in teacher education programmes. To do this, the various types of teachers must conceptualise their practice and develop their pedagogy with a vision that

2.5 Research questions

This study will be carried out with the hope of addressing the study problem so as to achieve the stated objectives. To guide the process, the following research questions are stated:

- What is the nature of the HI suffered by the HI students?
- What difficulties do HI students face in their academic learning?
- What are the teachers' qualifications and training?

CHAPTER THREE

METHODOLOGY

3.0 Introduction

In this chapter, the methodology used in carrying out the study is described. It mainly focused on the research design, sample and selection method of data collection, procedure and data analysis.

3.1 Research Design

An exploratory qualitative case study design was used to investigate a contemporary phenomenon within its real life context. It is used so as to gain understanding and experience of the selected case.

This was appropriate because according to Hall & Hall (1996), a case study is one of the methods used in social research which focuses on an instance of particular phenomenon with a view of gaining in- depth account of events, relationships, experiences or processes occurring in that particular instance. The study will be carried out in Wakiso Secondary School for the deaf.

3.2 Area of study

The research was conducted in Wakiso Secondary School for the deaf, in Wakiso district, Uganda. This school is the first and the only secondary school for the deaf in Uganda established by government in January 2005. Being a pioneer secondary school for the deaf in Uganda and still *in its initial stages, it is bound to have many problems that affect its* academic performance. These were worth researching upon. Besides, the school is familiar to the researcher while at the same time; delivery of service to the students is a big issue since its inception. It is therefore imperative that a research is carried out to understand the factors that influence academic performance of the students with hearing impairment. Above all it is easily accessible to the researcher.

3.3 Population and sampling

The targeted population for the study included the students and teachers of Wakiso secondary school for the deaf. The study was entirely conducted in Wakiso secondary school for deaf found in Wakiso district, located in central Uganda. The criteria used to sample the school as a study site is that it is a special secondary school for HI students. It was purposively sampled for this study since it is the only school with the study characteristics. There was a sample population of 30 informants for the study which was sampled by random and purposive sampling techniques.

Table 2: Category and number of respondents and sampling techniques used in the study. (N=30)

Category	No. of respondents	Sampling technique
Teachers	10	Simple random
HI students	20	Purposive
Total	30	

Sampling technique

Sampling is a process by which a relatively small number of individuals or events is selected and analysed in order to find out something about the entire population from which it was selected Koul, (1998). He argues that it reduces expenditure, saves time and energy, permits measurement of great scope or produces greater precision and accuracy. In this case study, selection of the sample was done using purposive sampling and simple random techniques.

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Purposive sampling technique

Purposive sampling as a technique according to Kambaza (2005), is when a researcher goes directly to the people who matter and such people may be somewhere readily available for him to find. This technique helps to increase the utility of findings. It is a none probability method and Koul (1998) argues that such methods are very convenient in the situation where the sample to be selected is very small and the researcher wants to get the population characteristics in a short time.

Purposive sampling was used to sample the 20 students for the study. Using the class reports, two best performing students from each class (S.1 to S.5) were selected giving a total of 10 students. And two worst performing students again from each class (S.1 to S.5) were also selected giving another total of another 10 students. When the two samples of 10 students each are totaled, it will give us a total of 20 students.

Simple random sample

In order to identify the 10 teachers to participate in the study, a simple random sample of 10 teachers from the 22 teachers in the school were selected. The researcher first obtained a staff list from which a sampling frame was obtained by writing each name from the staff list on a separate piece of paper to be folded separately.

These papers were then put in a basket, mixed up properly and the researcher picked a paper at a time. This procedure was repeated 10 times to get the sample size of 10 teachers. Randomization was used to minimize the researcher's bias.

3.4 Instruments

Instruments are the tools used to collect data. Data was collected by administering two questionnaires to the teachers and HI students. An observation guide was used to observe HI students. Existing documents of HI students such as reports were also be used to gather information.

Documentary evidence

Students' reports and note books that showed evidence on students' academic performance were used to gather information.

Observation

Students' social behaviour and functioning in relation to their academic performance was observed. The areas of observation included communication skills such as; listening, response to instructions and questions. Social relationships such as speaking out, acting as a leader, and confidence, assertiveness were also be observed. Investigation of these values will be sought to understand how they affect the academic performance of HI students.

An observation guide was developed to explore the behavior of the HI students within the school set up. Multiple observation sessions were conducted and the physical responses such as tone of the voice, body language, and facial expressions were noted.

Questionnaires

A questionnaire was also administered to the respondents. It was used because teachers can easily understand it and thereby give appropriate responses. It saves time since categorizing, tabulating and summarizing responses is simplified. Above all, it is easy to administer. The questionnaire contained both open ended and closed ended questions. Open ended questions were used to allow the respondents amplify and clarify their views while closed ended questions will be used to objectify and standardize the opinions expressed by the respondents.

3.5 Validity and Reliability of the questionnaire

Validity

The validity of the questionnaire was established through consultations and discussions with colleagues, lecturers and the supervisor.

Reliability

Reliability refers to the extent to which an instrument yields the same results on repeated trials according to Gall, et al, (1996). Therefore, a pilot study was undertaken to establish the reliability of the instrument.

3.6 Procedure

To rule out suspicion of the researcher by respondents, the researcher used the following precautions:

1. Wrote a proposal for approval by the supervisor

2. Obtained an introductory letter from the dean school of education of Kampala International University.

3. Proceeded to Wakiso S.S for the Deaf to conduct the research

4. Drew a programme to meet the teachers and the students before carrying out the study.

5. Informed the concerned parties about the intended research and its significance and thereby sought their cooperation.

6. Conducted the observations, administered the questionnaire personally, and analyzed the documentary evidence in the course of the term.

7. Analyzed the data and wrote the research report.

3.7 Data analysis

Data analysis is where the researcher tries to organize and extract meaning from the collected information according to Semakula (2000). In this particular study, data was analyzed both qualitatively and quantitatively. That is to say, information was categorized according to the study objectives, analyzed, tabulated and explained qualitatively or descriptively. Quantitative data was analyzed using frequency counts, calculation of percentages and use of tables.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

In this chapter, data collected from the field is presented, analysed and interpreted, according to the research questions.

The data to answer the research questions were analysed by working out frequencies and percentages of closed ended items and themes identified from open ended items and observations. In addition, documents were studied and analysed to get relevant information to the research questions. Data was presented and analysed question by question.

4.1 Research question one: What is the nature of your hearing impairment?

It is very important to note that out the 30 questionnaires that were administered all of them 30(100%) were dully filled and returned.

Table3: Percentage distribution of respondents and their response	Table3: Percentage	distribution	of respondents	and	their	responses	•
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(11-20)

	(UC-M)			
RESPONDENTS	RESPONSES	RESPONSES %		
Teachers	10	33%		
Students	20	67 %		
Total	30	100		

The results from above suggest that all the respondents responded to the questionnaires during the study as reflected by 30 (100%) responses.

To establish facts on the nature of their hearing impairment, students of Wakiso S.S for the Deaf were asked questions related to the nature of their hearing impairment and their responses were analysed and the results were presented in the tables.

Students were asked whether they are hearing impaired

Table 4: Showing Students with HI problems

(N=20)

RESPONSE	(N)	%	
Yes	20	100	
No	00	00	
Total	20	100%	

The table shows that all the 20 (100%) students in the study have hearing impairment problem.

Table 5: Showing Students born with HI

RESPONSE	(N)	%	
Yes	03	15	
No	17	85	
Total	20	100%	

The table shows that out of the 20, 03 (15%) were born deaf while 17 (85%) were not born with hearing impairment. Generally, the results show that the majority of the students with HI problem acquired the hearing loss after birth.

4.2. Research Question Two: What difficulties do students with HI face in their academic learning?

Respondents were asked if they had any academic learning problems and all the 30 (100%) said yes. when asked to list these problem the themes that emerged are as indicated below.

RESPONSE	(N)	%
Communication	10	50%
social problems	03	15%
Hearing difficulties e.g lack of	04	20%
concentration, failure to		
understand follow in class,		
English language	03	15
Total	20	100

Table 9: Showing the learning problems of HI students (N = 20)

Following the analysis of the research findings, communication emerged as a major problem and other problems listed included social problems, learning disabilities, failure to follow, comprehend and understand issues being discussed or taught in class. This finding is also confirmed by the observation results which found out that HI students have social, psycho-social and academic problems.

Students were asked to identify some measures that have been put in place to combat the HI hearing difficulties and the following were enumerated. The findings were categorized under the following themes.

- Use of sign language as a mode of communication schools.
- Establishment of special schools
- Donors and NGO sponsoring some HI students by payment of school fees
- Counseling and guidance has been introduced

This information indicates that interpreters, Total communication and sign language should be emphasized to assist the HI students overcome the communication barrier.

On the same question, teachers revealed that students have difficulties with speech, understanding and rejection in life by the hearing communities who are not knowledgeable about hearing impairment.

Analysis of the documents in the school showing the academic performance of the students such as class reports indicated that HOH students performed better in all the classes. For example when sampling the study sample of the student respondents all the first and second positions in senior one to five were taken by HOH students while all the last and second last positions in the same classes were taken by deaf students. This clearly indicates that the degree of hearing impairment determines the academic performance of the HI students.

4.3 Research question 3: What are the qualifications and training of the HI students' teachers?

To answer this question views were sought from the teachers using questionnaires to teachers of students with HI. On qualifications and training attained by the teachers the following information was recorded.

Table 10: Showing qualification and training of Teachers of students with HI. (N=10)

RESPONSES	A	%	
Diploma	05	50%	
Graduate	05	50%	
Total	10	100	

Results seem to indicate that all the 10 (100%) are general education trained teachers. However of the 10 (100%) trained teachers, (50 %) have diplomas in teaching while the other (50 %) are graduate teachers.

Teachers were asked whether the qualifications they have equipped them with adequate core knowledge on subject content and their responses were analysed and shown in table 10.

Table 11: Showing adequate core subject content with the qualification (N=10)

RESPONSES	N	%
Adequate core	2 10	100%
knowledge in subject -	- }	
content		
Total	10	100

Results revealed that all the 10 (100%) of the teachers acknowledged that the qualification they have equipped them with adequate solid core knowledge needed to teach their subject.

Responses on measures to improve teachers' curriculum delivery to students with HI revealed the following findings.

- Equip teachers with all the necessary skills required to teach students with HI.
- Vocationalise the curriculum of students with HI so us to equip them with skills for job creation after school.
- Visualize the teaching of the HI students
- Modify the general education curriculum to suit the educational needs of students with HI.

- Revise the student ratio to 1:5 to enable the teachers to develop individual education of plans for the HI students.
- Reduce the teaching load of the HI teachers.
- Ministry of Education and Sports should deliberately embark on the training of special needs education teachers at secondary level.
- Motivate the teachers in special needs schools by increasing their remuneration as compared to that of general education teachers.

On extra qualifications that they had to teach HI students teachers enumerated the following.

Table 11: Showing extra qualifications by the teachers of HI Students (N=10)

Extra Qualifications	(N)	%
Training in sign	4	40%
language		
Certificate in SNE	2	20%
None	4	40%
Total	10	100%

Findings revealed that 40% of the teachers had a certificate in sign language, while only 20% had a certificate in special needs education and the other 40% had none. Those who mentioned none suggested that government should organize training of teachers in the field of special needs education so as to equip them with the necessary skills and methods for effective teaching of students with HI.

On the other competencies essential for special needs teachers' respondents revealed the following;-

Competencies necessary to teach HI students

- Knowledge and understanding of hearing impairment disability.
- Competence in sign language as a mode of communication with the HI students
- Special needs education knowledge and methodology
- Being accommodative and adjustable to the challenges in the field
- Being supportive and committed.

CHAPTER FIVE

DISCUSSION, CONLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The purpose of this study was to investigate the factors that determine the academic performance of students with HI. Three research questions were formulated to guide the research. This chapter presents a discussion of the findings, for each research question. Conclusions and recommendations were based on these findings.

5.1 Discussion

Research question one sought to establish the nature of students' hearing impairment

In general, findings revealed that all the students of Wakiso S.S for the deaf have hearing impairment of varying degrees. While (17/85%) are hard of hearing (HOH), only 15% are deaf.

It seems the term deaf is being used as a substitute to refer to all people with hearing loss. Thus, a number of organizations and educational settings at the national level label themselves as "...... for the Deaf" as the case may be. This is an agreement with Ross and Levitt (2000) who noted that the current situation seems to have gotten worse than it was in the previous years, when the labels "deaf" and " hard of hearing" were often used as sub categories of the term " hearing – impaired".

The lumping together of deaf and HOH people is understandable, simply because both 'deaf' and hard of hearing people display auditory deficiencies of some degree or another. In actuality, however inspite of the overlapping needs these groups are fundamentally very different. Although, Wakiso S.S. for the Deaf purports to serve both the deaf and hard of hearing students, it provides only one educational philosophy for any child with a known hearing loss regardless of severity. In all these classrooms a Total communication (TC) approach is the one employed. In reality, the auditory oral mode suitable for the HOH who are the majority is not used. Because the teacher is simultaneously signing while speaking, the oral language component is rarely complete and grammatical. Hearing aids are not used, instead Uganda sing language 'with "voice –off" is the instructional language. It is therefore important to note that no educational program for "deaf and hard of hearing" children that is not committed to fully utilise residual hearing can be considered appropriate for HOH children. This is the kind of educational experience that can and does "create" functionally deaf people from audiologically HOH students Ross, M, Brackett . D. and Maxon, A. (1991).

Hearing Impairment according to the research findings is majorly caused by preventable diseases as indicated by 65% are a result of malaria, 15% meningitis, and 10% by measles. This is in agreement with the ministry of health observations that malaria and other preventable diseases are the major causes of death among the poor communities.

Research question two: Sought to establish the difficulties experienced by students with HI in their academic learning.

The majority of the respondents (students and teachers) indicated that hearing impairment affects academic performance negatively. They revealed that HI is a communication problem which in turn creates social and academic difficulties. This experience was also confirmed during the observations. The most handicapping aspect observed was related to the tasks requiring the child's ability to communicate using language, the English and speech skills. These students' speech problems included omission or substitution of some sounds, speech intonation and pitch. Their speech was observed especially for the deaf sounded nasal, gutteral and breathy while the HOH students had more intelligible speech. When the students' exercise books were examined especially in English significant omission of structure and rules was evident. The vocabulary was very low, and not of secondary school level standard especially for the deaf students. They omitted the grammatical components of English such as plurals, prepositions, articles (a, the), tenses and a variety of little words and word endings.

This experience is shared with Moore and Beazley (1995) assertion that hearing loss affect an individuals quality of life and ability to function in society. Educational achievement is perceived to depend on language, on words and how they are put together to create meaning. We converse in language, we think in language, we read and write in language, thus without language we can never reach our fullest intellectual potential. And it's in this respect that HOH children are frequently treated as high achieving deaf children rather than as a lower achieving normally hearing child. It makes a difference in that, parents and teachers' expectations are higher if they are normally hearing children. In the HOH case, the student is considered to already be doing quite well for a 'deaf' child. Expectations are lower since the educational achievement of deaf students are much lower than that of the normally hearing children.

Findings on how to combat the difficulties experienced by HI students in their academic learning, indicated that emphasis should be laid on the use of Total communication (TC) and sign language for communication. Indeed, some researchers have also found out that visualization of teaching using teaching aids can enhance the academic achievement of the HI students.

Solid objects brought to the classroom for demonstrations for example flowers, insects, seeds or use of pictures such as sketches, diagrams on paper or on the black board, maps, charts, drawings, and photographs should be used. However, aids should be adapted to the understanding of the class for visual aids appeal to the eye.

Research question three: what qualification and training do the teachers of HI students have?

It seems very clear that Ministry of Education and Sports has not yet put in place policies and regulations that fulfil the qualifications and qualities for secondary school teachers in special schools.

The findings given by the teachers indicated that all the 20 (100%) were general education trained teachers without any specific serious qualification to teach the hearing impaired students. the respondents who had extra qualifications had only certificates in sign language and special needs education which may not be sufficient for secondary education level education.

This finding is confirmed when teachers were asked to indicate the qualification and the training they required to be effective teachers of the students of HI and all of them 20 (100%) indicated that training in sign language interpretation at diploma level and degree in special needs education to enhance their general education training was essential.

Teachers' also revealed that teachers with commitment, understanding, empathy, patience should be identified to teach the students' with HI, to be able to accommodate the challenges that occur in the classroom situation. Hocutt, A. (1996) is in agreement with this finding when he notes that special education teachers usually undertake longer periods of training than do general education teachers and that most institutions require other graduate level preparations in educational psychology, legal issues of special education child growth and development, and strategies for teaching students with disabilities. These qualifications prepare the special education teachers to perform their roles effectively.

Conclusions

The focus of this research was to investigate the factors that determine the academic performance of students with HI.

Following the findings of the study, the researcher made the following conclusions.

- 1. The nature of hearing impairment determines the academic performance of the students with HI especially in our situation where examinations are based on tests designed for and normed on hearing populations without due consideration of communication needs or the possible effects of early language deprivation in hearing households of the HI students.
- 2. HOH students are batched together with the deaf in educational institutions labelled 'deaf' and are primarily using Uganda sign language (USL) with "voice -off" as the instructional language.
- 3. HI educational institutions in Uganda are busy creating functionally deaf people from audio logically HOH children by not employing the auditory oral mode of communication in the classrooms and encouraging the HOH to utilize their residual hearing.
- 4. The major difficulty in the education of the students with hearing impairment rotates around the communication barrier with the hearing world they live in.
- 5. The structure and the demands of the current system are partly the cause of the low academic performance of the students with HI. For example the demand of the existing curriculum, examination body and the educational policies are discriminating against the HI. For example the emphasis on English language as a grading measure for one to qualify for a division one by UNEB is unfair to the pre-

lingually deaf who do not posses the speech and language skills due to their hearing loss.

6. Wakiso S.S for the deaf has a highly academic curriculum with emphasis on verbal and linguistic skills which is not appropriate to the hearing impaired students.

Recommendations

1. Educational institutions of students with HI should employee both visually based mode of communication and encourage the HOH children to use hearing aids so that the auditory oral mode can be used in the class rooms. It is through audition and not vision that English language development can be developed most effectively and thus can serve as the basis for English literacy. And it is reading capability that is the key to educational accomplishments and vocational success in our modern age. The implication of this point of view is that in educating HOH children, it is first necessary to ensure the optimum use of their residual hearing. Only after this is accomplished should other remediation services be used. In no case, should any of these other services be offered as substitutes for an optimal auditory management programme

2.Ministry of Education and Sports should support the teachers in acquiring skills in the monitoring of hearing aids and auditory training systems so that HOH children can be helped to develop speech and language skills primarily through the auditory mode and employs a primarily auditory system of communication. Educationally, when HOH children are treated as deaf children, the visual channel receives the primary educational emphasis rather than the auditory channel thus the emphasis in the use of sign language in many educational institutions with students of HI.

3. The Ministry of Education and Sports should work hand in hand with the Ministry of Health to formulate deliberate programs to create awareness on the causes of hearing impairment and how to prevent them just like malaria programmes are being disseminated with the communities

4.Preligually Deaf students in particular have some difficulties in English and may find difficulty to understand the meaning of questions in a typical examination paper particularly when they communicate in sign language which a non-grammatical language. Questions should therefore be phrased clearly and the students understanding of them should be checked at the outset. Invigilators must also ensure that spoken instructions are available in written or in signed form.. For some of them sign language may be their first language and where oral or written communication is difficult the problem must be regarded as one of understanding. Assignments should be outlined in clear jargon free, short sentences.

5. Ministry of Education and Sports to fund all the activities in HI schools to enable the schools procure the necessary instructional materials for effective learning and teaching of HI students.

Areas of Further Research.

More research regarding factors that determine students of H.I. academic performance should be carried among others on the following:

- a) Whether these findings pertain to other H.I. educational institutions.
- b) Students' performance and availability of special educational services in the HI educational institutions.
- c) Students socio-economic status, syllabus coverage, the setting of examinations and their marking,

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HPPENDEN 11



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fice of the Director

10 WHOM IT MAY CONCERN:

Dear Sir/Madam.

RE: INTRODUCTION LETTER FOR MS/MR.

REG. #.. BED/11996/6/60/00

The above named is our student in the Institute of Open and Distance Learning (IODL). pursuing a Diploma/Bachelors degree in Education

Hethe wishes to carry out a research in your Organization on:

ACADEMIC PERFORMANCE AMONG STUDENTS OF HEARING IMPAIREMENT: A CASE STUDY OF WAKISD SECONDARY SCHOOL FOR THE DEAF.

The research is a requirement for the Award of a Diploma/Bachelors data was a Education

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why assistance accorded to him/her regarding research will be highl_ appreciated

YourstFaithfully,

MUHWEZI JOSEPH HEAD, IN-SERVICE

APPENDIX B

Questionnaire for teachers of the hearing impaired students

Dear Sir/Madam

RESEARCH QUESTIONNAIRE

I am currently registered with Kampala International University for a Bachelors Degree in Special Needs Education. This questionnaire is part of a study that is meant to examine the academic performance of hearing impaired students in secondary schools and identify ways in which it can be improved.

As a teacher of hearing impaired students you must have a lot to contribute to this study, so please respond to the questions in the attached questionnaire as honestly as possible.

Yours responses will be treated with utmost confidentiality.

Thank you for your cooperation and support.

Yours sincerely,

Theresa Anyait Akorimo (Mrs)

Bachelor of Special Needs Education Student

QUESTIONNAIRE FOR TEACHERS OF HEARING IMPAIRED STUDENTS

INSTRUCTIONS \checkmark and fill in the blanks accordingly. For each question tick SECTION A: PERSONAL INFORMATION 1. Ageyears 2. Gender Male Female 3. Position Teacher of arts subjects Teacher of science subject 4. Marital status Single Married SECTION B: QUALIFICATION AND TRAINING 5. What is the level of your educational qualifications? Graduate teacher Diploma teacher 6. Do you your qualification has equipped you with solid core knowledge of your subject content needed to teach the hearing impaired student? No 🗔 Yes 🖂 7. If No, what do you think should be done in order for you to effectively perform your roles?

8. Do you have e	extra qu	alifications	for teaching	children	with	hearing
impairment?						

Yes	No	

9. If your answer to question (8) is Yes, specify the qualification below.

10. If your answer to question (8) is No, please indicate what should be done?

.

11. Please list below the competences you think are important to teachers of hearing impaired students

.....

.....

12. What in your opinion should be done to improve the academic

performance of eh hearing impaired student?

13. Please indicate some of the problems hearing impaired students face
in their learning?
13. How should these students be helped in their studies

APPENDIX C

Questionnaire for students with hearing impairment

Dear Students,

Below are some questions about the nature and difficulties of hearing impairment. In some of the questions tick \checkmark the appropriate option or give a brief explanation as required. There are no wrong or right answers.

SECTION A: The Nature of Hearing Impairment.

1. Do yo	u have	hearin	g impair	rment?	
YES				NO□	
2. Were	you bo	rn hear	ring imp	aired?	
YES			NO 🗆]	
3. If no,	at wha	it age d	id you g	et hearir	ng impairment?
0-3	years			>3years	of age 🗔
4. What	is the	extent	of your l	hearing i	mpairment?
Hard o	of heari	ing		Deaf	
5. Speci	fy the	main ca	ause of y	our hea	ring impairment.
•••••				• • • • • • • • • • • • •	
••••	• • • • • • • • • • •	• • • • • • • • • • • •			
	• • • • • • • • • • • •			•••••	

•••••	 	
•••••	 •	•••••
	 	• • • • • • • • • • • • • • • • • • • •

SECTION B: Difficulties faced by students with hearing impairment in their academic learning

6. What was your class position in the last term's examinations?

1 st	2^{nd}	

2nd last□

last 🖂

7. Do you have any difficulties in your academic learning?

YES NO NO

8. If yes, kindly please list them down.

.....

.....

9. Are there any measures that have been put in place to overcome these difficulties?

YES D NO D

10. If yes kindly please list them.

	Gattes	
relationship	• involvement	
	• courtesies	
	 association 	
	 controls of emotions of 	
	anger,	
	embarrassment	
	• confidence	
social	 interactions 	
relationships	 friendship formation 	
	in groups	
	 co operation with 	
	others	
	• roles	
Participation	 contribution in group 	
	 self expression 	
	• freedom	
	• influence	
	• control of power	
	leadership	
Reflective Notes		