

**CHALLENGES FACED BY TEACHERS IN TEACHING SCIENCE TO
CHILDREN WITH HEARING IMPAIRMENT IN THE
MAINSTREAM SCHOOLS IN GATUNDU DIVISION,
GATUNDU DISTRICT-KENYA**

BY

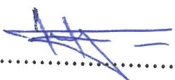
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**A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF OPEN AND
DISTANCE LEARNING IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF BACHELORS
DEGREE IN SPECIAL NEEDS EDUCATION OF
KAMPALA INTERNATIONAL UNIVERSITY**

DECEMBER, 2011.

DECLARATION

I declare that this is my original work and has never been submitted to any University or institution of higher learning for the award of a degree or any award. Work of other writers has been used, but clearly acknowledged and quoted.

Signed: 

Muhia Hannah Nyambura

Date: 17-12-2011

APPROVAL

This research study has been under my supervision and is now ready for submission to the academic board of Kampla International University.

Signed:


.....

Mujuni Evarist

Supervisor

816

Date;.....17-12-2011.....

DEDICATION

This research work is dedicated to my dear husband Mr. Anthony and son Payton Eric.

ACKNOWLEDGEMENT

I wish to extend my sincere gratitude and appreciation to various people and institutions who supported and assisted me during this study in one way or another.

First and foremost, I would like to thank my beloved parents who offered me financial, moral support and personally guided and corrected me where in all. Also to relatives and friends for their prayers and wishing me well as I pursued this course.

Special thanks to the staff and administration of Kampala International University, particularly, the Institute of Open and Distance Learning. More so to my supervisor Mr. Mujuni Evarist relevant, parental corrections, contributions, guidance and encouragement played a vital role in the successful production of this precious piece of work.

I also wish to express my sincere appreciation and gratitude to all the staff members and pupils Githuya primary schools and most especially the Head teachers Mr. Michael Kibe and his Deputy Mr. Teressia Njeri and all head teachers and teachers and pupils of Gatundu and Ngenda Primary Schools who enabled me to carry out this study smoothly in many ways, dedicatedly and timely responded to my questionnaires, without which I would not have accomplished this work in time.

I also wish to acknowledge my colleagues and course-mates BED Special Needs Education and all my staff/ work-mates who offered to give constructive criticism and advice that have helped me to produce this work.

A big thank to Uhuru printers who did their best to type this work and make it look as beautiful as it appears.

To you all who contributed in one way or the other towards completion of this study but whosenames have not been mentioned I pray; “ May the Lord shower you with endless blessings”.

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ABSTRACT

This study focused on the causes of poor performance in science among children with hearing impairment in mainstream schools. This study was carried out in Gatundu Division, Gatundu District-Kenya

Interviews and questionnaires were used as research tools to collect data from respondents. Random and purposive sampling techniques were used to select schools and the respondents.

The findings revealed that teachers in the mainstream experienced some challenges which among others included; lack of training in special needs education among teachers, inadequacy of appropriate science equipment and learning materials, inappropriate teaching materials, negative teachers' attitudes towards the education of the deaf children, inappropriate modes of communication, low pupils' interest to learn science and high Teacher – Pupil ratio in class among others.

From the study, the following recommendations were made;

Special needs education should be introduced into primary teachers' colleges as a course.

- Government, NGOs and other stakeholders should intensify the community the community awareness programmes about the rights of persons with disabilities
- Refresher courses should be provided to teachers by NGOs
- Teachers should be trained to make and use the available local materials
- Primary school teachers should be encouraged to go for up grading special needs education.
- Teachers should be trained to make and use the available local materials.
- Parents of children with special needs (Hearing impairment) should be encouraged to learn sign language to enable the easy communication.

CHAPTER ONE

INTRODUCTION

Background

The introduction of Free Primary Education (FPE) saw so many children of school going age including those with hearing impairment enrolled in schools. This caused increase in children population in mainstream schools was a government strategy towards promotion of inclusion which enabled all children to learn and freely participate in mainstream schools despite differences in their age sex and ability.

Because it is a national policy, these schools follow the national curriculum where all subjects such as science, English, Mathematics, Music, reading and writing are taught. However, findings by the Educational Assessment Research Services (EARS) revealed that a few of deaf children who managed to go to mainstream schools do not do as well as compared to their peers.

This calls for an investigation in order that special attention is given to the whole education system if there is to be improvement in the quality of education given to children with hearing impairment.

Hagarly (1993) in the agreement with the above states that pupils with special needs in ordinary school do not always have to do with the successful mainstream curriculum and sometimes indeed are more restricted in their curriculum experiences than they would be in special schools. He added that ordinary schools have potential to offering a wide range of curriculum than special schools but in practice they often fail to do so.

It can therefore be said that although children with hearing impairment are being taught science in mainstream schools, it is not done in the appropriate way. Many teachers have problems in teaching these children due to lack of communication approaches, methods and materials in inclusive schools.

Ingule (1996) noted that teachers teach science to the learning of disabled children by providing guidance to independent work, proceed from smaller to the larger volumes of work through involving students in activities that they can manage; he can be able to proceed from simple language, models, picture and real events and situation in teaching science. There is a need to modify instruction methods enhance pupils participation policies.

Statement of the problem

It is a national policy that children regardless of their age, sex and ability should attain appropriate education in their nearest schools. However the performance of children with hearing impairment in the mainstream schools has been noted to be still wanting. A particular reference is made to learning and performance of science as a subject. This is because science is one of the major subjects that form a basis of many careers and the government has put a lot of emphasis on it.

Learners with hearing impairment like all other children should benefit but this seems yet to be seen. They have continued to perform poorly.

It is against this background that the researcher seeks to investigate the causes of poor performance of hearing impaired children in mainstream schools.

The purpose of the study:

The purpose of the study was to find out the causes of poor performance in science among children with hearing impairment in mainstream schools.

Objectives:

The study was guided by the study objectives.

- (i) To find out challenges teachers face in teaching science to children with hearing impairment in the mainstream schools.
- (ii) To find out teachers' attitudes towards children with hearing impairment in mainstream schools.
- (iii) To find out the modes of communication that teachers in mainstream schools use to communicate with learners.
- (iv) To find out the methods teachers use in teaching when teaching children with hearing impairment.

Research Questions.

- (i) What are the challenges faced by teachers in teaching science to children with hearing impairment in mainstream schools?
- (ii) What attitudes do teachers of science have towards children with hearing impairment in mainstream schools.
- (iii) What mode of communication do teachers use in mainstream schools.
- (iv) What methods do teachers use in teaching children with hearing impairment?

The scope of study

Gatundu Division is made up of six zones and each zone consists of nine public primary schools and three private schools. The study was carried out in three schools selected from three zones. These include; Gatundu, Ngenda and Githuya primary schools. The study focussed on performance of children with hearing impairment in science in mainstream schools.

Significance of the study:

The researcher hoped the result of the study would:

- (i) help teachers to improve on their methods of teaching not only science but every other subject to children with hearing impairment.
- (ii) Enable teachers to design appropriate instructional materials when teaching science to children with hearing impairments.
- (iii) Enable researcher to acquire skills and knowledge of teaching science to children with hearing impairment.

Limitations:

- The study proved to be expensive as more funds were needed to meet expenses in designing and typing questionnaires, typing and binding final report, transport, lunch and others which was sometimes not available.
- Due to busy teaching schedule and other academic work, time was not enough for the study. This meant foregoing other study activities or working strain which may cause fatigue.
- Some methods used to collect data required meeting respondents and physical talking to them one by one. This took a long time and the respondent failed to give the information.

Delimitations:

- The study was carried out in familiar places where communication and interaction with respondents was easy.
- Some costs were minimised by short distances from researchers home to areas of the study. This therefore was no need of accomodation expenses as researcher to gather information.
- Transport was easy for the researcher when gathering information because most areas of the study were near the researcher's working station.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

In this chapter, the researcher presents the ideas of other writers who have discussed issues related to the education of children with hearing impairment. Their views have been found to be relevant to the study and may be of much help in understanding the challenges teachers of children with hearing impairment in the mainstream face.

For orderly and clarify, literature was reviewed considering the following themes developed from study objectives.

- Understanding a child with hearing impairment.
- Attitudes towards children with hearing impairment.
- Mode of communication teachers use in teaching children with hearing impairment.
- Teaching methods used by teachers in teaching children with hearing impairment.

Understanding a child with hearing impairment.

A child with hearing impairment is one who has difficulties in perceiving sounds. When the problem started, what caused it or how big it is does not matter. It may either be total or partial loss of sound perceptions.

In support of the view, Donath (1997) described hearing impairment as an umbrella concept and that it includes all degree of hearing loss, that is mild, severe and total loss.

Martin (1991) referred to it as the disability that hinders successful process of linguistic information through audition.

The researcher agrees with the above statement for it is extremely difficult and even impossible for a hearing impaired learner to access and perceive any linguistic information through audition.

Nyakahuma (1997) observes that “understanding a child with hearing impairment means understanding him first as a child then understand the way the impairment may influence his development and behavior” (Pg 8). This is because what is important is that the deaf child should be understood first then be known that the problems he/she experiences affects his or her social emotional and academic development.

In Uganda (one of the common languages spoken especially central region and many urban centres i.e. Luganda) a person with hearing impairment is referred to as “Kasilu” (Stupid). Most of deaf children especially those who acquired deafness before developing spoken language do not speak. As such, the hearing find it difficult to talk to them. Failure to understand their verbal communication the hearing perceive the deaf as stupid.

It is important that teachers understand some signs shown by child with hearing impairment which include:

- Difficulty in following verbal instructions
- Tendency to depend on eyes when communicating
- One may appear to be a day dreamer.

Teachers attitudes towards children with hearing impairment

Attitudes are feelings that develop from experiences with others and the environment.

The attitudes influence the way people behave towards, react and feel about others.

Cecil et al (1987) noted that “..... generally the hadicaped encounter so many negative experiences that it is difficult for them to develop positive attitudes. The majr negative attitude is academic failure. Furthermore, the handicapped experience negative reactions from others and these reactions can not be hidden which results in lack of confidence in abilities and lower self-attitude”.

Horn (1995) noted that teachers also show negative attitudes in the classroom. Attitudes of teachers are characterized by lebeling children with hearing impairment like “Stupid”, “dump”. He also observed that hearing children reject their handicapped peers which is a sign of negative attitudes. The researcher in agreement noted that such lebelers portray negative attitudes towards learners. Therefore, the need for right attitude should be upheld and emphasized.

Okech (1992) noted that people exhibit negative attitudes towards children with hearing impairment. This is true in that negative attitudes are seen through neglects, isolation, denial and killing children with disability.

As observed by Lingstand and Whyte (1995) that negative attitudes can also influence parent practices in particular way; Most learners with hearing impairment are being neglected by their parents as a result of poor guidance from the teachers who already have negative attitudes towards their learning.

Crisci (1981) states that “Negative attitudes may rise from frustrations of not having the necessary skills”. In this situation it becomes clear that ordinary teachers who have had relatively little or no formal preparation for working with children with special needs respond negatively to the idea of inclusion.

Teaching methods used by teachers in teaching children with hearing impairment

Hergarly (1988) observed that joint participation in education activities is the full form of teaching children with special education needs. He further said that most of the schools have failed to teach children with special needs due to teachers who have not acquired knowledge and skills in modifying the materials and methods to meet the learning needs of the children with disabilities fully.

Aggarwal (1995) explains that, teaching methods are strategies and tactics of showing how to do this so that they will be able to do it themselves the choice of what is to be taught and how to teach it. Danshan (1995) claims that people who teach children with hearing impairment before training do not have enough experience about educational methods for teaching those children.

However, after training they get correct ways of working with them. This is true because during teacher training one is taken through methods of handling the learners. In the absence of training one doesn't have skills. It is worse for learners with special needs.

Cornett (1992) stated that cued speech method is multisensory approach for teaching communication and language skills to children with hearing loss. Teachers use this method to emphasize the child's use of the visual and auditory sense. The goals of cued speech is for child to receive spoken language clearly both visually and auditory.

Sanders (1988) explains that an effective teacher will present many examples of new concepts and will provide several opportunities to practice new skills. The teacher will help the learners' participation in their learning where necessary. The researcher is in agreement with this observation that the modelling of procedures can be acceptable and effective methods of instruction for a child with hearing impairment.

Sanders goes on to say that teachers who are sensitive to needs of hearing impaired learners should employ a variety of visual aids to assist their comprehension of abstract concepts by providing concrete support e.g. charts, photographs, films, books and pupils mode of materials are usually available or easy mode and should be appropriate to the age and level of development. The researcher concurs with above that manipulative approaches provide concrete aid in developing concepts through discovery methods of teaching.

Kiltz and Wanyard (1993) observed that normally children learn a great deal from what goes on around them, that is through playing, learning and imitating. This is true because different ways through which pupils learn and variety of facilities will ensure that all pupils fulfill their potentials and help to make teaching more effective and stimulating for them.

The researcher in agreement, further noted that a variety of teaching methods should be used to kill boredom among pupils and more so children with hearing impairment for instance guided discovery, child to child, discussion, question and answer, group work, observation among others should be employed to make learning more interest.

Mode of communication teachers use in teaching children with hearing impairment

As Ingule (1990) observed that communication with the children with hearing impairment is a big challenge to teachers and everybody else. This is true as of now teachers who have never stayed in deaf community find it difficult to communicate with deaf children in mainstream schools unless he or she has special training.

This is in agreement with Okwaput's (1996) who observed that there few teachers in Uganda. Trained to teach children with hearing impairment. This presents difficulty in making strategy to reach all children who are hearing impaired and are attending schools scattered all over a wide area.

Cleaser (1996) put it that most teachers are faced with a task of delivering content to learners which requires effective communication that involved sitting arrangement, class teaching. In the agreement with the above, the researcher noted that for effective teaching and full involvement of learners, teachers should always be equipped with methods, instructional materials and means of communication while handling children with visual impairment.

Kizito (1994) noted that most effective ways of fulfilling those basic needs is the ability to communicate with people, the environment resulted into stereotypic behaviour patterns not good for society and the child itself. This is true because the mainstream learning environment can greatly result to barriers of communication.

Birgit et al (1993) explains that it is extremely frustrating for an individual not to be able to communicate and be understood by the surroundings. Usually it is so frustrating that the person may give up even trying to be understood and withdraw to his own world. In

this people may think that he or she does not understand what they are saying. Therefore they stop talking with him or her which makes a person more isolated and even fail to gain much from the surroundings spoken language.

CHAPTER THREE

METHODOLOGY

Introduction

The concern of this chapter is to explain how the study was carried out. It shows major areas of methodology that is, research design, area of study, study population, sample size research instruments, sample research procedure and data analysis.

Research design

The researcher used cross sectional survey design and both qualitative and quantitative methods were

used. Some data were presented in average, number and percentages including children with hearing impairment from selected schools. The research was qualitative in that pupils' opinions and ideas were collected, interpreted and analyzed. The questions asked were such as who, which, where, when and why but not how many and how much.

Qualitative approach was chosen for this study because it studies things in their natural settings. The researcher hoped that this would help to avoid artificial evidence. It also aims at exploration of social relations and describes reality as expressed by respondents. The researcher used random sampling to select both schools and respondents.

Area of study

The study was carried out in Gatundu division Gatundu District due to the following considerations:

- Availability of transport, easy movement to reach the area chosen since the area is with in the researcher's place of residence.
- The availability of people to guide the researcher where necessary in order to produce reasonable work.
- Communication was easy since the researcher knows the language used in the area.

The study was carried out in three schools

- Gatundu Primary School
- Ngenda Primary School
- Githuya Primary School

The selection of these schools was by random sampling. This was done because the schools have equal chances to be involved in the study.

Study Population

A representative sample of school and respondents was selected purposive sampling and the target population for study – included the following categories:

- Head teachers
- Teachers

Sample size

A total number of 9 teachers in the mainstream schools who teach children with hearing impairment, 3 Head teachers of the three selected schools and 9 children with hearing impairment, making a total of 21 respondents.

The selection of these respondents was by purposive sampling. Purposive sampling is the process of selecting cases that are likely to be information rich with respect to the purpose of the qualitative research study.

Purposive sampling was chosen because

- It fits the nature of the study
- Not all the teachers in school teach children with hearing impairment, so there was a need to use only those that are directly involved with those children.

Research instruments

The instruments used in this research study to collect information from respondents were questionnaires and interview.

Questionnaires: Are data collecting tools consisting of sets of questions which are written and presented to respondents, that is, from whom data is to be collected to answer questions by writing.

The reasons for choosing this tool for data collection in the study include:

- It is simple to administer to a large group of people scattered over a large area.
- It saves time
- Detailed information can be got as it is flexible
- Helps the respondents feel free to give out frank answers

However, the following limitations were born in mind;

- It was not easy for a researcher to establish the reasons for in case the respondents leave blank space.
- Return rates from the respondents was very low.
- There was no chance for the researcher to observe the respondents attitudes to topics under discussion.

Interview: Is a dialogue between interviewer and interviewee. It involves face-to-face interaction between individual leading to self report and responses are recorded and later analyzed. The questions may be broad, general and unfocussed as an open ended/structured or even specific and prescribed as in structured interview.

Interviews are advantageous due to the fact that:

- The researcher gets both verbal and non verbal information
- It is used for illiterate people
- It gives a researcher a chance of repeating a question which are not clear
- The researcher is able to notice and record a lot of information from the respondents and observe the respondents attitudes to the topic being discussed

Research procedure

Before the researcher set off for data collection, a proposal was made and presented to the supervisor for approval. Tools were developed and discussed with the supervisor. Authority was then sought from University and the researcher was provided with a letter of introduction to the area of study for purpose of seeking permission to carry out research in the area.

The researcher had to pretest the research tools among fellow students to test their validity, reliability and appropriateness.

The exercise of data collection was done between the month of September and October 2011 following the procedure below

- (i) The researcher introduced himself to the office of the head teachers and produced an introductory letter from the University for Permission to carry out the study.
- (ii) The researcher handed over questionnaires to each individual head teacher in each of the selected schools. Each head teacher was given four questionnaires, one of which was for the headteacher while the other three were designed especially for selected teachers teaching in those schools.
- (iii) Presentations were followed by specific briefings about questionnaires and how they will be filled.
- (iv) The researcher requested to meet and interact with the children known to be having hearing impairment from whom three were randomly chosen for interview in each school.

- (v) The researcher also gave enough time to respondents to fill in the questionnaires

Description of data analysis procedure

After the data was collected, it was organized and analyzed qualitatively using descriptive methods with the help of tables. Important to note is that some of the interesting things people told the researcher were directly presented.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF RESULTS

Introduction

In this Chapter, the data collected from the field by the researcher is digested presented, analyzed and interpreted according to the objectives of the study and has been presented in tabular form and in other cases graphically.

Data analysis and interpretation on objective one:

Objective one sought to find out challenges faced by teachers in teaching science to children with hearing impairment in the mainstream. The findings are presented in the table.

Table 1 Challenges faced by teachers in teaching children with hearing impairment

Question	Responses	Frequency	Percentage
What challenges do you meet when teaching science to children with hearing impairment	1. Most of science concepts are difficult to sign	04	44.4%
	2. The ratio of learners to a teacher in class is big.	02	22.2%
	3. Learning aids, chemicals, equipments and models are not enough	02	22.2%
	4. Learners with hearing impairment are not interested to learning science	01	11.1%
	Total	09	100%

The table above shows that 44.4% of teachers from the sampled school find it difficult to sign scientific concepts while teaching, 11.1% revealed that learners with hearing impairments are disinterested to learning science and learning aids. Equipments, chemicals and model while 22.2% teachers complained that they handle large number of pupils in class. A combination of these factors can greatly affect effective teaching and learning.

Data analysis and interpretation of objective two:

Objective two was set to find out children with hearing impairment in mainstream. The findings are presented in that table

Table 2: Causes of negative attitudes in teachers towards teaching children with hearing impairment

Question	Responses	Respondents		Total	Percentage
		Teachers	Head Teachers		
Cause of negative attitudes in teachers and Head teachers	Difficulties in communicating to hearing impairment	09	03	12	100%
	Children do not easily follow instructions	09	03	12	100%
	Lack of instructional materials used in teaching science to learners with hearing impairment	09	03	12	100%
	Learners with hearing impairment are stubborn and disturb others	06	00	06	50%
	Lack of training in special needs education	02	03	05	42%

From the table II above varied responses were given in respect to the question causes of negative attitudes in teachers and Head teachers. 12 respondents who included 3 head teachers and 9 teachers said that difficulties in communicating to children with hearing impairment was the major cause of negative attitudes towards learners with hearing impairment.

Other 12 respondents who included 9 teachers and 3 Head teachers had a different view that it was children not easily follow instructions. Also another 12 respondents who included 9 teachers and 3 head teachers had theirs that there was teaching science to learners with hearing impairment.

A few respondents include 2 teachers and 3 head teachers had their views that there was lack of training in special needs. All these led to negative attitudes in teachers towards learners with hearing impairment.

Data analysis and interpretation on objective three

It targeted at finding out the mode of communication that teachers use while teaching children with hearing impairment in the mainstream. Table III below indicate the findings of the study in relation to the above objectives.

Table 3: Mode of communication used in teaching learners with hearing impairment

Responses	Number of respondents	Percentage
Oral	4	44.4%
Gestures	3	33.3%
Sign language	1	11.1%
Total communication	1	11.1%
Total	9	100%

From the table, majority of teachers (respondents) 44.4% use oral to communicate with hearing impaired children in the mainstream.

A few teachers (11.1%) use sign language while others (33.3) use gestures as means of communication when teaching children with hearing impairment. This complex situation indicates that there is always communication breakdown.

Data analysis and interpretation on objective four

Objective one ought to find out methods used in teaching science to children hearing impairment in mainstream schools.

Table 4: Methods used by teachers to teach children with hearing impairment

METHODS	SCHOOL AND TEACHERS RESPONSES			NUMBER OF TEACHERS	PERCENTAGE
	A	B	C		
Demonstration	03	03	03	09	100%
Teacher – Centred	03	03	03	09	100%
Talk and Chalk	03	03	03	09	100%
Gesturing	03	03	02		88.8%
Individuals method	01	02	01	04	44.4%
Group work	00	01	02	03	33.3%

The table above shows that 9(100%) teachers use demonstration, teacher centred and talk and chalk methods while teaching. From the table IV above it was revealed that demonstration, Teacher centres and Talk and chalk were commonly used with respondents using them respectively.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Introduction

This chapter dwells in discussion, conclusion and recommendations of the study. This study was intended to find out challenges faced by teachers in mainstream to teach science to learners with hearing impairment as they are discussed and presented here below.

The result of the study are discussed according to the objectives

Discussion of results on objective one

This was set to find out the challenges teachers face in teaching children with hearing impairment. The study according to table I discovered that teaching science to children with hearing impairment is affected by a lot of constraints. The most significant constraint is lack of instructional materials. This was revealed by 2 respondents which represented 22.2% of the total number of the respondents.

Science being practical subject, required to be taught experimentally but surprisingly the findings from the study (table I) revealed that all the three selected schools are adequately equipped with science equipments, chemicals, manuals and models.

The lack of such materials make it difficult for teachers to teach science experimentally. This inevitably affects the effective teaching of science to children with hearing impairment.

Another challenging constraint was found to be communication barrier. Majority of respondents (44.4%) revealed that they find it hard to sign some signs according to table I response number 1.

For teaching and learning to be interesting and effective, there is a need for effective communication between the learner and the teacher. Such compound situation demoralises the teachers to the extent of hating the class. This further makes the learners too to lose interest and eventually hate learning science.

Accordingly, the study found out that teacher pupil ratio in class is very high as revealed in table I response number 3 in which 22.2% of respondents implies that teachers handle large number of pupils in class than they can effectively manage.

This is a great constraint to teachers because the teaching of hearing impaired children and other disabilities demands a teacher to concentrate on an individual child but because of high teacher pupil ratio, a teacher does not have time to personally attend to each learner as an individual. This has led to a fall in academic performance.

It was established that majority of the hearing impaired children are not interested in learning science such learners attitudes towards the subject is very low and negative as revealed by table I response number 2 in which 11.1% of the respondents rated their attitudes towards as being low.

This is a major constraint and because disinterested learners are devoid of the drive and enthusiasm to study and enjoy science. This phenomena coupled with the lack of effective communication skill leads to a composition of inactive class. It is thus difficult for the teacher to motivate such learners.

Discussion of results on objective two

The focus of the objective two was to find out teachers' views and attitudes towards teaching science to learners with hearing impairment in the mainstream.

The findings on this objective have indicated that most of respondents have negative attitudes towards disabled learners. According to responses from sampled teachers and headteachers (In Chapter 4 table 2) 100% respondents revealed that they prefer teaching pupils/children with no hearing impairment to hearing impairment children and some of the reasons being:

Difficulties in communication, they do not easily follow instructions and lack of instructional materials. However, such statements are not real but a result is bias and misconception of negative attitudes was thus found out to be one of the barriers to children' learning and development and hence a great challenge to teaching science to children with hearing impairment in mainstream children in mainstream school.

In reference to revelations in chapter 4 table II response number 5, about teachers' views and attitudes towards teaching science to learners with hearing impairment, lack of training in special needs education was sighted 42%.

The above situation makes teachers lose interest in teaching hearing impaired learners and the school at large accord such children low value leading to stigmatization. The teacher should therefore learn to accept and assist the handicapped in their classrooms.

Discussion of results on objective three

Regarding the mode of communication used by teachers to communicate to learners with hearing impairment, the findings of the study have revealed that majority of respondents 44.4% was using talking and signing. Others used talking and writing (33.3%).

It should be noted that signing allegedly used by most of the respondents is not sign language but gestures. This is because only 11.1% of the respondents got training in teaching children with hearing impairment.

This shows that teachers are trying by all means on their own to see that children with hearing impairment learn.

These days teachers are encouraged to use total communication approach which combines all modes of communication to allow a child with hearing impairment benefit from what is being taught. Total communication modes include; lip reading, eye contact, finger spelling, hand movement, facial expression and gestures.

One of the aims of total communication is to give deaf children a right to free choice of their favorite means of communication.. The process of assisting deaf children to learn was rather difficult because language barrier brought about by deafness. Lack of hearing causes poor speech and hence difficulty in understanding of what teachers want and telling teachers what they want.

Findings from children through interviews and discussion between the researcher and them have revealed that sometimes children get disappointed and fear to embarrassment cause them to fail to ask teachers and fellow hearing children to repeat for them hence end up missing the lesson progress.

These children therefore lose more than they would be benefiting or gain if the mode of total communication was being used.

In reference to table 3 (Chapter four) response number 3 and 4 indicates that they are few specialized teachers to teach children with hearing impairment in the mainstream schools. Most of the teachers have grade three certificates and Diploma in Primary Education and majority of them still have never got a chance of attending sign language refresher courses. They are therefore not experienced and lack adequate communication and teaching skills in children with hearing impairment.

Discussion of Results on objective four

The focus of objective four was to find out methods used by teachers in teaching science to children with hearing impairment in mainstream.

In reference to table IV in chapter four all respondents (100%) said that demonstration, teacher centred, talk and chalk methods are common methods used when teaching science to learners with hearing impairment. This is followed by other respondent (88.8%) who revealed that gestisturing is second common method used.

The findings on this objective established that most teachers method of teaching are not all appropriate. Teaching requires teachers to develop sensitivity and skills in teaching to assist learners in psychological and educational adjustment. Appropriate methods of teaching result in successful teaching and learning.

The frequency use of talk and chalk and teacher centred, do not only promote note learning but also makes hearing impaired learners to lose a lot due to the fact that they do

not understand what the teachers lips for he or she talks as she/he writes on the chalk board.

Also in reference to to table iv response number 6 only 33.3% of respondents use group work during the teaching. Therefore there is inadequate use of group work in the teaching process. This deprived pupils opportunities of learning by doing, discussing and experience leading to lack of motivation.

Children with special needs should receive additional support (remedial teaching) in the contents of the regular curriculum. Different methods should be used to get them understand and be understood. These include demonstration, child centred, experimentation, demonstration, child to child

Conclusion

It is important to note that the current advocacy no longer supports the philosophy of special schools, therefore children with hearing impairment should be placed in mainstream schools. Three things therefore have to be put into consideration namely; Environment, Curriculum and Teaching approaches. Teachers handling children with hearing impairment should have compassion and love for assisting these children to learn and accept them as they are, freely interact with them, coming down to their level, building good rapport, knowing their likes and dislikes and learning their language (sign language). Teachers should endeavor to get more knowledge the learning needs of children with special needs by going for further studies, attending refresher courses and workshops on special needs education.

Recommendations

According to the children statute, it is the right of every child to live and receive all basic needs of life including food, shelter, clothing, medical care, love respect and education. After gathering all the information herein, the researcher made recommendations which when implemented may improve on the education and performance of children with hearing impairment. These include:

There is need to co-opt special needs education into Primary Teacher Training Colleges. The current system of training special needs at Diploma level minimumly favors special needs education. A few teachers who receive training either at Diploma or Degree level do not go back to class. They are instead placed in leadership positions such as Headteachers, inspectors or hired by rich non-government organisations which have high demand for them. It is therefore important that primary teacher training colleges take up the responsibility of training special needs teachers so that teachers get a 'dose' to take to primary schools where they are needed most.

Special needs department-EARS should organize a number of sign language seminars at subcounty and parish levels for teachers, parents and pupils in mainstream schools. It should be noted that sign language seminars currently being organized at regional levels are very expensive and attended by few. This could be best done with the help of such as Kenya National Association of the Deaf (KENAD) who may provide instructors and interpreters. This may help to bridge the gap between children with hearing impairment, hearing children, teachers and parents by using sign language for easy communication.

Creation of resource room facilities within every mainstream school, with a variety of to cater for the learning needs of all children with special needs. There should also be trained teachers to be made responsible for special education in each mainstream school.

Intensifying awareness programs. It should be noted that although Special Needs Education/EARS has carried out awareness sensitisation seminars in many districts country schools, many people in the community have not had enough information about inclusive learning. EARS therefore to intensify its awareness activities. The work of sensitisation should however not only be done by EARS/SNE staff but involve different categories of concerned professionals and stakeholders. While organizing seminars and other programs about persons with disabilities like education of the deaf children, their involvement is of great importance. The idea behind this involvement is to bridge the gap between persons with disabilities and the community

Since it has been found out that the majority of teachers are untrained special teachers in main stream, many teachers should go for up grading in special needs education at Kampala International University and KISE.

Parents of children with hearing impairment should be encouraged to attend sign language classes and take their children to school when they are still young and they should be taught some sign language to enable them learn to communicate with their children easily and then in helping them learn at home.

Seminars for teachers to learn to make and use educational materials from local materials should be organised locally by districts. Local manpower should be utilised to train and other people who are more experienced because there are areas where competence

seems to be limited. This will increase the number of teachers with skills and eliminate the problem of teachers depending on the already made teaching/ learning materials which are expensive and scarce.

All said and done, I suggest that in future there should be more research studies to find out more challenges found by teachers not only in teaching science but also other subjects like Mathematics to children with hearing impairment in both mainstream and special schools.

APPENDIX 1

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APPENDIX 11

INTERVIEW GUIDE FOR CHILDREN

Class

Age

1. What subject do you learn in your class

.....

.....

2. What are your favorite subjects?

.....

.....

3. Do you find learning science very interesting?

Yes ☐ No ☐

If not what makes in uninteresting

.....

4. Do you have friends in your class and the whole school

Yes ☐ No ☐

If Yes, of what category are your friends.

Deaf ☐ Hearing ☐ All ☐

5. Do your teachers love you like they love your hearing peers>

.....

.....

6. What instructional materials do you use when learning science in your class.

.....

7. What problems do you find in using these materials

.....

8. What do you prefer to do after your studies?

APPENDIX 111

QUESTIONNAIRE FOR TEACHERS

I am a student from Kampala International University carrying out research on causes of poor performance in science among children with hearing impairment in the mainstream schools. I request you to answer these questions willingly.

Name of school

1. What is the enrolment of your class?

.....

2. Are u a specialist teacher in teaching children with hearing impairment?

Yes

☐

No

☐

3. Have you ever attended any refresher course on teaching children with hearing impairment?

.....

4. Do you teach science to children with hearing impairment?

.....

5. Which of the communication methods below do you use when teaching children with hearing impairment in your classroom?

- Oral

- Group work

- Sign language

- Demonstration

- Total communication

6. What challenges do you meet in using the methods above?
.....
7. What methods do you use in teaching science to children with hearing impairment?
.....
8. Which of the methods is (aare) most effective
.....
9. What challenges do you meet in using the methods you have mentioned?
.....
10. What instructional materials do you use in teaching science to children with hearing impairment.
.....
11. What suggestions would you give to improve on teaching of science to children with hearing impairment?
.....

THANK YOU FOR YOUR COOPERATION

APPENDIX IV

QUESTIONNAIRE FOR HEADTEACHERS

I am a student from Kampala International University carrying out research on causes of poor performance in science among children with hearing impairment in the mainstream schools. I request you to answer these questions willingly.

Name of school

1. What is the general school enrolment?

.....

Indicate those with hearing impairment per class

Sex	ST 1	HI	ST 2	H.1	ST 3	H.1	ST 4	H.1	ST 5	H.1	ST 6	H.1	ST 7	H. 1	ST 8	HI
Girls																
Boys																
Total																

2. How many teachers do you have on your staff

Grade	Licenced	III	V	Graduate	Total
Number					

3. Do you have special trained teachers for children with hearing impairment.

Tick Yes ☐ No ☐

4. What methods do your teachers use in teaching science to children with hearing impairment

.....

5. What challenges do you meet in trying to communicate to learners with hearing impairment?

.....

6. What mode of communication do you and your teachers use to communicate with children with hearing impairment?

.....

7. What facilities are used by your teachers in your school to teach science to children with hearing impairment

.....

Thank you.