EXAMINING STRATEGIES USED TO TEACH ENGLISH LANGUAGE TO HEARING IMPAIRED LEARNERS: THE CASE OF MACHAKOS TEACHERS’ COLLEGE.

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2014
DECLARATION

I declare that this work is mine and has not been submitted to any other institution for higher learning for the purpose of examination. Any information which is not my own has been fully acknowledged.

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DEDICATION

I wish to dedicate my work to my sister for her encouragement and financial support. I also express my gratitude to my nephew Patrick, niece Sarah and Sharon for their moral support.
ACKNOWLEDGEMENT

I wish to acknowledge with great appreciation the tremendous contribution of my supervisors Dr. Bwire A.M and Professor J. Kimemia for their help and encouragement. I also thank all the respondents who made this a reality. I thank Machakos Teachers College for allowing me to collect data in the college without any problem. I thank everyone for their tireless effort that they showed me during this tiresome exercise of carrying out the research work.
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<td>H.I</td>
<td>Hearing Impaired</td>
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Since 2003, Kenya prioritized education for all including free primary and secondary education where every child has a right to free and compulsory basic education without discrimination. One of the most fundamental needs for the hearing impaired learners was the acquisition of English language which is a critical aspect in education. Mwangi (2007) emphasized the importance of English Language as an official language and medium of instruction in schools. It was viewed as an important tool to the learner’s intellectual growth and professional development. Skinner (1957) explained how language provided by the environment influence learners as they perceived environmental happenings and respond to their demands. The objectives of this study were to identify strategies that could be combined to help tutors and learners in teaching and learning of English language to realize better results. The researcher also investigated how oral and manual strategies would be used to enable learners with H.I improve their English language performance. This study applied a case study design which was appropriate to the study because it was restricted to fact finding and helped to come up with solutions to the problem. Questionnaires were designed for the tutors, learners and interpreters. Qualitative description was used in order to establish the consistency of the instruments in eliciting the same responses whenever they were administered. The study indicated a strong relationship between responses of all the instruments. Detailed analysis and description was done using Statistical Package for Social Science (SPSS). Chi-Square statistical tool was used to determine the significant relationship between the interpreters, learning materials, methods and learners with H.I’s performance at 95% confidence level. Scales were created from various descriptive statistics. Distribution tables and figures were used to summarize the findings. The study was conducted at Machakos Teachers Training College, with the 18 learners with hearing impairment, 7 tutors who teach English Language and 4 interpreters were involved in the study. The study showed that tutors used oral method of communication which did not help the H.I learners to get all the information through lip reading. It was found out that, the access to full content was highly dependent on the tutors learning sign language to enable them combine strategies. Learners with H.I revealed that the interpreters had sign inconsistency for the same concept. The H.I found it hard to make consultations after the lesson because of the language barrier. The H.I learners, the tutors and the interpreters were of the opinion that combining strategies of teaching would improve the learners’ English language results. They said this approach may solve a problem of clarity, getting first hand information and bring a sense of inclusion. The tutors concluded by requesting to be taught sign language so that they could be able to address all the learners at the same time and be able to combine the strategies at will. The study recommended strongly combination of Signed English, Signing Exact English facial expressions and speech as the only solution that would make learners with H.I understand better than using the interpreters.
CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The UN Charter on child’s right to education (1995) emphasizes that States should respect and ensure that the rights set for each child are followed without discrimination of any disability. It further documented that, States should recognize the right of the child to education and ensure primary education is compulsory, available and free for all. Education of the child shall be directed to development of the child’s personality, talents, mental and physical abilities to their fullest.

Education for people with hearing impairment in England was proposed by John Bulwer. He outlined plans for an academy in Philosophy to teach deaf and dumb language. While in France, Charles-Michel de l’Épée pioneered deaf education. He did a good charitable work for the deaf sisters who communicated in sign language. He decided to dedicate himself to the education of the deaf, and founded a school in 1760. He believed that deaf people were capable of using a language and developed a system of teaching French and religion. During the early 1760s his shelter became the world’s first public school for deaf children.

The first school for teaching the deaf to speak and read in Britain was established in 170 by Thomas Braidwood’s Academy for the Deaf and Dumb in Edinburgh. During this time, Braidwood used an early form of sign language which was recognized as a language in 2003. Under the management of Braidwood's family, the school expanded, encouraging the
establishment of an Institution for the Deaf and Dumb in Edgbaston in 1814 and others in Liverpool.

Deaf education in the United States began during the early 1800s. The manual school was established by Thomas Hopkins Gallaudet and Laurent Clerc. The school used a manual method which was the American Sign Language. The manual method became common in deaf schools for the rest of the century. During the late 1800s schools began using the oral method, which only allowed the use of speech in contrast to the manual method previously used. The oral method was used for many years, until sign-language instruction was gradually developed in deaf education.

Around 1958, education for deaf people in Kenya was introduced with the establishment of the first school in Mombasa. When Professor Michael Ndurumo came back to Kenya from America he advocated for the use of sign language in early 1980s. Moreover, schools for the deaf in Kenya started using sign language where SEE, fingerspelling and Total Communication was introduced. A 1988 study conducted by the Ministry of Education showed that using total communication as a teaching method enabled faster learning and was more effective for cognitive growth when incorporated at earlier ages than later ages. After this study, the Kenyan government promoted the use of sign language and, more specifically, SEE alongside total communication in deaf schools and units.

Kenya’s constitution states that, every child has a right to free and compulsory basic education where persons with disabilities are entitled to access educational institutions and facilities to assist them in learning. Due to increasing population of students with hearing impairment, classes are crowded and their set up has been changed to that of a regular classroom to
accommodate the overwhelming numbers. Integrating students with H.I to learn with hearing students is a good noble idea which has its own challenges. They are not able to keep up to the pace of the class hence the benefit of an integrated environment may become difficult to realize. Since 2003, Kenya has prioritized education for all including free primary and secondary education where the government should provide assistive devices like group hearing aids to be fixed in classrooms and also a web camera for translation. It reaffirms its position that students with hearing difficulties have a right to full access and to quality education through visual modes of communication which is Sign language.

Sign language is the use of manual communication which involves combination of hand shapes, body language and facial expressions to convey a meaningful message. This may not successively happen when an interpreter is used to mediate the learning. Their participation becomes minimal because the interpreters were not able to match the tutors’ high speed for them to follow closely.

Special education in Kenya involves students with special needs, where Hearing Impairment (H.I) is one of the focus areas. Education for the students with hearing impairment falls under the Ministry of Education where its history dates back to the founding of Kenya Society for the Deaf Children (KSDC) in 1958. Students with H.I were expected to lip read and make meaning out of the lip movement. Students who are H.I were not able to understand most of the instructions given by the tutors by watching their lip movement and facial expressions only. They were punished when found using gestures by tying their hands and forcing them to follow lip movement. It is clear that if the brain had not understood information that passes through the learning channels, learning becomes difficult. This is evident the time the tutor communicates
orally through an interpreter who presents the information using KSL whereby students with H.I receive this information in bits.

There are many factors that cause deafness ranging from genetic to environmental noise. Hearing impairment is classified according to the degree of hearing loss the person had acquired. The categories range from mild hearing loss to profound hearing loss. This study is focused to handle two categories that is severe hearing loss measuring from 71dB to 90dB and profound hearing loss measuring from 90 dB and above. This group constitutes students with hearing impairment (H.I) who can only use gestures or sign language to communicate. For the students with hearing impairment to perform well, they should be provided with optimum interactive learning environment where maximum learning should be achieved. They find themselves at a dilemma when they come to realize that they were not able to read text books selectively and were not able to construct good structured sentences because their interaction with learning materials is minimal.

1.2 Statement of the problem

Tutors communicated to students with hearing impairment through speech and gestures. This brought break down of communication between the two calling for the intervention of services of an interpreter. Considering that the H.I students used sign language and the tutor used speech, this placed the two in two different worlds. For the two to understand one another, the tutor had to use an interpreter or other strategies had to be identified to help the tutor to communicate with the H.I student. This study therefore investigated to identify other strategies that could be combined to bridge the gap to break language barrier between the student and the tutor in an integrated class without using an interpreter.
1.3 Purpose of the Study

The purpose of this study was to identify strategies that could be combined to teach English language to students with hearing impairment at Machakos Teachers' college.

1.4 Objectives of the Study

The study aimed at achieving the following objectives to:

1. Find out strategies that are used to teach English language to the students with hearing impairment in an integrated setting.
2. Identify challenges faced by tutors and students during classroom teaching and learning of English language.
3. Assess instructional materials used by students with H.I during learning of English language.
4. Establish the role of interpreters in teaching and learning of English language in an integrated class.
5. Identify some of the reasons why students with H.I obtain poor grades in English language.
6. Find out some of the strategies which could be combined to help students with H.I to obtain better grades in English language.

1.5 Research Questions

The study sought to answer the following questions:

1. What strategies do the tutors use to teach English language to the students with H.I in an integrated class?
2. What challenges do tutors and students with H.I face in the teaching and learning of English language?

3. Can adapted learning materials be of help to students with H.I in learning of English language?

4. What is the role of interpreters during teaching and learning of English language in an integrated class?

5. What are some of the reasons that lead to poor performance in English language examinations.

6. What are some of the strategies that tutors can use to teach students with H.I inorder to improve their performance in English language?

1.6 Significance of the Study

This study endeavoured to identify strategies that could alternatively be used to teach English language to students with H.I. The study also attempted to address some of the challenges encountered during teaching and learning of English language. The role of the interpreters was addressed and the findings of the study could be used to improve P.T.E English language performance of students with H.I. This research aimed at influencing curriculum developers to come up with adapted curriculum that could be of help to the students with hearing impairment to cope with the work load.
1.7 Scope and Limitations of the study

1.7.1 Scope of the study

The study focused on a group of students who could only communicate through sign language. These are students with severe hearing loss measuring from 71 dB to 90 dB to those with profound hearing loss measuring from 90 dB to 120 dB admitted at Machakos Teachers' College.

1.7.2 Limitations of the study

There were a few barriers encountered during the process of this research.

- The population of the students with H.I was smaller in relation to the general students' population.
- Another challenge was that, the absence of similar institutions with similar settings for comparison; meaning that the pilot study was done in the same institution; denying the study the benefit of comparison.

1.8 Assumptions of the Study

The study assumed that tutors who taught English language were able to teach English language to students with H.I by using gestures and the blackboard. Sign language interpreters were less needed in mediation of teaching and learning of English language in an integrated class.
1.9 Conceptual Framework

Figure 1.1: Conceptual framework for integrated learning

The conceptual framework for this study suggested that learning takes place by integrating students with H.I and those with hearing to establish that learning has taken place for both. Having students with hearing impairment (H.I) in an integrated classroom may slow down learning for both students with H.I and those with hearing. This therefore would call for interactive use of different strategies to ensure that learning took place for all the students in equal measure. The diagram in figure 1:1 above explains how learning takes place in an
integrated situation. On one hand the tutor communicates orally through an interpreter who is the only link between the tutor and the student with H.I. The interpreter changes the information from English to K.S.L and presented it to the students. Here the interpreter signs only the content words using K.S.L structure which is different from English language structure. Students with H.I receive this information in bits. The information was presented in incomplete broken sentences where students with H.I were expected to get full information to enable them to follow classroom teaching.

It is clear that a lot of information get lost between the tutor and the student causing poor performance. The tutor might not be aware how much information the student with H.I had lost until the examination was done. At the same time, the resource materials used were hard for students with H.I to read and derive meaning out of them. This mode of communication and use of unadapted materials might be some of the causes of poor performance by students with H.I. It seems that it might be more difficult to learn and appreciate information fully when learning passes through an interpreter.

The interpreter provided the students' feedback orally in well-constructed sentences whereby the tutor would be convinced that all students had understood the concepts. The tutor would not know that these well-constructed sentences were not from the student with H.I but from the Sign language interpreter (S.L.I). This assumption would deny students with H.I any assistance from the tutor that would help them improve their grades.
Sign language interpreters' (S.L.I) continued use of non-manual markers might make the students lack knowledge of punctuation marks and how to use them. This is because they use facial expressions and body language to emphasize a point and punctuate sentences. The S.L.I is one aspect that should provide access to the tutor and peer communication, which would allow the student with H.I to learn in the same manner as his or her hearing peers. Clearly, the quality of access to classroom content is highly dependent on the skills of a S.L.I.

On the other hand, a tutor combining strategies to teach all the students without passing through an interpreter in which it is believed that, all students would be given first-hand information in equal measure was important. The tutor would also use adapted learning materials where students with H.I would follow closely. The students would be able to ask and answer questions directly to the tutor who would clarify the information without passing through the sign language interpreter. This would enable the tutor evaluate how much information students with H.I had understood. By doing this, the tutor would be able to monitor learning taking place without encountering communication barrier. This is where sentences would be restructured and information made easier for the students to follow and derive meaning from the printed adapted text. Tutors would be able to identify students' weaknesses and spare more time for remedial work after realizing that the students were lagging behind. Having this in mind, the tutor would be able to identify strategies that would work best to deliver the lesson leading to the students' improved performance.
1.10 Theoretical Framework

This study used Skinner's (1957) theory, which emphasized that “when learning a language, whether using signs or speech, students should be active participants.” Language provided by the environment influence students as they perceive environmental happenings, communication and respond to their demands. According to Skinner, acquiring Sign Language was natural, just like acquiring spoken language. Students with H.I acquire language just like the ‘normal’ children and goes through the same stages of language acquisition. However, he pointed out that students with hearing impairment (H.I) may not acquire complex language patterns, which could help them construct meaningful sentences. The use of new technology can help students with H.I to overcome this learning problem. In a classroom environment, speech to text systems can prove beneficial to students with hearing impairment. The system converts spoken words into text displayed on the computer it can also provide a print-out text.

This theory is essential in explaining the study of English language. It shows that, students follow a similar course in language acquisition from the first words which are usually gestures to the mastery of simple to complex language patterns. Skinner still observed that, students with H.I slowly move away from pointing and start using facial expressions, eye gazes, gestures and body language gradually moving towards the use of manual communication. This is the most complex skill that students with hearing impairment (H.I) develop for communication. Yang (2006) supported Skinner on the stages of language acquisition which are shared by both the students with hearing and students with hearing impairment (H.I). Students with H.I lack a very important sense of hearing that shapes language to its complexity. Yang (2006) argued that due to lack of this sense of hearing, students would ‘speak’ or sign in incomplete broken sentences which
appear uncoordinated and difficult to understand. It is very possible to have one or two words for a complete sentence for example, *ME COME* meaning *I am coming*, *HAVE* meaning that *I have finished*.

Derek (1991) like Yang supported Skinner by arguing that the surrounding environment is very important to help students acquire language which is structural, systematic and complete. He asserted that, the environment where positive responses reinforce correct language learning is crucial for students to acquire language though this may not be the case with students with H.I. Derek (1991) observed that, while home environment usually helps students with H.I to interact with the language consistently, the school also continues the process of learning in a more interactive and complex way. He further asserted that, students with H.I from parents with H.I are exposed to sign language at early stages which help them acquire language early.

On the other hand, Yang (2006) argued that the school environment may have some limitations in which students may not benefit unless where effort is made in an integrated setting. Some of the limitations are like the use of interpreters who modify and provide incomplete information to the students who in turn provide distorted feedback. The tutors use uncoordinated channels where some information get lost between them and students with H.I which eventually bring about poor performance. Moores (1996) supported this theory by pointing out that, language learning is not only for students with H.I alone but a process to be undertaken by all the students interacting in the same environment irrespective of their conditions. He continued to point out that people learn best when they have the ability to store and recall what they have heard which may be a hard thing to do with students with hearing impairment. This study sought to establish
how students with H.I could be helped to improve their performance and acquire better results in English language.

1.11 Operational Definition of Terms

Combination of strategies: Putting different teaching methods together to help students go through a learning process.

Deafness: Condition referring to children or people with little or no hearing.

Deaf Language: This is an invented form of communication where sign language, gestures, facial expressions and body language are used to convey meaning.

English Language: It is the third most common native language in the world that is widely learned as a second language and it is an official language of the United Nations.

Hard of Hearing: These are people who hears specific frequencies within 500Hz to 4000Hz at 41dB to 70dB and are able to follow instructions by use of hearing aids.

Hearing Impairment: Denotes disability of people with hearing problems.

Integration: Placement of a student with hearing difficulties into ordinary institutional environment without modifying the curriculum.

Integrated setting: This is a programme where students with hearing impairment and regular students are put together under an ordinary instructional environment sharing the same learning materials and where services are provided in the most integrated manner.
Sign Language Interpreter: Designates a person who uses manual symbols to communicate ideas and concepts from spoken to sign language.

Interpretation: This is a process designed to reveal and relay concepts and ideas between two languages.

Kenyan Sign Language (K.S.L): Visual gestural language used by hearing impaired people in Kenya as their mother tongue.

Lip reading: Ability to perceive and follow speech by watching the movement of the speaker’s lips and observing all other visual clues including facial expressions and gestures.

Manual Communication: It uses articulation of the hands to mediate a message between persons. The information is expressed manually and received visually.

Non-Manual Communication: It uses visual non sign patterns like body language, facial expressions, eye gaze, gestures and pointing to convey the intended meaning.

Oral Method: A method of educating students with HI by use of speech and speech reading.

Profound hearing loss: These are students who are unable to hear anything through auditory channels. They have very little residual hearing and can only learn through sign language.

Sign Language: A language which uses visually transmitted sign patterns to convey information instead of it being conveyed acoustically.

Signed English (SE): A system of manual communication which represents English word order where suffixes are usually dropped.
Signing Exact English (SEE): A system of manual communication which is exact representation of English words.

Strategies: Plan of action laid down to achieve a particular goal. They are used to improve students’ performance.

Teaching Method: The term teaching method refers to the general pedagogical principles, and management of strategies used by teachers to give instruction to students.
CHAPTER TWO

LITERATURE REVIEW

2.1 Background information

This chapter reviewed and discussed many different methods employed in teaching English language as a second language to students with hearing impairment (H.I). It investigated the possibilities of using more than one strategy in a single lesson to teach English language.

Mwangi (2007) documented that; one of the most fundamental needs for students with H.I was the acquisition of language which is a critical aspect in education. It particularly plays an important part in a student’s life as it facilitates interaction with the environment and learning materials. Mwangi (2007) emphasized on the importance of learning English language as an official language and medium of instruction in schools. This is viewed as an important tool to the student’s intellectual growth and professional development. According to educational reports, Ominde Report, GoK (1964), Kamunge Report, GoK (1988) and Koech Report, GoK (1999) observed that, emphasis was always put on the teaching of English language in all institutions of learning but was not clear on which methods of teaching students with H.I could be appropriate for them to follow classroom teaching successively. The Gachathi Report on Education, GoK (1976) documented the need for institutions of learning to effectively use alternative approaches and adapted instructional materials to improve P.T.E English language performance of students with H.I.
According to Kathryn (1984), oral method of communication was the only method used in schools and institutions that integrate students with H.I to teach English language. This method seemed not to favour students with H.I because they were not able to follow the classroom discourse by watching lip movement, gestures and body language. She further observed that, this method was effective only when used with the students who are hard of hearing because they used hearing aids to assist them.

Antia & Stinson (1999) noted that the students who are hard of hearing were able to lip read, use their residual hearing and voice to learn English language. Kathryn (1984) further noted that it was believed that this method would help students with H.I to learn how to speak and hear. Mwangi (2007) further noted that, teachers for students with H.I were following a language policy which advocated for the teachers to use speech while teaching and the students with H.I to follow lip movement. This method only benefitted the hard of hearing students only who could use sound and voice readily.

Ndewa (2006) pointed that Kenya advocated for the use of Kenyan Sign Language, Signed English (S.E) where suffixes are not signed and Signing Exact English (S.E.E) which is the true representation of English language since 1985. According to the Ministry of Education (MoE) (1986) the use of Sign Language was a better means of communication compared to the oral system but it was yet to be put forward for improvement of English language.

For students with H.I to improve their performance in English language, Kaupinen (1994) suggested the use of different tools to implement the popularly advocated bilingual approach. She further pointed out that there were constraints of inadequate trained teachers which may be
one of the biggest challenges. Antia & Stinson (1999) emphasized that the fundamental goal to educate students with H.1 was actually not to make them normal but to prepare them to take up challenges in a working environment.

Although Antia & Stinson (1999) argued that students with H.1 could be integrated and the use of more than one strategy be used, the strategies are yet to be known. Quigley (1984) further argued that combination of strategies could help the students to achieve native-like fluency in English language.

According to the Ministry of Education (MoE) (1986) language policy in Kenya favours the use of Kenyan Sign Language in lower classes as the language of instruction. For the upper primary, Signed English (SE) and Signing Exact English (SEE) are used alternatively as languages of instruction. Instead, the teachers use Kenyan Sign Language to teach English language which is the same as using mother tongue to teach English language (Stahlman 2002). Quigley (1984) emphasized that it was very clear that for effective communication and learning of English language to take place, several strategies were critical.

Mwangi (2007) observed that there are two categories of deafness whereby in one category, students who are profoundly deaf need an interpreter or a tutor who can use sign language. While on the other category are students who are Hard of Hearing (HoH) may need a hearing aid to follow normal classroom instructions. Mwangi (2007) further explained that hard of hearing (HoH) is a mild problem originating from the outer or middle ear. At the same time, Silverman (1978) noted that students who experience mild to moderate hearing losses may not need an
interpreter in the class because they are able to follow instructions quite easily by use of hearing aids.

Silverman (1978) further observed that severe to profound hearing loss results from an abnormality affecting the inner ear preventing the student to follow simple instructions. Mwangi (2007) suggested that students who suffer from this problem would need an interpreter who would interpret without first changing English Language to Kenyan Sign Language to help students with H.I to maintain the speaker's intended message.

This study confined its research on students with H.I with severe to profound hearing loss. These students perform poorly in English language examinations because of their inability to follow normal classroom teaching. There might have been a lot of confusion when sign language interpreters are used because they change English language to Kenyan sign language to deliver the intended message. Using several strategies would be the best idea that would help students with H.I to follow instructions well (Napier & Goswell 2006).

According to Hegarty (2002) integration of strategies is important because it gives students equal opportunity to learn and achieve the expected goals. Students with H.I require highly skilled preparation and presentation, where various communication strategies are simultaneously needed. However, he observed that, teaching students with H.I was considerably challenging, especially in an integrated setting. This was because their condition required specialized attention as compared to the students who are hearing. Teaching English language is one of the
most challenging areas due to the students' inability to hear and process information systematically.

Albertini (1988) observed that, many methods of teaching English language as a second language have been developed over the years. While many have been put aside like lip reading where students read lip movement only to gain knowledge. Actually he emphasized that, all methods provided a stepping stone towards an approach theory which had ultimately aided the progression of teaching methods as a whole. He further observed that, methods are put into practice and objectives are organized by teachers to prepare the students to achieve the set goals.

Stahlman (2002) emphasized that, a method is a specific strategy, a set task which aims at moving students towards achieving the objective while learning a target language. He however explained that, students with H.I may not be able to move towards this goal as fast as it might be expected because they use non manual methods and gestures to acquire language.

Baker (2001) explained that, when grammar is taught, it uses syntactic rules, which is the process by which a language functions. For students with H.I, this process may not be applicable because their K.S.L syntactic rules are different since they sign only the content words. He further noted that, students follow a gradual path of discovery learning to read and write by interacting with the environment.

In addition, Silverman (1978) argued that, the environment has limited goals and a few language patterns to offer with regard to students with H.I. He observed that, the hearing impaired students needed an interactive rich environment that would help them learn English Language
systematically without breaking language rules. He therefore concluded that tutors of students with H.I. needed to apply methods that are systematic and coordinated to help students with H.I. understand rules applied in learning of English language. They also needed to simplify their teaching and learning materials to provide a chance for students with H.I to follow the lesson well. This study tried to establish the possibility of using combined strategies with adapted materials to teach students with H.I without using the interpreters.

2.2 **Oral Method for Teaching Hearing Impaired Students**

Oral method is a method for communication where spoken language, lip reading and voice are used to train students with hearing impairment.

Quigley (1984) argued that, the most typical traditional method was when the tutor must write on the blackboard and use voice to explain without considering students who may have had difficulties in following the teaching and make meaning out of it.

According to Ajavon (2003) this method may not be beneficial because students with H.I were likely to be left guessing what the tutor might have been teaching. He observed that students with H.I learn through trial and error with a lot of strain and guess work. This is because there may have been no proper communication between the two. He further argued that, if the tutors would provide reading materials early, students with H.I would be able to follow the teaching well. The interpreter could be of help at this point to explain in signs what the tutor may likely be teaching but the truth is that the information from the interpreter is delivered in K.S.L leaving the student and the tutor in two different worlds.
Ajavon (2003) noted that, this method would help students to build good interpersonal relationship between them and their tutors. Albertini (1988) emphasized that, when the services of interpreters were applied, the information given to students with H.I may carry minimal meaning because the same information would be modified and given in the most adapted way. The information from the interpreter always provides the student with a general idea. They eventually end up being unable to construct simple English sentences.

Wren (2002) pointed out that interpreters were one of the major reasons why students with H.I perform poorly in signed and written English language. This is because the interpreters have inadequate skills to provide full information to students with H.I as it is expected. Kalee (2007) added that, an interpreter may tell the students that, *TEACHER SAY/ OUT DISCUSS/* The student may not know how to write the same sentence in good grammatical English. The students would understand that they should go out and discus but the H.I student may find it difficult to construct the same sentence in good English. She argued that, this may be one of the reasons that made them lag behind in English language performance in all levels. Ndegwa (2006) further explained that, an interpreter would report back to the tutor what the student would be saying in well-constructed sentences therefore the tutor would think that all the students had understood the concept. The tutor may not know that the well-constructed sentences were from the interpreter but not from students with H.I. Therefore students with H.I would continue suffering because of the tutor's failure to identify and address the prevailing problems.

Wren (2002) argued that, oral method was based on the belief that students with H.I could become competent and independent in *spoken* English language and would learn effective communication skills to achieve independence. This method may be used to teach students with
H.I and students who are hard of hearing where spoken language, lip reading and voice were only used. He explained that, the ultimate goal for using this method was to enable students with H.I to learn how to hear and use speech. He further asserted that, it was an effective method that worked well with students with mild and moderate hearing loss. The truth about this method according to Dale (1972) was that, students using this method usually learn using hearing aids where voice was easily recognized and readily used.

Woodward (1972) pointed that students were expected to use their residual hearing to maximize their understanding. Effective lip reading depended on knowing the content where most of it was guesswork. Stinson (1999) argued that, lip reading helped students gain confidence lessening isolation and increasing interaction. He further noted that, this did not mean that students with H.I were able to develop good spoken English language but it would give them an over view of what may be said. According to Stahlman (2002) tutors were expected to talk directly to the student but not to the interpreter and likewise the student should address the tutor. Bunch (1994) further argued that, this may not help solve the prevailing problems because the interpreter would report back to the tutor in good English and to the student in K.S.L subjecting them to be in two different worlds.

Bunch (1994) pointed out that, the student with H.I should be seated towards the front seats of the class with the better ear facing the teacher and the same ear towards the class to help them use their residual hearing to maximum. Kathryn (2003) explained that, severe to profound students may struggle a lot to use oral method which may not help them learn and achieve better results.
Baker (2001) noted that, severe to profound hearing impaired students may continue showing signs of shyness, lack of understanding and withdrawal from active participation. This study strived to identify methods that would help students with H.I to achieve the intended objective by receiving complete information from the tutor.

2.3 Manual Method of Teaching the H.I

Baker (2001) emphasized that, manual method of communication was based totally on sign language which provided a way to communicate and interact without the use of spoken language. According to Baker, this was considered to be the natural way that students with H.I could express themselves and receive information. He pointed out that *Signing Exact English (S.E.E)* was one of the manual methods used to teach students with H.I. This is where signing is done in English word order and where each word is given a sign.

Kalee & Aura (2007) added that, *Signing Exact English (S.E.E)* is a system of manual communication which strives to be exact representation of English vocabulary and grammar. It is an artificial system that was derived and put in place for use in 1972 by the Ministry of Education (MoE). According to Ajavon (2003), *Signing Exact English* derived much of its vocabulary and signs from American Sign Language (A.S.L) which follows English word order. Ajavon further pointed that, it is visually representing spoken English language developed for use in education for the hearing impaired students. It helped the students to develop English language communication skills in a more organized way showing fully the use of articles and prepositions.
However, Ndewga (2006) observed that SEE was slower than natural speech and consumes a lot of time making tutors not to favour for lack of covering their work. At the same time, tutors may not favour the idea of going back to school to learn sign language. Kihure & Otiato (2007) added that, this method may be cumbersome and tiresome where students using it alone become tired and lag far behind the expectations of the tutor but also noted that the method is far much better than the oral approach.

According to Hegarty (2002) for manual method to be effective, it has to be accompanied by another method to make the combination work well. However Aura (2007) explained that manual method of communication may not be effectively used in schools for the deaf because it needed teachers who are able to use sign language well. This meant that, tutors should be ready to learn sign language and be able to work out which other methods could best be alternated during teaching of English language. Roy (2000) observed that, it was very unfortunate that interpreters may not embrace the idea of using Signing Exact English because it is slow and time consuming causing delay. In this case, the study examined to identify other methods which would be combined during teaching to address the issues of students with H.I in an integrated setting.

2.4 Integration of Methods

Bilken (1978) stated that, integration of students with H.I into a regular classroom has proved to be one of the best methods to educate them. He argued that, there was no single method that could be used to teach English language to students with hearing impairment and achieve good
Engen (1983) observed that, to avoid language developmental delay in students with H.I, an integrated approach was necessary with good teaching methods to provoke their interaction and participation. He added that, this approach would give the student a chance to use sign language and also learn from peers through oral language by lip reading. He further explained that, communicating in sign language plays an important role in cognitive and social development where the students interact with one another in a rich environment to learn language freely. Nolan and Tucker (1981) asserted that integration of methods would give students with H.I a chance to learn about the world around them by use of any available method and to acculturate into the deaf world.

Although Aura (2007) found sign language to be a good method than oral communication, she however observed that students only sign the content words or one word for a full sentence which provided them only with a general idea. Ndegwa (2006) supported Aura by pointing out that language used by students with H.I to be ungrammatical with native like features which interfered with good mastery of English language. This meant that, neither verbal nor manual means of communication could work singly therefore we go back to Hegarty (2002) that no one was sure what methods could work best unless they are identified.

Wong (1999) argued that if tutors would carefully identify two methods and combine them accordingly, they would be able to address students with H.I's prevailing problem of poor performance in English language. It may have helped them to address the students' needs and maybe able to monitor their receptive skills, expressive skills and performance. This study tried
to address the issue of possible strategies and learning materials that would suit to teach students with H.I to learn English language without the intervention of interpreters.

2.5 Kenyan Sign Language

Kalee (2007) observed that, Kenyan Sign Language (K.S.L) is a visual gestural language used by the hearing impaired people in Kenya. She noted that, it uses manual symbols to represent ideas and concepts. According to Ndegwa (2006) students who use Kenyan Sign Language are unable to comprehend spoken English language and its written form. This is because they use English in reverse to express their ideas, for example a sentence such as, This boy went to school early; in K.S.L it reads, EARLY/ SCHOOL BOY THIS GO// She noted that this shortening of sentences made their reading level and performance in English language remain below their level.

Ndegwa (2006) argued that, their grammar appeared modified and do not resemble spoken English language, for example, I am going to the market. In K.S.L MARKET ME GO//. She pointed that, the K.S.L sentences are very short and only capture the concept which may not be clearly presented. She further explained that, the sentences are written in upper case because they are unique and carry incomplete information. She continued to explain that due to this uniqueness, their commas are characterized by a slash and their full stops are a double slash for example, she said, “I want to go home”. In K.S.L: SHE SAY/ HOME ME GO//

Baker (2006) argued that, this shortening of sentences should be the same style used by the interpreters to make their work easy. He explained that it created a barrier in understanding of English and its structure but could be applicable in teaching other subjects. He continued to
argue that this might be the kind of communication students get from the interpreters when interpreting an English language lesson. Baker (2006) again noted that, students with H.I use the same language to communicate to the tutors through the interpreters and receive information through the same mode from the tutors through the interpreters. He said that, due to this exposure students with H.I would not be able to write good English language with the correct grammatical structure.

According to Engen (1983), interpreters present information from the students in good structured language. During this time the tutor might not be aware that the students actually had problems that needed to be addressed. Use of K.S.L brings language delay, poor understanding and low achievement in English language according to Ndurumo (1999). He further explained that Kenyan Sign Language (K.S.L) should be avoided in classroom situations to avoid confusion and misconception of ideas. Ndurumo (1999) observed that; this might be one of the causes of the problems encountered by students with H.I in pursuit to learn English language. This study tried to establish if students with H.I would develop good mastery of English language by avoiding the use of K.S.L in English language lessons.

2.6 Effective Communication in an Integrated Class

Moores (1996) explained that, effective communication was the key to teaching students with hearing impairment. He argued that, tutors had a responsibility to ensure that there was good communication in their classes between them and students with H.I. Many tutors who teach English language might not be sure how to communicate effectively with students with H.I in and outside classrooms (Stockoe 2000).
Baker (2006) emphasized that due to this problem where tutors were unable to communicate with students effectively, strategies may be developed to achieve effective expressive communication. Baker further explained that a tutor should be sensitive to the issues brought by a student and should be able to communicate without a mediator. Napier (2006) supported this concept and emphasized the need for students with H.I to work with a tutor who uses more than one strategy. This would help them gain support in development of study skills and mastery of English language. He further pointed out that tutors might not be in a position to help students with H.I to achieve good results if they continued using interpreters.

Mwangi (2007) further argued that combination of strategies might be the solution to deal with students with H.I and help them improve their English language performance. However he did not put forward suggestions for the best methods to be combined. He argued that continued use of interpreters denies students with H.I interaction with their peers and good mastery of English language. Mwangi continued suggesting that, it was always good for the tutors to simplify learning materials for the students with H.I to read and follow instructions. This proposed study further established and suggested possible methods and adapted learning materials that could be used to teach students with H.I to develop fluency and good mastery of English language.

2.7 Hearing Impaired Students and Written English Language

Wren (2004) noted that, when teaching an integrated class, it is always good to use more than one strategy to understand the students' work. A study on bilingualism done by Rawlings (1997) revealed that some students were bilingual with good mastery of English language and good
writing skills. However, Ndegwa (2006) argued that students with H.I, who have Kenyan Sign Language (K.S.L) as their first language might take longer time to read and understand simple text, especially where it relates to abstract concepts.

According to Rawlings (1997) students with H.I have limited vocabulary and make grammatical errors with poor sentence construction. He argued that they usually take longer time to plan and produce written work than students with hearing. Therefore they needed adapted reading materials to make them understand better without much strain. He emphasized that lack of exposure to good English language signers might cause uncoordinated written and broken meaningless sentences.

Abang (2005) suggested that, tutors should be encouraged to learn sign language. This would help them use more than one strategy to help the students develop positive self-esteem regarding their work. He further explained that, written materials should be clearly structured and adapted to eradicate misconception of ideas. He suggested that it is good to use simple English language structure that would easily be understood to help students follow English language in its simplest form. The study examined to establish if the use of simple English language structure would break the barrier between the students and the tutors through interaction.

2.8 Learning Situation

According to Keller (2005) tutors should always be ready to break long sentences into short simple manageable sentences to help students master the structure and its use. He suggested that difficult vocabularies and sentences should be reduced and made simpler for easy understanding. He pointed out that tutors should be able to reframe and simplify reading materials for the
students to understand better. Stahlman (2002) asserted that it was advisable for the learning material to be made simple and to work with simple coordinating conjunctions, for example, \textit{but, so, that, because, for,} and avoid transitional words like \textit{however, nevertheless} and \textit{although} which make language more complicated. He further explained that, this could only be done by the tutors because interpreters use only the content words to pass information. Wren (2004) further encouraged tutors to be obtaining feedback at every step for corrections to be made promptly and to plan for remedial work.

According to Jefwa, G. (2009) auditory materials like audio tapes and video tapes could be translated into simple printed materials. This would make it easier for students with H.I to make meaning out of them. He further suggested that it would be easier for the tutor to make explanations direct to the students and begin from concrete towards abstract concepts. Bilken (1978) supported this by suggesting that blackboard should always be erased to reduce visual congestion and confusion.

Stockoe (2000) further emphasized the need for the tutor to be keen enough to engage the attention of students with H.I before communicating to the rest of the class. Roy (2000) however warned tutors to refrain from using passive voice and negative forms in sentence construction because they confuse the students.

However, Adoyo (2004) observed that, hearing impaired students should always be encouraged to take part in discussions. He asserted that this would help them to understand how to construct meaningful sentences in sign language. He suggested that it was good to clearly, identify by
pointing who would be speaking or who is answering questions for the students to follow. Adoyo (2004) further explained that, when the students are discussing in groups they should sit in a circle or in a semi-circle in order to have a view of each students’ face and lip formation. This would encourage students with H.I to be more involved and become active participants. He argued that this would encourage students to read more and be more interactive. This might help to reduce challenges that the tutors and students faced in the process of teaching and learning of English language.

2.9 Challenges faced by Students with H.I

Ndurumo (2005) argued that, although curriculum may be one of the obstacles that needed to be carefully designed and adapted to cater for the needs of the students, classroom arrangement and provision of adapted materials should also be addressed. Ndurumo further noted that, learning institutions in Kenya follow the regular curriculum which is extensive and demanding whereby its coverage is impossible. Napier (2006) supported Ndurumo by noting that, the curriculum is rigid leaving little flexibility for adaptations and for tutors to try new methods. According to Adoyo (2002) the timing for the completion of the curriculum was also unrealistic for students with H.I because their learning process is slowed down.

Adoyo revealed that, Kenya National Association for the Deaf (KNAD) foresaw challenges and fears for students with H.I in an integrated setting. Some of the challenges and fears were:
• The hearing impaired students in an integrated programme might lack attention from the tutors due to lack of communication skills.

• Due to the broad curriculum, adaptation and provision of adapted reading materials to fit the needs of students with HI may be difficult.

• That the tutors may have a negative attitude towards learning of Sign language and also using more than one strategy in a single lesson.

• Due to students with HI’s lack of social and academic interaction due to language barrier may lead to isolation.

• It may be difficult to supply adequate sign language interpreters because the demand might be too high for the government to meet (Adoyo 2002).
CHAPTER THREE
METHODOLOGY

Introduction

This chapter discusses research design, target population, sampling and sampling procedures and research instruments. Piloting procedures, data collection techniques and analysis are explained. Logistics and ethical issues are considered and explained in this chapter.

3.1 Research Design

A research design is the framework that had been created to seek answers to research questions by collecting and analyzing data in a manner that aims to bring relevance to the research purpose (Kothari, 2004). This study applied a qualitative case study design, implying that the findings were descriptive in nature. According to Yin (2003) a case study research methodology is most appropriate when the objective of the research is to evaluate a programme and develop an intervention. Since the aim of this study was to investigate and identify common strategies employed by tutors, the most appropriate strategies were proposed and a qualitative case study method was found to be the most ideal.

The design was appropriate to the study because it was restricted to fact finding and helped the researcher to obtain data that was used to analyze the problem. It also enabled the researcher to study the subjects in their own natural setting. The study helped to meaningfully describe a distribution of scores or measurements by analyzing and interpreting the data. Having this in mind Machakos Teachers’ College then qualified to be a case study because it was the only college which integrates students with H.I in Kenya.
3.2 Variables

Independent and Dependent Variables

An independent variable in a study is a variable that when it is manipulated it causes some change that provides the desired results. The independent variables in this study are the teaching methods such as oral, signing exact English and Signed English. On the other hand, the dependent variable is the factor influenced by the independent variable to cause a change in performance. It is said to be measured or observed result of the independent variable.

In this study, teaching methods, sign language interpreters and learning materials comprised the independent variables whereby if they were manipulated a change in the results was to be realize. On the other hand the performance was the dependent variable where improvement of results depended on the manipulation of the independent variables.

There were many factors that would influence this activity such as the tutors, interpreters, students, peer interaction and interaction with the learning materials.

3.3 Location of the Study

The study was confined at Machakos Teachers Training College and focused on students with severe to profound hearing problems. This was because it was the only college that integrates students with H.I in Kenya. This college is located two kilometers from Machakos town along the Machakos-Nairobi road and one kilometer from the main road to the left on the way to Machakos town. It is a unique institution where different disabilities such as visually impaired
physically handicapped (P.H) and students with hearing impairment (H.I) are integrated among the non-challenged students.

3.4 Target Population

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing their conclusions. The target population for this study consisted of all the 23 students with H.I, all the 5 sign language interpreters and all the 9 tutors who teach English language. They were expected to offer suggestions that would help improve teaching and learning of English language. Tutors have a lot of experience on the barriers to effective teaching while the students themselves were the ultimate beneficiaries of learning outcome. As this type of research had not been carried out before, their ideas would be utilized for developing more innovative teaching and learning strategies. There are 23 students who are severe to profoundly deaf and who the study focused on.

3.5 Sample Size and Sampling Techniques

3.5.1 Sampling Techniques

Purposive sampling technique represents a small group of objects where all the individuals are involved in the study. The study applied purposive sampling technique since the target population was fully involved in the study. The identification of the target population was based on the researcher’s prior knowledge of the subjects to provide guide on important aspects such as the nature of the respondents, geographical situation and general local structures. Machakos Teachers Training College was chosen based on the fact that it was the only institution in Kenya that integrates leaners with hearing impairment at this level.
3.5.2 Sample Size
The sample size consisted of 18 students with H.I, 4 sign language interpreters and 8 tutors. According to Mugenda & Mugenda (2003), where the sample population is small, all are included in the study and they are not split into smaller units. This had an advantage of getting in-depth information about a case and in its richly informative way.

3.6 Research Instruments
The study used both a questionnaire and an observation schedule to collect primary data. Document analysis was used to collect secondary data. Both primary and secondary data were important in informing the study.

3.6.1 Questionnaire
The questionnaires were designed on the basis of the objectives of the study which aimed at obtaining important information from the tutors, students with H.I and the sign language interpreters. There were closed and open-ended questions. The questionnaire included two major sections: “A” bio-data and “B” structured and open ended questions. Section “A” required the respondents to write down their gender, age, qualifications and length of service as it would apply to them. In this study, respondents were classified into three groups: tutors (N=8), students (N=18) and Interpreters (N=4). The researcher developed the three questionnaires which were used as follows: the Tutors Questionnaire Appendix I (T.Q) this was for the tutors who teach English language, it captured data regarding how best tutors could teach English language in an integrated class to help students with H.I perform better. The Students’ Questionnaire
Appendix II (L.Q) sought information regarding how students could best learn English language without the use of an interpreter.

The Interpreters' Questionnaire (I.Q) sought for information on why students with H.I construct broken meaningless sentences. This was because the tutors, the students and interpreters work in an interactive way during teaching and learning. During analysis, data was easily coded and analyzed. Each tutor, each student and each interpreter needed a questionnaire which means 18 questionnaires for the students, 8 questionnaires for the tutors and 4 questionnaires for the interpreters were required.

3.6.2 Classroom Observation Schedule

Observation schedule was used to obtain information relating to learning and teaching of English language to students with hearing impairment (H.I) in an integrated setting. Guidelines in form of statements were formulated to help the researcher follow what to observe in an English lesson for one month. The researcher was expected to put a tick according to the observations made. During observation, real classroom activities were displayed where the tutor, the students and the interpreter were involved.

3.6.3 Document Analysis Guide

Document analysis was a method used to get information about the students from the examination records that were already in their files. Records obtained were Primary Teacher Education examinations results for the last three years that is 2013, 2012 and 2011 which
provided an in-depth analysis. The P.T.E performance presented in the documents was analyzed and relevant information to the study was recorded.

3.7 Pilot Study

Pilot study refers to pre-testing of the research instruments to ascertain the validity and the reliability of the research instrument. The study involved five students with H.I, one tutor and one interpreter, selected randomly at Machakos Teachers College. This was done at Machakos Teachers College because it was the only college where this category of students is found at P1 level. This was the highest educational level students with profound hearing loss have gone so far in Kenya. The study helped the researcher to make necessary amendments such as wording and re-arrangement of the research items. This helped to improve their precision and correctness which reduced vagueness. The pilot study provoked responses which were important to help validate the research instruments. All those who participated in the pilot study were excluded from the main study. To avoid contamination of information, enough time between pilot study and the actual study was allowed.

3.7.1 Validity

Validity refers to a measure of degree to which data collected using a particular instrument presents the content that the instrument was designed to measure, (Mugenda & Mugenda 2003). It determines whether the research truly measures that which it was intended to measure or how truthful the research results would be. This study used a pilot study to ascertain the validity of research instrument, which involved five Students with H.I, one tutor and one interpreter
randomly selected. The pilot study was used to test different dimensions of research instruments validity which included construct validity and content validity. Content validity was used to check the accuracy and meaningfulness of inferences. It checked the study objectives against the content sampled in developing the test items to determine whether the set items accurately represented the concept under study.

Construct validity refers to the extent to which the interpretation is supported by the theory for the operations of the instrument. It helped the researcher to check if the right variables were accurately measured and interpreted. The necessary adjustments were made thereafter before the commencement of the actual data collection for the study. Detailed analysis and description was done using Statistical Package for Social Science (SPSS). Chi-Square statistical tool was used to determine the significant relationship between the interpreters, learning materials, methods and students with H.I’s performance at 95% confidence.

3.7.2 Reliability

According to Orodho (2004), reliability is a measure of degree to which particular measuring procedures give equivalent results over a number of repeated trials. To determine the reliability of the instrument, retest method was used in which the same test was given to the same people after a period of time. The reliability of the test was obtained by examining the consistency of the responses between the two tests.

This means that, similar instrument could be used in similar settings and obtain the same results as long as there were no significant changes on the conditions of the studied cases. Description was done to establish the consistency of the instruments in eliciting the same responses whenever they were administered to indicate a strong relationship between responses of all the instruments.
To ensure reliability the pilot study was carried out immediately the new term was opened where clear instructions were given and at a time when the respondents were not overloaded with work.

3.8 Data Collection Procedure

Permission to carry out the research was obtained from the National Council for Science and Technology (NCST) as it was required. The letter was presented to the principal to create awareness of the intended research. Further permission was sought from the tutors and the interpreters explaining to them about the intended research. The dates to administer the instruments were planned by the researcher in consultation with the office in-charge. With the help of a proficient sign language interpreter, the researcher administered the instrument to the respondents with H.I in the middle of the term. The researcher, through an interpreter, explained to the students the purpose of the questionnaire which was distributed to them to fill. The questions were read to them for clarification. The questionnaire for the tutors and interpreters was administered almost at the same time where the researcher explained that the purpose of the study was purely educational and only the tutors who taught English were expected to answer the questionnaire. The questionnaire was distributed to them and was later collected. All the questionnaires from the students and interpreters were returned but one questionnaire from the tutors was not returned. This helped to ensure a good return-ratio of the instruments.

3.9 Data Analysis and Presentation

This study obtained data from both primary and secondary sources which were mutually complementary. Data collected using the questionnaire, observation schedule and document
analysis was read through, edited and organized, in order to familiarize with it. All the questions were analyzed and information gathered from document analysis was linked to the results of the questionnaire. The researcher checked and interpreted the data before it was keyed in the computer. All the items of the questionnaires were keyed into the computer and were analyzed using the Statistical Package for Social Sciences (SPSS). Details of the questionnaires were analyzed using the Chi-Square statistical tool to determine the significance of the findings at 95% confidence level. Distribution tables and figures were used to summarize the findings. The results were interpreted to determine the findings and a conclusive report was written based on the results.

3.10 Logistical and Ethical Considerations

To carry out this research, authority was sought from the National Council for Science and Technology (NCST) after Kenyatta University had approved the proposal. The researcher ensured confidentiality of the information given by respondents and adhered to the obligation to respect their rights, needs, values and desires without compromising their privacy and dignity.

The information collected was not identifiable which meant that the questionnaires were coded after they were filled to make the information anonymous. Providing anonymity of information collected from research participants meant that, the researcher did not identify information of individual subjects by their names.
Permission was also sought from the college authorities to carry out the study. Collection of data was done by explaining the objectives verbally through an interpreter for the students to understand. The researcher also explained to the tutors and sign language interpreters that the information was educational and requested them to voluntarily fill the questionnaire.
CHAPTER FOUR

FINDINGS, INTERPRETATIONS AND DISCUSSIONS

4.0 Introduction

This chapter covers data analysis, findings and their interpretations based on the study objectives. The objectives of the study were to explore strategies that could be combined to teach English language among students with H.I. Challenges faced by tutors and students in teaching and learning of English language were identified. Investigations on how oral and manual strategies could be used to enable students with H.I to improve their English language performance were looked into. The objectives of the study were to:

- Find out strategies that are used to teach English language to the students with hearing impairment in an integrated setting.
- Identify challenges faced by tutors and students during classroom teaching and learning of English language.
- Assess instructional materials used by students with H.I during learning of English language.
- Establish the role of interpreters in teaching and learning of English language in relation to the performance of students with H.I.
- Identify some of the reasons why students with H.I obtain poor grades in English language.
- Find out some of the strategies which could be used to help students with H.I to obtain better grades in English language.
4.1 Research Instruments Response Rate

Total numbers of 29 questionnaires were issued and 28 were successively completed and collected as shown in Table 4.1.

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Response Rate</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sampled</td>
<td>Completed</td>
<td>Percentage return rate</td>
</tr>
<tr>
<td>Students</td>
<td>18</td>
<td>18</td>
<td>100</td>
</tr>
<tr>
<td>Tutors</td>
<td>8</td>
<td>7</td>
<td>88</td>
</tr>
<tr>
<td>Interpreters</td>
<td>4</td>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>29</td>
<td>97</td>
</tr>
</tbody>
</table>

The aggregate return rate was at 28 (97%), with students completing 18 (100%), tutors completing 7 (88%) and interpreters 4 (100%) making the study finding more conclusive.

4.2 Demographic Information

4.2.1 Bio-data of Study Respondents

The bio-data for respondents is presented on the basis of gender, education level, work experience and role played in teaching and learning of English language among students with H.I at Machakos Teachers College.

4.2.2 Gender

The gender of the respondents and the findings were summarized in Table 4.2.2
Table 4.2.2: Gender

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>%</td>
<td>Female</td>
<td>%</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>Freq</td>
<td></td>
<td>Freq</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>11</td>
<td>61.1</td>
<td>7</td>
<td>38.9</td>
<td>18 (62.1%)</td>
</tr>
<tr>
<td>Tutors</td>
<td>2</td>
<td>28.6</td>
<td>5</td>
<td>71.4</td>
<td>7 (24.1%)</td>
</tr>
<tr>
<td>Interpreters</td>
<td>1</td>
<td>25</td>
<td>3</td>
<td>75</td>
<td>04 (13.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>48.3</td>
<td>15</td>
<td>51.7</td>
<td>29 (100%)</td>
</tr>
</tbody>
</table>

The number of students with H.I who participated in the study was eighteen 18 (100%) comprising of eleven 11 (61.1%) male students and seven 7 (38.9%) female students. Seven tutors participated in this study of which 2 (28.6%) were males and 5 (71.4%) were females. The sign language interpreters who participated were four 4 whereby males were 1 (25%) and females were 3 (75%). The study therefore involved both male (48.3%) and female respondents (51.7%) as we had seen.

4.3 Educational Level of Tutors and Interpreters

The tutors and interpreters’ educational level was established and analysed where Table 4.3 gave the summary of the findings.
Table 4.3: Educational level of tutors and Interpreters

<table>
<thead>
<tr>
<th>Formal Education Level</th>
<th>Teaching/Learning Facilitators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tutors</td>
<td>Interpreters</td>
</tr>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>Masters</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Degree</td>
<td>6</td>
<td>86</td>
</tr>
<tr>
<td>Certificate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

All the tutors 7 (100%) had degree certificates where 1 (9.1%) of them had master’s degree. All the interpreters had certificates. Therefore, the tutors and the interpreters had a lot of knowledge that would help students with H.I score good marks.

4.3.1 Teaching subjects

The actual subjects tutors were formally trained to teach were identified. The findings are summarized in Table 4.3.1

Table: 4.3.1 Tutors’ level of Education.

<table>
<thead>
<tr>
<th>Subject Trained to teach</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>English/Literature</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td>English/CRE</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>English/Special Education</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>
The study established that all the tutors who taught English language had English as one of the teaching subjects. This finding cleared doubts that the poor performance by students with H.I was as a result of tutors’ incompetence. The responses revealed that the tutors had what it takes to teach in a college.

4.4 Work Experience in Years

The findings of the tutors and the interpreters work experience was summarized in Table 4.4

<table>
<thead>
<tr>
<th>Work experience (in years)</th>
<th>Teaching/Learning Facilitators</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tutors</td>
<td>Interpreters</td>
</tr>
<tr>
<td></td>
<td>Freq</td>
<td>%</td>
</tr>
<tr>
<td>Over 10</td>
<td>6</td>
<td>85.7</td>
</tr>
<tr>
<td>5-10</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>2-5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Less 1 year</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

It was found that most 6 (85.7%) of the tutors who taught English language had over 10 years of experience in teaching and only 1 (14.3%) had between 5-10 years of teaching experience. The interpreters had 2-5 and 5-10 years of interpreting experience at 50% each. This means that tutors may not be the cause of students with H.I’ poor performance because they are able to help them perform better.
4.5 Students’ KCSE Grades

The academic qualification of students with hearing impairment are summarized in Table 4.5.

Table: 4.5 Students’ KCSE Grades.

<table>
<thead>
<tr>
<th>Grades</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>C+</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>C-</td>
<td>16</td>
<td>88.8</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100</td>
</tr>
</tbody>
</table>

The study revealed that the highest grade obtained by students with H.I was one B- (5.6%) followed by one student with C+ (5.6%). The rest had mean grade of C- 16 (88.8%). All students with H.I had KESE certificate as the highest academic qualification. This showed how hard it might be to be put in the same class to pursue the same syllabus and be expected to perform as well as the others. Students with H.I are always a grade lower compared to the regular students. This may be one of the factors causing poor performance.

4.6 Performance of Students with H.I in the last three years

The primary teacher education examinations for the last three years were analysed in table 4.6. The results showed clearly that there was a cause to make tutors worry about this category of students.
According to table 4.6 a big number of students with H.I have not been performing well in all the three examinations. It was clear that P.T.E examinations posed a big challenge to them. None of them scored either grade one, two, three or grade four in PTE examinations done in the three years. The table clearly shows that 14 (63.6%) in 2013, 3 (13.7%) in 2012 and 1 (12.5%) in 2011 clustered at pass 7 in PTE examination which means that they attained low grades compared to the students who were hearing. This performance may have been caused by factors like entering into the college with a grade lower than the other students. This performance caused a lot of
worry warranting the tutors to search for other alternative methods to help the students improve their grades in English language. It had been noted that in the three years a big number of students have been failing their English language examination totalling to 10 (24.1%). The results were skewed towards grade 5, 6, 7 and 8. This showed that if students with H.I were able to obtain grade 5 and pass 6 while using interpreters, they could perform better with the tutors combining strategies and teaching them without an interpreter. Their entry grade which was C- and use of interpreters had posed a big challenge to their English language performance. The tutors had realized that this category of students with H.I needed extra skills to be trained and qualify as skilled teachers therefore the tutors had accepted to learn sign language to cater for the needs of students with H.I.

4.7 Strategies used to teach English Language to students with H.I in an integrated setting.

Strategies used by tutors to teach students with hearing impairment were summarized in Table 4.7

### Table 4.7 Strategies used by tutors

<table>
<thead>
<tr>
<th>Strategy used</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech and interpreters</td>
<td>5</td>
<td>71.4</td>
</tr>
<tr>
<td>Speech and gestures</td>
<td>2</td>
<td>28.6</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
</tr>
</tbody>
</table>

The study sought to find out strategies that were used to teach English language in an integrated class. The classroom observation revealed that all the 7 tutors used oral method in teaching
English language. After probing the tutors, they agreed that students with H.I did not get all the information by watching the tutors’ lip movement. According to the study, all the 7 (100%) tutors were of the opinion that students with H.I were able to obtain good results if the correct strategies were put in place.

Many tutors 5 (71.4%) engaged interpreters to help students with H.I to understand better while the remaining 2 (28.6%) tried to combine gestures with speech and also used interpreters. Most of the students said that tutors used speech when teaching English language a method they did not favour because an interpreter must be involved. However, according to Bilken (1978) integration of students with H.I into a regular classroom proved to be one of the best methods to educate them. He, however, found out that, there was no single method that could be used to teach students with H.I English language and achieve good results. Engen (1983) pointed out that, to avoid language developmental delay in students with H.I, an integrated approach was necessary with good teaching methods to provoke their interaction and participation.

4.8. Challenges tutors and students face in teaching and learning of English Language.

Challenges are difficult issues that need a lot of skill, energy and determination to solve them, Napier (2006). This study sought to find out challenges faced by both the tutors and students with H.I during teaching and learning of English language. According to the study findings, 16 (89%) of the students were not comfortable when taught together with the students who are hearing. This is because after the students who are hearing grasped the concept, the tutor moves ahead without considering students with H.I in the class. However, it was observed that the students who were hearing also felt bored and delayed because students with H.I take too long to answer simple questions.
Students who are H.I did not understand most of the instructions given by the tutors by watching their lip movement and facial expressions only. Their participation was minimal because the interpreters were not able to match the tutors' high speed for them to follow closely. The students who are hearing on the other hand were not able to make points clear due to communication barrier. Although the tutors took time to encourage students who are H.I to answer questions, sometime they did not wait for the answers because they felt that the students took longer time to present their answers. This made students with H.I become passive when taught together with the students who are hearing. Figure 4.1 Summarizes challenges faced by students who are H.I.

The challenge that took lead was the tutors' high speed at 30% followed by the students' inability to follow the interpreter closely at 24%, which they said was caused by the tutors' high speed. A lot of information got lost between the student and tutor leaving the students to guess what the information could have been. This meant that leaners with H.I were not aware of the
information presented by the tutor and what they had lost. During observation it was realized that most of students with H.I provided wrong answers. This shows how difficult it was to get full and right information from the tutor through the interpreter.

Students with H.I revealed that interpreters provided sign inconsistence for the same concept as the third major challenge at 19%. This meant that, the interpreters would use several signs for a single concept which students said was not clear and was confusing. According to the tutors 4 (57.1%) whichever method they try to use, students with H.I seemed to have challenges in following instructions correctly. Sometimes tutors become discouraged and tend to develop negative attitude because students with H.I take too long to understand a simple concept delaying the learning process. It is therefore important to note that patience and positive attitudes are key roles in realizing a successful performance of a student with H.I.

Students with H.I found it hard to make consultations after the lesson because of the language barrier. This means that they were not able to use speech whereby students with hearing and the tutors were not able to use sign language. This made tutors get concerned and wished they could learn sign language to help all the students participate fully. All the 18 (100%) students with H.I were not happy with the results they obtain and they wished if tutors and students with hearing would learn Sign Language, their performance would improve. Stockoe, (2000) observed that the average English language competence of a 18 year old student with H.I was found to be below a standard four child with hearing. This means that students with H.Is’ ability to perform well needed a highly qualified interpreter or alternative methods to help them improve their grades. According to Benjamin, (2002) accurate interpretation of all classroom discourse is extremely
vital to a student with hearing impairment and needed a highly qualified sign language interpreter.

It was observed that, in cases where the class had a distributed discourse, it became a challenge for the interpreter to pick the key concepts and present them to the students consistently and clearly. It was also observed that students with H.Is’ participation in the class was minimal compared to their counterparts because distribution of questions did not favour them. This was because the tutor lacked patience to give them enough time to organize their ideas. It was observed that in most cases they provided wrong answers making the tutor to rephrase the questions every time to get the best responses. This means that it was hard for the interpreters to link students with H.I with the whole class to be at par.

4.9. Copying mechanisms to overcome learning Challenges.

Coping mechanisms are ways and skills which people use to deal with challenges. The study sought to find out mechanisms used by students with H.I to overcome challenges highlighted. The findings are summarized in Figure 4.2.
The findings show that there were ways that could have been used to help students with H.I to cope with the prevailing learning challenges. Mechanism that took lead was 6 (33.3%) where students with H.I favoured the idea of repeating and rephrasing of information. The students were of the opinion that when the information was repeated the interpreters would understand it better and give them clear and correct information. Other 5 (27.7%) students with H.I cited that provision of lesson notes would help them follow the lesson and be able to ask and answer questions in an informed way. The students explained that they would be able to revise the notes later and seek for more clarification. Another group of students 4 (22.2%) favoured the idea of the tutors addressing them direct because they would have eye contact and have a view of the tutors’ gestures, lip movement and facial expressions. Some of the students with H.I would be able to pick some information from the tutors’ facial expressions, lip movement and also follow the gestures. For students with H.I to sit in front was favoured by 2 (11.1%) students who said it was a good idea because they would be able to see the tutors’ facial expressions and body
movement clearly. The last mechanism was favoured by 1(5.6%) student who felt that assistive
device like hearing aids would be of help but many students did not like the idea because they
already know that they are profoundly deaf and the hearing aids would not help them understand
better.

4.10 Use of instructional materials by Students with H.I

The study sought to find out the feelings of the tutors and students on the use of English
language learning materials. A good performance comes as the result of interaction between the
student and the instructional materials. The demands for instructional materials and its
adaptations would make students with H.I learning needs very beneficial. Adaptation of learning
materials would simply be a good teaching technique put to use. During observation, Students
with H.I seemed not to understand clearly information read from text books or maybe they took
longer time to synthesis the information for them to understand. The information seemed to be
complicated for them to get the intended meaning taking the tutor back to rephrase and repeat the
same simple information.

4.10.1 Students with H.I opinions on reading materials

The hearing impaired students view the learning materials as hard to understand and a bit
confusing. Getting hidden meaning from complex sentences and set books is a big handle to
overcome. The following Figure 4.3 summarizes the students' opinions.
Students with H.I at 14 (77.7%) supported the idea of having adapted reading materials before the lesson started to help them understand the content. The students argued that the information from text books was hard to read and understand on their own. They were of the opinion that it would be better if the tutors prepared adapted notes for them and be provided before the lesson started. The students would be able to read the notes and follow classroom teaching closely, they would also be able to ask and answer questions well. They would keep the notes and read them later and seek for more clarification after the lesson. This was sending a clear message that students with H.I have been finding it hard to read and get the intended information from text books.

The other 3 (16.5%) students with H.I were not for that idea because they said that the original information would be distorted if tutors adapted the notes. They argued that during examination their work would appear too simple for the same level having them score little marks. The other 1 (5.5%) students with H.I had mixed reaction and did not know which way to follow. The
student did not come out clearly to support the adapted materials or to continue using the same text books. This student said that the only big challenge was getting the hidden meaning from the set books. If notes on set books would be adapted the student would have no problem in handling the other areas.

4.10.2 Tutors opinions on reading materials

Tutors said it was good to provide adapted notes to students with H.I but some felt like the work would be too much for them. Figure 4.4 gives a summary on tutors’ opinions on the provision of adapted learning materials.

![Figure 4.4: Tutors opinions on learning materials](image)

Tutors at 5 (71.4%) had the opinion that, it was a good idea to provide students with H.I with adapted notes to make them follow the teaching and help them do revision at a later date. The tutors felt that this may help to change the students’ negative attitude towards English language
that it is not a hard subject. They hoped that this would be one of the strategies to help students with H.I view learning positively and improve their English language grades. The other 1 (14.3%) tutor said that the idea was good but felt that the work would be too much for the tutors to handle. The tutors were of the opinion that they would clarify difficult areas for students with H.I later after the lesson. The other 1 (14.3%) tutor said that students with H.I meet challenges in all areas of English language and therefore they would find it hard to provide adapted notes on all those areas. They argued that it may be of no use to provide adapted notes in some areas while other areas remained a challenge.

4.11 The role of interpreters in teaching and learning of English Language in an integrated programme

The role of an interpreter is to convey every intention and feeling of the message that the tutor is directing to students with H.I. The skills and knowledge of an interpreter are critical aspects where full access to information in an integrated programme could be challenging. This is because classroom communication typically is distributed among multiple speakers. For the student with H.I to understand the content, it requires a qualified sign language interpreter to integrate what many individuals say. It would be very difficult to represent this type of discourse, which often involves shifts in register as well as the speakers. The study intended to establish the role played by interpreters in teaching and learning of English language in an integrated programme, the findings are summarizes in Table 4.11 and Figure 4.5
According to Table 4.11 most of the students 12 (67%) did not embrace services of interpreters as important in learning English language. According to the students, interpreters skip important information, present wrong information, make learning slow and sometimes distort the original information. This contributed to poor performance because students may not be able to present their answers relevantly due to distortion of information. Students with H.I 6 (33%) were of the opinion that interpreters’ services were important to them because they treasured the little information they get from them. Tutors were also not pleased with the interpreters’ role in teaching and learning of English Language because they tended to slow learning and sometimes present irrelevant information.

According to the tutors 5 (71.4%) interpreters were one of the major causes of students with H.Is’ poor performance in English language because they lacked relevant signs and used K.S.I to deliver the content. According to the tutors, interpreters used mother tongue to pass the intended content to the students and also lack professionalism. The other 2 (28.6%) tutors
embraced the interpreters’ services. Figure 4.5 gives a summary as to why services of interpreters were not favoured.

![Figure 4.5: Why the use of interpreters is not favoured](image)

The main reason as to why interpreters interfere with teaching and learning of English language was lack of knowledge on the subject content according to the tutors. Tutors at 37% were not comfortable with the involvement of the interpreters because they were of the opinion that interpreters lack enough and relevant signs to pass the right content to the students. The other reasons as to why tutors would rather do without interpreters included; passing of wrong information, delaying of information and mother tongue interference at 25%, 19% and 13% respectively. The interpreter changes the information from English language to K.S.L whereby the K.S.L structure is different from that of English language.

Students with H.I face more difficulties in accessing full information through an interpreter in comparison to what their hearing peers learn. Therefore most of them 12 (67%) did not seem to favour services of an interpreter instead they wished tutors would learn Sign language. Although
tutors said they were ready to learn sign language, maybe there would be constraints that would slow the process like time factor and work coverage. This means the access to full content was highly dependent on the skills of the interpreter which involved much more than the ability to pass information. Interpreters needed to have good interpretation performance skills to help students obtain better results in English language.

4.12. Reasons for poor performance

The grades obtained by students with H.I showed it evidently that joining the college with a grade lower than the others posed a challenge to students in an integrated programme. The sign language interpreters continued use of K.S.L to interpret English language, lead students with H.I to make many grammatical mistakes in their written work causing a major drawback in their performance. Students with H.I lack good sign language models that they would emulate and become competent in answering questions. Lack of adapted learning materials would also pose a challenge because students with H.I may fail to understand a complex text that would enable them answer questions well.

Tutors’ lack of patience and negative attitude would make the students lag behind. Tutors and hearing students’ lack of sign language skills had put the students who are H.I in an awkward situation whereby they were not able to follow normal class discussion or ask for clarification. On observing their performance in Table 4.6, it was clear that tutors had a cause to worry and an obligation to go out of their way to look for ways to help the students improve their grades. Figure 4.6 summarizes reasons for their poor performance.
According to the study findings, 6 (33%) of students with H.I present many grammatical errors that cause poor performance in English language. The second reason was 4 (22%) of students with H.I who get mixed up when writing their examination by mixing English language and K.S.L. This makes their work appears incomplete and meaningless. This mix up makes the students score very little marks. The third reason being 3 (17%) who lack models of good English language signers who could serve as role models. If tutors were able to communicate in sign language they could be the best role models because they would sign to the students full grammatical sentences. The other reason 3 (17%) was the interpreters' continued use of K.S.L to interpret English language. This made students with H.I lack firm grip of the subject content and fails to understand where they go wrong.

The students were left not knowing how to read selectively and how to write good structured sentences. Another reason was that students 2 (11%) said that they were not provided with adapted reading materials to help them get clear information without much struggle. The students
found the text books and the tutors' notes hard to read and understand. This made students with H.I ignore the notes and stick to what they had written. The notes they wrote were full of mistakes and could not help them during revision. Since the text books were hard to follow they did not feel encouraged to read selectively and look for strong points that would make them write their examinations well. If the tutors' notes would be adapted, students with H.I would read and understand better and probably their performance would improve. Some of the students with H.I ask the interpreters for clarification who use K.S.L to provide answers making the students lose track. According to the information provided in Figure 4.1 the main reasons for the poor performance by students with H.I was grammatical errors and use of K.S.L to provide answers for their examinations. However, tutors were of the opinion that students with H.I were able to perform better if relevant strategies could be put in place.

4.13 Tutors and Students' opinions on the use of combined methods.
The study sought to find out the opinions of the tutors, students and interpreters on the best and appropriate strategies to be used in teaching and learning of English language among Students with H.I. The findings are discussed below.

4.13.1 Tutors' and students' suggestions on combined strategies.
Oral method is a method used for communication and educates students with hearing impairment using spoken language only. Manual method uses articulation of the hands to mediate a message between persons whereby the information is expressed manually and received visually. Figure 4.5 shows that 3 (42.8%) of the tutors suggested that the use of sign language combined with speech would help students with H.I understand better than using the interpreters. All the 7 tutors
were of the opinion that learning sign language would enable them teach all the students at the same time because they would have the capacity to clarify points.

This shows that all the tutors were ready to learn Sign language which would enable them combine strategies to help Students with H.I obtain better results. Tutors 2 (28.6%) observed that small discussion groups would make it possible for students with H.I to learn from their peers. This would be one of the most appropriate things to do but it would work well if the students with hearing would also learn sign language.

Only one tutor at 14.3% favoured the use of slowed speed and another one tutor 14.3% favoured the use of remedial teaching but no tutor favoured the use of K.S.L at all. This is because use of K.S.L would deter acquisition and full understanding of English language. At the same time use of slowed speed and remedial teaching would call for more time and use of an interpreter. They observed that, use of interpreters distort information and the use of K.S.L make students lag behind. Kenyan Sign Language was not equivalent to English language because it has mother tongue features which do not concur with English language. This information is summarized in Figure 4.7.
All the 18 Students with H.I and 7 tutors were of the opinion that combining speech, gestures and signs would make students with H.I improve their English language grades. They attributed improvement of their performance to tutors learning sign language to enable them provide first-hand information. This would enable students with H.I to access full information from the tutor just like the hearing peers. The students also would provide answers direct and without delay to the tutor without passing through the interpreter. This involvement would encourage them to learn and improve their grades. This would also help save time because repetition would be minimal and the tutor would not wait for the interpreter to grasp the concept. Students with H.I would be able to respond to the tutor’s questions promptly without delay because they would understand one another. Learning Sign Language would enable the tutors combine strategies and deliver the intended content without any delay. This would help them reduce their speed because they have to combine speech and signs well to present full information. The tutors need to help the students follow classroom discourse closely whereby the hearing students should also learn
sign language to help put across points as they discuss. This would make students with H.I not to feel neglected and to also get involved in the discussions. However this would delay the expected work load coverage in good time as it was mentioned by some tutors.

The tutors said this approach had several advantages including improved clarity, getting first-hand information, a sense of inclusion and participation. Hearing impaired students would be expected to participate fully just as the hearing counterpart. Tutors learning sign language would help do away with use of mother tongue in learning English language and provide ground for all students' participation. All the 7 tutors favoured S.E.E/S.E/Oral as the best combination that could work well in teaching the H.I and the hearing students without an interpreter. The students also suggested to be given reading materials before the actual teaching starts, to make them enhance their understanding.

4.13.2 Interpreters' suggestions on favourable strategies

There was a mixed response among the interpreters as to whether the use of K.S.L could improve English language performance among students with H.I. One interpreter (25%) favoured oral method while another (25%) favoured Kenyan Sign Language (K.S.L). Just like the interpreters students with H.I provide their answers in K.S.L which did not match English word order. As the interpreters find it easy to use K.S.L, students with H.I remain at a loss because they used the same broken English language structure to answer questions scoring poor grades. Although use of K.S.L helped the interpreters to match the tutors speed, this did not help the students to improve their English language grades as it is suggested by 2 (50%) of the interpreters. All the 4 interpreters agreed that K.S.L and English language are two different languages where one of the
languages cannot be used to teach the other. The other two interpreters (50%) favoured combination of strategies as the only solution where tutors could use speech and signs to pass the intended information to all the students.

The interpreters favoured Signed English (S.E), where plurals and endings are not signed, Signing Exact English (S.E.E) where all words, suffixes, prefixes, plurals and tenses are signed combined with speech. This means that if students with H.Is' grades are to be improved the only possible way was for the tutors to be ready to combine strategies. This would help the students to learn English in English but not learning English through mother tongue. They suggested the combined approach as the most appropriate to improve English language performance among students with H.I. as shown in Figure 4.8

![Pie Chart](image)

Figure 4.8 Interpreters suggestions on strategies
4.14 Summary on strategies.

The combined opinions and suggestions on how to improve the performance of students with H.I are summarized in Figure 4.9.

![Figure 4.9: Combined suggestions by the tutors, students and interpreters](image)

It was apparently clear that most respondents wished to have the tutors be trained in Sign Language this was suggested by 90%, 79% and 25% by the tutors, students and interpreters respectively. This was because according to the study tutors were of the opinion that the regular students perform better compared to students with H.I. They further observed that, students with H.I did not get clear information by lip reading.

It was observed that, their participation was minimal because the interpreters were not able to match the tutors’ high speed for them to follow teaching closely. They attributed improvement of
their performance to tutors learning sign language to enable them provide first-hand information. This would enable students with H.I to access full information from the tutor just like the hearing peers. Tutors suggested that, this approach had several advantages including improved clarity, getting first-hand information and a sense of inclusion and participation. Having hearing aids was not favoured because they may not be of any assistance because the students under study are profoundly deaf at the same time the new technology may be expensive for the college to afford.

The second most favoured suggestion was to have remedial classes for the slow students who were basically students with H.I at 38%, 72% and 50% by the tutors, students and interpreters respectively. Tutors did not favour remedial classes because this meant having extra hours to teach. It also meant slotting in more time and more work for the interpreters. The next two mostly suggested strategies were involvement of qualified interpreters and separation of students with H.I from hearing students. To separate students with H.I from the rest of the class meant teaching them alone with or without the involvement of an interpreter. Tutors should try and learn sign language to avoid the use of interpreters and to enable them combine strategies freely. Separating students with H.I from the other students would not be a good idea because integration is the best method for active learning for both students with hearing impairment and students with hearing.

Providing full access to information to an integrated class may be complex, and it may involve more than one strategy to help students improve their performance. Clearly, for students with H.I to improve their P.T.E English language grades, the clarity of information would highly depend on the skills of a qualified interpreter whose involvement would be much more than the ability to
sign. It would be critical for tutors to monitor the progress and understanding of all students when they may not communicate in Sign Language. To monitor this, tutors should provide students with an outline of the lesson notes, allowing them to counter check and clarify their notes while teaching was taking place.

Students would then be more engaged in learning and could easily review the notes at a later time. This is because from the classroom observation it was observed that students with H.I were finding it hard to understand full meaning of simple concepts. Therefore students with H.I also wished the students with hearing learn sign language so that they could be able to help them after the lesson and during group discussions and conversations without feeling neglected. The combination that was highly favoured was Signed English where root words are signed only, Signing Exact English where all words, tenses, suffixes, prefixes, plurals, facial expressions and speech are combined.

4.15 Findings

According to the findings, students with H.I have been found to present many grammatical errors. It was also found out that the interpreters continued use of K.S.L. to present the tutor’s ideas and concepts provided distorted information to the students. According to the tutors 5 (71.4%) interpreters were one of the major causes of the students H.I poor performance in English Language because they lacked relevant signs, consistency and presented broken meaningless sentences, whereby the students used the same language to write their English language examinations. The tutors and students with H.I showed a lot of dissatisfaction with the interpreters’ involvement because they were not able to deliver fully the intended information.
Students were of the opinion that there was need for the tutors to provide adapted learning materials for them to refer after the lesson. It was clear that between the tutors and students with H.I was a gap that needed to be bridged.

Due to this gap the tutors suggested that they need to learn sign language to enable them combine strategies and teach the regular and students with H.I without an interpreter. They argued that all the students in the class should be able to access full and first-hand information from the tutor and perform well.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter summarizes the findings, conclusions and recommendations of the study and areas that require further research. The purpose of this study was to identify strategies that could be used to teach English language to students with hearing impairment in an integrated setting at Machakos Teachers' college. Challenges faced by the tutors and students with H.I. were investigated to find out how they could be solved to help the students improve their English language performance. It sought to establish the role of interpreters, learning materials and reasons leading to poor performance in teaching and learning of English Language in an integrated programme.

5.1 Summary of the Research Findings

The study established that students with H.I had an uphill task to handle each day's oral learning activities they endeavour to achieve in an integrated class. They go through many struggles of emotions, depression, bewilderment, sadness and frustration in order to catch up with the rest of the class. They go through many challenges that deter them from active participation.

As per the findings, all the tutors who taught English language had English as one of the subjects trained to teach and had over 10 years of experience in teaching. According to the study findings, 16 (89%) of students with H.I were neither comfortable nor did they follow instructions well while being taught together with the students with hearing. The classroom observation
revealed that all the 7 tutors used oral method in teaching English language engaging the interpreters to mediate the teaching.

All the tutors stated that students with H.I did not understand all the information by following speech and lip movement. The challenge that took the lead was the tutors’ high speed at 30% where a lot of information got lost between the student and the tutor leaving the students guessing what the information could have been. This meant that students with H.I were not able to access all the information presented by the tutor through the interpreter. This was followed by the students’ inability to give attention to the tutor and the interpreter at the same time at 24%, which they said caused fatigue and eye strain. Students with H.I revealed signs inconsistency for the same concept from the interpreters as the third major challenge. This meant that, the interpreters were using several signs for a single concept causing confusion and doubt.

Students with H.I also found it hard to make consultations after the lesson because of the language barrier between them and students with hearing. Most of the students (67%) did not view the services of interpreters as important in learning English Language. According to them interpreters skip important information, present wrong signs, make learning slow and sometimes distort the original information from the tutor. The tutors were also not pleased with the interpreters’ role in teaching and learning of English Language because they viewed the interpreters as one of the major challenge to students with H.Is’ poor performance.

The main short coming of the interpreters, according to the tutors who teach English Language was lack of subject content, passing wrong information, delaying information and lack of professionalism. Tutors agreed that combining sign language with speech at the same time would
enable the students understand better than using the interpreters. They cited that given a chance to learn sign language would make it possible to teach all the students at the same time. It was apparently clear that most of the students with H.I wished to have the tutors be trained in Sign language so that they could be able to get first-hand information.

The role of an interpreter was to convey every intention and feeling of the message that the tutor would be directing to the student with H.I. To access full content depended highly on the skills of the interpreter which involves the ability to interpret.

It is clear that students with H.I had not been performing well for the last three years in English language. Some of the reasons for this poor performance were students with H.I having many grammatical errors, interpreters’ use of K.S.L to present English content and being admitted with a grade lower than the others. Interpreters continued use of K.S.L to interpret English Language was another setback to students with H.Is’ performance. Therefore tutors had a cause to worry making them want to obtain alternative methods to help students with H.I improve their P.T.E grades in English language. Students with H.I attributed improvement of their performance to tutors providing adapted reading materials and learning sign language. This would enable the tutors to provide first-hand information to the students. Students with H.I would be able to ask for clarifications even after the lesson. Combination of strategies would help the students solve many grammatical errors that cause poor performance.

The interpreters favoured Signed English (S.E), where plurals and endings are not signed, Signing Exact English (S.E.E) where all words, suffixes, prefixes, plurals and tenses are signed combined with speech. This means that if students with H.Is’ grades are to be improved the only
possible way was for the tutors to be ready to learn sign language. This would enable them combine strategies without strain. This would help the students to learn English in English but not learning English through KSL. They suggested the combined approach as the most appropriate to improve English language performance among students with H.I.

The number of students with H.I who participated in the study was eighteen (18) comprising of eleven (11) male students and seven (7) female students. Seven tutors participated in this study of which (2) were males and (5) were females.

5.2 Findings

This chapter summarized the findings, of the study and areas that required further research. The study established that students with H.I go through many struggles while trying to learn English language. Data collected showed that students with H.I performed poorly compared to students with hearing because the interpreters used K.S.L to present English language content. They lacked good sign language models who would lead them to understand English language grammar well. For the hearing impaired students joining the college with a grade lower than the others, posed a great challenge to their performance. Adapted learning materials would be of great help for the H.I students for easy understanding and active participation. If the tutors learned sign language, the speed will be slowed to enable the students move together with the tutor and the rest of the class.

The study found out that the sign language interpreters acted as a hindrance to the students accessing full information from the tutors. All the tutors were ready to learn sign language and do away with the interpreters. Learning sign language would enable the tutors combine strategies
and deliver the intended content without any delay. This would help the students to participate fully in learning.

Therefore the study identified the use of signed English, Signing Exact English and speech as a solution that would make students with H.I improve their English language grades.

5.3 Conclusions

Hearing is what keeps us in touch with the world. It plays a significant role in expressing and receiving information. Hearing loss creates problems in how an individual receives and analyses information in turn causing social, communication, and educational barriers (Yang, C. 2006). Therefore any practical way to solve the challenge should be the institutional number one priority. Educators also needed serious consideration to provide short and long term remedies of accommodating students with H.I when developing their language curriculum.

Based on the data collected in this study, it was evident that students with H.I faced many challenges in an audio saturated classrooms and hence were at a loss academically compared to their regular hearing peers. If necessary attention was not going to be put in place in time the perceived discrimination may lead to social, emotional and classroom management problems for the tutors. The tutors were not pleased with the interpreters' role in the classroom because they viewed the interpreters as one of the major challenge to the students' poor performance. Their continued use of mother tongue sometimes providing wrong signs and skipping important information was worrying. To minimize challenges that caused poor performance, tutors were ready to learn sign language that would enable them help the students even in discussions and classroom discourse.
This eventually helped the tutor to provide first-hand information to all the students at the same time. Tutors believed that it was also very important for the students with hearing to learn sign language. This would help students with H.I participate in discussions and ask for clarification of difficult points even after the lesson. If the reasons for poor performance were to be well dealt with it was clear that tutors were to combine strategies at will and students would be able to achieve better grades. The study concluded that, use of Signed English, Signing exact English and speech are the best combination that would help students with H.I to get a grade higher.

5.4 Recommendations

On the basis of the findings, discussions and conclusions of this study, the following recommendations were suggested for effective teaching and learning among students with H.I to enhance their performance in learning of English language:

i. The study recommended the use of signed English, Signing Exact English, facial expressions and speech as a solution that would make students with H.I follow classroom instructions better than using the interpreters.

ii. With the help of the government, it would be good for strategies to be put in place to eliminate negative perception by the hearing community in the institutions to help students with H.I. achieve their objectives.

iii. The Ministry of Education and other educational institutions should develop and implement a policy addressing challenges highlighted in this study. This includes training
tutors who teach English language in sign language so as to empower them deliver relevant information to students with H.I.

iv. Curriculum developers should come up with adapted teaching and learning materials to simplify hard concepts for students with H.I.

v. Tutors and students with hearing should be sensitive to the social, emotional and academic challenges a student with H.I undergoes every day. They should continuously be sensitized to discard biased perception and be accommodative and supportive towards students with H.Is’ education.

vi. It will always be good if the government through the Ministry of Education put strategies in place to empower students with H.I to enhance their self-esteem to participate equally in class regardless of their challenges and hence improve the quality of their life through education, advocacy and self-reliance.

vii. There is need for the government to provide technological support devices like assistive speech-to-text technology devices to enhance the students’ education.

viii. Tutors and interpreters should be encouraged to use facial expressions and have eye contact during all communications and ensure that there is good lighting to reinforce clear communication and view visual aids clearly.

ix. Tutors should always remember to address the student but not the interpreter and vise versa.

x. When teaching, tutors should always remember not to bite a pen, chew, face opposite direction, exaggerate their mouth movement or move up and down the classroom. They should also speak slower than normal to enhance clarity in communication.
xi. Signs made by either the tutor or the interpreter should be clearly articulated following English word order to provide the intended meaning.

xii. Tutors should always say the student’s name or signal their sign name before speaking to them.

5.5 Suggestions for Further Research

1. This study focused on Machakos Teachers Training College, it is recommended that a similar study be conducted again in the same institution for comparison and ascertainment of the findings.

2. This study proposed that other similar research be conducted to come up with enough data that would enable the educational planners and policy makers to come up with a coherent policy for students with H.I for best practices and education for all.

3. The study also proposed a cohort but an in-depth research in the same area over a period of time to establish if the same strategies would be of help and if the challenges affecting students with hearing impairment over a period of time are minimized.

4. This study proposed that for fair comparison, other colleges should be encouraged to integrate students with hearing impairment among their hearing counterpart.
REFERENCES


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Appendix I:

QUESTIONNAIRE FOR TUTORS (QT)

My name is Angela Phoebe Nzau a student at Kenyatta University seeking your assistance to help me collect data to enable me complete my Masters degree. This questionnaire seeks to collect information on strategies that could be combined to teach English Language to students with H.I at Machakos Teachers College. The data will be used for the purpose of addressing the emerging gap to help the H.I student acquire better results in English Language.

Instructions

1. Please answer all the questions put a tick (✓) where possible.
2. Confidentiality is assured

SECTION A: PERSONAL INFORMATION

1. Your gender
   a) Male
   b) Female

2. Academic level

3. Years of experience

4. Which subjects are you trained for?

SECTION B

Please put a tick (✓) where possible and also explain where you can.

1. Which method do you use when teaching English language in the integrated class?
   a) Oral
   b) Manual
2. Do students with H.I understand all the information by watching your lip movement?
   a) Yes □  b) No □

3. If no how could they be helped to understand you better?
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

4. If you compare the regular students to those with hearing impairment, do they perform equally the same?
   a) Yes □  b) No □

5. What might be causing the difference?
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

6. What are some of the challenges that you face when teaching both students with hearing impairment and those with hearing?
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________
   ___________________________________________________________________________

7. Do you think the interpreters convey the same message from you to students with H.I and from students with H.I to you?
   a) Yes □  b) No □

8. What could be the problem?
   ___________________________________________________________________________
   ___________________________________________________________________________

9. Do you sometimes feel like you are not sufficiently communicating well to students with H.I as you would wish to?
   a. Yes □  b) No □
10. How best can this gap be solved?

11. Whichever method you try to use do students with H.I follow instructions as well as their hearing counterpart?
   a) Yes □   b) No □

12. After checking the previous years' results do you think students with H.I are able to perform better than that?
   a) Yes □   b) No □

13. How can this be realized?

14. Interpreters may be one of the major factors that cause poor performance in Students with H.I?
   a) Yes □   b) No □

15. If you were to use sign language and speech at the same time do you think the students would understand you better than when you use an interpreter?
   a) Yes □   b) No □   c) Not sure □

16. How can students with H.I be help to follow group discussions and class room discourse?
17. If you were to use more than one method to teach English language, do you think you can cover the expected work load in good time?

a) Yes □

b) No □

Why ________________________________

18. Which combination of methods do you think could work better in teaching both the hearing and the hearing impaired students?

a) Facial expression/lip reading/ gestures □

b) SEE/SE/ Oral □

19. Will it be of any help if students with H.I are provided with adapted English language reading materials during the lesson?

____________________________________

____________________________________
QUESTIONNAIRE FOR STUDENTS (QL)

Appendix II

My name is Angela Phoebe Nzau a student at Kenyatta University seeking for your assistance to help me collect data to enable me complete my Masters degree. This questionnaire seeks to collect information on strategies that could be combined to teach English Language to students with H.I at Machakos Teachers College. The data will be used for the purpose of addressing the emerging gap to help the H.I student acquire better results in English Language.

Instructions

1. Please answer all the questions.
2. Confidentiality is assured

SECTION A: PERSONAL INFORMATION

1. Your gender?
   a) Male □  b) Female □

2. Respondent’s age ________________________________

3. What is your academic qualification? ________________________________

4. In your KCSE what grade did you obtain? ________________________________

SECTION B:

Please put a tick where possible and also explain where you can.

1. Are you comfortable learning English language together with the hearing students?
   Yes □  b) No □

Explain

________________________________________________________________________

________________________________________________________________________
2. Are the hearing students able to make points clear to you after the lesson?
   a) Yes ☐  
   b) No ☐

3. If no why?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

4. Which method do tutors use in class when teaching English language?
   a) Speech ☐  
   b) Sign Language ☐
   c) K.S.L ☐

5. Do you understand their instructions well when they use speech in teaching English language?
   a) Yes ☐  
   b) No ☐
   Explain ____________________________________________
   ____________________________________________
   ____________________________________________

6. For you to follow the instructions well how do you want it done?
   ____________________________________________
   ____________________________________________
   ____________________________________________
   ____________________________________________

7. Are the services of an interpreter of any help to you in learning English language?
   a) Yes ☐  
   b) No ☐
   Explain why ____________________________________________
   ____________________________________________

8. How do the interpreters pass the information to you?
   a) Use K.S.L ☐  
   b) Use English ☐

9. If they use K.S.L, are they clear enough to make you follow what the tutor is teaching?
   a) Yes ☐  
   b) No ☐
   Explain ____________________________________________
   ____________________________________________
   ____________________________________________

10. Through the use of an interpreter, are you satisfied with your English language performance?
11. Do you think if the tutors were able to use speech, gestures and sign language at the same time, would make your English language results improve?
   a) Yes □  b) No □
   Explain

12. Do the tutors who teach English language take time to talk to you in person and advise you on how to improve your work?
   Explain

According to you what might be causing this poor performance?

13. Explain some of the challenges that you face when learning English language together with the hearing students.

14. In your own opinion how can these challenges be solved?

15. What are some of the ways do you think would help you cope with the class work?
15. On reading the learning materials, do they help you understand the content better? Explain
QUESTIONNAIRE FOR INTERPRETERS (QI)
Appendix III

My name is Angela Phoebe Nzau a student at Kenyatta University seeking for your assistance to help me collect data to enable me complete my Master's degree. This questionnaire seeks to collect information on strategies that could be combined to teach English Language to students with H.I at Machakos Teachers College. The data will be used for the purpose of addressing the emerging gap to help the H.I student acquire better results in English Language.

Instructions
1. Please answer all the questions.
2. Confidentiality is assured

SECTION A: PERSONAL INFORMATION

1. Your gender?
   a) Male    b) Female  

2. Your age?
   _____________________________________________________________

3. What is your educational level?
   _____________________________________________________________

SECTION B

Please put a tick where possible and also explain where you can.

1. For how long have you been interpreting?
   _____________________________________________________________

2. Which method is easier to use during interpretation?
   a) SEE    b) K.S.L 
   Why? _______________________________________________________
   _____________________________________________________________

3. Is K.S.L Equivalent to English Language?
   a) Yes    No  
   _____________________________________________________________
4. The time you use K.S.L does it help students achieve the intended information from the tutor?
   a) Yes  
   b) No  
   Explain

5. Does K.S.L help students with H.I improve their English Language performance?
   a) Yes  
   b) No  
   c) sometimes  

6. What challenges do you encounter when you are interpreting?

7. When students with H.I are explaining their ideas, do they do it in full English sentences or they do it in K.S.L?
   a) K.S.L  
   b) Full English Sentences  

8. Does this help them do their English Language work well?

9. Is it possible to provide correct and full information to the students through signing?
   a) Yes  
   b) No  
   Explain

10. Are the students’ responses relevant to the tutor’s questions?
   a) Yes  
   b) No  
   Explain

11. Do you relay back information from the students the way it is presented to you or do you present it in full English sentences?
   a) Broken sentences  
   b) Full English sentences  

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12. What interpretation speed do you think could help the students follow instructions well?
   a) High  
   b) Moderate  
   c) Slow  

   Why  

13. Are you happy with their exam results?
   a) Yes  
   b) No  

14. If no do you think if tutors were to use sign language together with speech the results would be better?
   a) Yes  
   b) No  

   Explain  

15. Which method(s) do you think can suit students with H.I best when learning English language?
   a) K.S.L  
   b) SE/SEE/Oilal  
   c) Oral  

   Explain why  

16. Do you think involvement of interpreters is important to students with H.I in improving their English Language results?
   a) Yes  
   b) No  

   Explain  

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This observation schedule will seek to collect information on teaching and learning during English lessons. Observation will be carried out for one month and the observer will tick the schedule accordingly.

WEEK ___________________         DAY ___________________

Number of students in the class ____________________________________
Number of students with H.I _________________________________________
Duration of the lesson _____________________________________________

1. Motivation of students during English lesson
   Low [ ] Good [ ] Very Good [ ]

2. Participation of students with H.I in the lesson
   Low [ ] Good [ ] Very Good [ ]

3. Responding to tutors questions
   Below average [ ] Good [ ] Excellent [ ]

4. Time allowed to students with H.I to respond to questions
   Inadequate [ ] Adequate [ ]

5. Behaviour of other students towards those with H.I during learning situation.
   Not conducive [ ] Conducive [ ]

6. Distribution of questions to students
   Fair [ ] Good [ ] Very good [ ]

7. Tutor's attitude towards students with H.I
8. Use of interpreters in the lesson
   Not required   Necessary   Very necessary
9. If very necessary, do they link students with H.I to the rest of the class during the lesson?
   No   Yes
10. Strategies used by the tutors in the lesson
   K.S.L   Oral   Combination   S.E   S.E.E
12. Challenges faced by Tutors and students during the lesson

Tutors

Students

13. Observer’s recommendations in the lesson


THIS IS TO CERTIFY THAT,

Prof./Dr./Mr./Mrs./Miss/Institution

Angela Phoebe Nzau

of (Address) Kenyatta University

P.O. Box 43844 00100, Nairobi

has been permitted to conduct research in

on the topic: Strategies employed in teaching English to hearing impaired learners and their Performance: The case of Machakos Teachers College

for a period ending: 31st December, 2014

Applicant's Signature

For: Secretary

Date of issue: 6th September, 2013

Research Permit No. NCST/RCD/14/013/1533

Fee received: KSH. 1000

Page 2
1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.

2. Government Officers will not be interviewed without prior appointment.

3. No questionnaire will be used unless it has been approved.

4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.

5. You are required to submit at least two (2) hard copies and one (1) soft copy of your final report.

6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.

**CONDITIONS: see back page**