

**EFFECT OF READING LITERACY RESOURCES ON ACQUISITION OF
ENGLISH LANGUAGE SKILLS AMONG LOWER PRIMARY GRADERS
WITH HEARING IMPAIRMENT IN WESTERN KENYA**

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DECLARATION AND APPROVAL

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This thesis/project is my original work and has never been presented for any academic award in any institution.

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DEDICATION

To my Mum Mary Kadugu Luvai, my Husband Charles Kweyu Salasia and my children Craig Munyendo Kweyu, Adrian Luvai Salasia and Donald Kutsushi Kweyu.



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Mount Kenya

ABSTRACT

This research investigated the effect of reading literacy resources on acquiring skills in English language among lower primary school graders with hearing impairments in the Western region of Kenya. Statistics show that in the 2016 Kenya Certificate of Primary Education results learners with hearing impairments in special schools in Western region of Kenya obtained a mean score of 24.11 in English language. In 2017, they managed a paltry 26.63. It is presumed that proficiency in the English language is closely linked to the development of reading literacy skills. This study utilized Krashen's (2003) theory of second language development to argue that linguistically rich environments can help learners with HI develop English language skills. The study determined the effect of available skilled manpower, printed instructional materials, non-printed instructional materials and electronic instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties. It used a descriptive survey design to target 489 respondents composed of: - 63 teachers of English Language, 4 county Directors of Education officials, 9 Heads of institutions, 333 lower primary school graders and 80 non-teaching staff. The researcher used 30% of the targeted populations in their stratified categories to derive a total sample size of 100 lower primary school graders, 24 non-teaching staff, 63 English language teachers, 9 heads of institutions, and 4 County Directors of Education officials who were sampled purposively. Balloting was used to obtain the required samples from the strata. Therefore there were a total of 200 participants. questionnaires were used to collect data from English teachers. Interview schedules for head teachers, Education officials, and non-teaching personnel. Scores of the lower primary school graders' achievements in the schools were appraised using a document checklist. Split-half split testing ensured the reliability and validity of the instruments. The data collected was analyzed both descriptively through frequency counts and inferentially through coefficients. and reports presented in a narrative form. The study established that the effect of the teaching staff on language acquisition was 18.9%, Printed instructional materials was 19.1% Non Printed instructional materials was 24.9% and electronic instructional materials was 11.1% on acquisition of English language skills. The study concluded that teachers in the Western region of Kenya were not fully utilizing their acquired skills, printed, non-printed and electronic instructional materials when instructing lower primary school graders with hearing impairments. The researcher recommended that the skilled manpower should fully utilize their acquired skills, printed, Non Printed and electronic instructional materials to instruct lower primary school graders with hearing impairments. This study will not only provide a basis for enhancing improvement in acquiring skills in the English language for lower primary school graders with impairments in the Western region of Kenya but also form a basis for further inquiries into challenges faced in the acquisition of English skills worldwide.

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LIST OF ABBREVIATIONS AND ACRONYMS

GOK	: Government of Kenya
KICD	: Kenya Institute of Curriculum Development
MOE	: Ministry of Education
SEE	: Sign Exact English



CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter discusses the background information for the study, the statement of the problem, and the purpose of the study. It also highlights the research objectives, research questions and hypotheses of the study. The chapter further discusses the significance of the study, justification of the study, scope, limitations, delimitations and assumptions of the study. It also highlights the operational definition of key terms.

1.1 Background to the Study

Reading comprehension has historically been one of the most difficult abilities for deaf learners to acquire, especially in the early stages of the educational journey WHO (2020). It is anticipated that these lower primary school graders have to participate in simultaneous English reading and writing activities in order to build language competency for the purpose of successful communication, as stated by Clark, Gilbert and Anderson (2011). According the recent UNESCO (2021) report on Sustainable development goal number 4 (SDG4), governments must make explicit provision for optimal early childhood development to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all children, in addition to other targets.

The policy of inclusion is enshrined in several treaties and legislative mandates including the World Declaration on Education for All (1990) and the UN Convention on the Rights of Persons with Disabilities (2006). The conceptual framework for early childhood development and care are envisaged under SDG target 4.2 which is geared

towards facilitating school readiness for inclusive education for children with disabilities UNESCO, (2020).

Chabari Patrick (2017) writes that learners with hearing impairment in England are expected to be assisted to read and write in English and at the same time develop the same language skills for communication purposes. In Britain, Bunman, Nunes and Evans (2006) report that learners with congenitally profound hearing who use British Sign Language (BSL) as their language of the catchment area have reading abilities. They are aided by signing effectively by not majorly focusing on auditory communication. They note that both spelling and writing skills of these learners may be limited to an extent that no assessment method can adequately appraise their competencies.

Research has provided evidence in favor of the relevance of language development in the education of learners with hearing impairment whose parents are also living with hearing impairment challenges. This is due to the fact that these children have rich linguistic environments and observe signing skills right from their home background before attaining school age UNDP, (2020). In India, Sandra, (2005) has demonstrated that language development plays an essential role in the acquisition of literacy skills in learners with HI.

WHO, (2022) document that the quality of the home environment in which a child with hearing impairment develops language skills is a significant factor in their development of communication and socialization. UNDP, (2000) emphasizes that it is necessary to provide learners with hearing-impairment with environments that are rich in language

to assist them develop English language skills such as observing signed words, writing, reading, signing, and identifying language symbols. Development of English language skills help these learners to become more independent in their use of language. According to Salend (2001), the majority of learners with Hearing Impairment in the United States are often integrated into mainstream public educational settings alongside their hearing peers. This policy is meant to make it easier for mainstream learners with HI to integrate with their peers who are enrolled in normal education programs as their peers provide them with support. According to Salend, the acquisition of literacy abilities, in addition to learning a first and second language, has a substantial influence on the educational success of lower primary graders (Paulus, 2006)

Even though there has been significant progress in increasing reading literacy among lower primary school graders in American schools over the course of the past two decades, a significant portion of students still demonstrate insufficient writing skills that fall short of meeting grade-level requirements expected at their level (Lee, Grigg, & Donahue, 2007). This is a problem that needs to be addressed. A sizable percentage of individuals who are able to successfully complete their education not adequately equipped to pursue further education or enter professions that require high levels of reading and writing abilities.

According to the findings of a study carried out in Uganda by Sheila (2011) on the subject of teaching reading skills to hearing-impaired lower primary graders, it was shown that learners with hearing impairment display writing mistakes that are very similar to those often encountered in second language acquisition at upper grade learners. Sheila (2011) asserts that one of the most important aspects of the structure

used by schools to make sure that teaching and learning is balanced and consistent in Ugandan Primary Schools is the incorporation of both precisely spoken and accurately written English language.

The government of Kenya (GOK) has been taking steps in the provision of special education to her citizens with learners with HI since independence in 1963. Enrolments in primary schools has steadily improved since then. With the introduction of free primary education in January 2003 there was an increase of 18 percent from 0.025 million in 2021 to 0.031 million pupils with HI in 2022 in public schools (GOK sessional Paper No. 1 of 2005).

The government of Kenya has introduced various reforms to ensure that the policy on inclusivity is implemented fully. With the government commitment of providing education to all regardless to their ability backgrounds, learners with special needs have not been left out (Presidential Working Party 2022). The development of speech and written English language in lower grade primary school learners is strongly associated with the timely acquisition of English language skills (Adoyo, 2002). Adoyo asserts it is recognized that for learners to master the correct shapes of letters of the alphabet, their development in language skills is very important at their early stages of life (Faroog, 2012).

1.2 Statement of the Problem

According to County Directors of Education in Bungoma, Busia, Kakamega, and Vihiga, learners with hearing impairments bear inability to write, read, sign, and even recognize the shapes of letters correctly. Their reports document that in the year 2010,

the enrolment of learners with HI was 1,443 in special schools and units in Western Kenya. Out of these, only 418 (28.96%) learners were able to read and sign in English language (MOE, 2010). In the year 2021 the enrolment improved to 6,111 but only 532 (8.7%) were able to read and write in English Language. In 2023, the enrolment moved to 6,342 with only 549 (8.65%) learners with HI able to read and sign in English language. The acquisition of English language skills of the pupils living with disability is clearly still very low, noting that 10 percent of Kenya's population comprise of people with disability (Presidential Working Party 2022). The number of learners with HI with ability to read, write in English language in special units and schools are too few.

Given that 10% of the Kenyan population is made of PLWDs, the government of Kenya introduced the aspect of integration of learners with disabilities in regular schools to bring on board the spirit of equality. Equally, the competencies in acquisition of English language skills is emphasized. Needless to say, acquiring English literacy skills is a firm foundation for developing spoken and written English language. This study established the effect of available reading resources and the resulting effect on acquiring English language skills among lower primary school graders with hearing impairment in schools with HI learners in Bungoma, Busia, Kakamega, and Vihiga counties of Western Kenya.

1.3 Purpose of the Study

This research investigated the effect of reading literacy resources on acquiring skills in English language among lower primary school graders with hearing impairments in the Western region of Kenya.

1.4 Study Objectives:

- i. To establish the effect of available Skilled Manpower on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties.
- ii. To find out the effect of printed instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties.
- iii. To determine the effect of non-printed instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties.
- iv. To examine the effect of electronic instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties.

1.5 Research Questions

- i. What is the effect of available Skilled Manpower on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties?
- ii. What is the effect of printed instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties?
- iii. What is the effect of non-printed instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties?

- iv. What is the effect of electronic instructional materials on acquisition of skills in English Language among lower primary school graders with hearing impairments in Bungoma, Busia, Kakamega, and Vihiga, counties?

1.6 Hypotheses of the Study

H₀₁: There is no statistically significant effect between available skilled manpower and the acquisition of English language skills in lower grade students with hearing impairments in the Western region of Kenya.

H₀₂: There is no statistically significant effect between printed instructional materials and the acquisition of English language skills in lower grade students with hearing impairments in the Western region of Kenya.

H₀₃: There is no statistically significant effect between non-printed instructional materials and the acquisition of skills in the English language for lower grade students with hearing impairments in the Western region of Kenya.

H₀₄: There is no statistically significant effect between electronic instructional materials and the acquisition of skills in the English language for lower grade students with hearing impairments in the Western region of Kenya.

1.7 Significance of the Study:

The intention of the results of this study aim to contribute to the global body of knowledge on the learning process for children with hearing impairment; provide the government of Kenya with information on how to improve teaching and learning activities for lower grade learners with hearing impairments. The study findings will also provide other stakeholders in education with the relationship between reading literacy resources and acquiring skills in the English language for lower grade learners with hearing impairments in Western region of Kenya. This study will establish the

extent to which reading literacy resources affect skills in the English language for lower grade learners with hearing impairments in the Western region of Kenya. It will also provide data to be used to evaluate the effectiveness of the resources used by lower grade students in acquiring English language skills.

1.8 Justification of the Study:

Timely acquisition of English language skills is a prerequisite for the development of skills in mastering language and speech. The development of language skills in lower grades makes it easier for learners to develop oratory skills, such as articulation of facts, organization of ideas, and free expression of subject matter. It is important that teachers help learners develop these skills through practice and regular exercises. Learners with impaired hearing ability can easily acquire early English language skills when they are properly guided because without these skills, the development of speech and oratory prowess can easily be hampered. This study therefore sought to suggest strategies by which learners with HI can be timely helped to acquire English language skills for the development of their speech and oratory prowess that would be much needed in their future lives.

1.9 Scope of the Study:

This survey was carried out in special schools with hearing-impaired lower primary school graders in the Western region of Kenya. There are nine such schools in this region spread across Bungoma, Busia, Kakamega, and Vihiga Counties. The study sought to establish the effect of Reading Literacy Resources on acquiring skills in English Language at lower primary school graders with impairment in hearing ability in the Western region of Kenya.

1.10 Limitations of the Study:

- i. The survey engaged personnel who are trained in sign language and are currently working in schools with HI learners. It did not involve other stakeholders, such as parents, national MOE officials, funding organizations and well-wishers, who could have also provided crucial information on the study findings. However, the chosen sample was believed to be representative enough to capture the concerns of these excluded stakeholders.
- ii. The researcher mainly used questionnaires to gather information from the respondents. However, questionnaires have a ceiling and floor effect, which was minimized by interview schedules and document checklists.
- iii. The findings of this research can only be applicable to special schools for learners with hearing impairments in the Western region of Kenya and areas with the same geo-demographic conditions.

1.11 Delimitation of the study:

- i. The researcher is a teacher who is not well trained in sign language of lower primary school graders with hearing impairment. She therefore sought the services of an interpreter who is well grounded in the Kenya sign language.
- ii. Due to time limitations, the researcher trained a research assistant who assisted in the collection, cleaning, and coding of the data. This enabled her to finish collecting and analyzing data within the shortest time possible.
- iii. Because of limitation in funds, the researcher mobilized financial resources through family donations, well-wishers and acquisition of loans.

1.12 Assumptions of the Study

- 1) Hearing impaired lower primary school graders acquisition of English language skills is affected by reading literacy resources.
- 2) Major avenues for inculcating new literacy skills in the English language are schools.
- 3) All teachers in schools with HI learners have undergone Special Needs Education training

1.13 Operational Definition of Key Terms

Acquisition of English Language skills	: The ability of a learners with hearing impairments to receive, sign, Read and write in the English language.
Lower Primary School Graders	: Learners in grades one to three in public primary schools.
Learners With Hearing Impairments	: Lower primary school graders who have difficulties in hearing
Electronic Media	: Projectors, Tablets and Electronic Boards, TVs, radios, and CD-ROMs.
English Language Skills	: Receptive, writing, reading, and signing skills in the English language.
Hearing Impairment	: difficulties in hearing.
Non-Print Materials trained	: Blackboards, pieces of chalk, and skilled manpower Personnel.
Post-Lingual Deafness	: Hearing impairment acquired after the development of language and speech, usually after the age of six.
Pre-lingual deafness	: Hearing impairment acquired at birth before language acquisition.
Print Materials	: Any written content produced through printing technology, including textbooks, magazines, charts, wall maps, and exercises, Books
Reading Literacy Resources:	The resources used to enhance the learning of English language skills, including skilled manpower, print, non-print, and electronic instructional materials
Skilled manpower	: A person with hearing-impaired communication skills used to instruct learners with hearing impairments.
Western Region of Kenya	: Bungoma, Busia, Kakamega, and Vihiga Counties.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Empirical and theoretical literature has been reviewed in this chapter. The chapter discusses the possibility of skilled manpower trained personnel enabling lower primary school graders with impaired hearing ability to acquire English language skills; the use of print, non-print, and electronic/digital media of instruction to promote acquiring skills in English language at lower primary school graders with impairments in hearing ability special schools in the Western region of Kenya. The review establishes inherent gaps in the literature.



2.1 Skilled manpower trained personnel and language acquisition skills

According to Luckner, Sebald, Coonery, Muir, and Young (2006), having literacy in English requires the ability to notice and receive information that is signed, generate the signs, read, write, and interpret the words that are signed. Scholars report that it has never been easy for learners with hearing impairment to receive signed information of the catchment area during the early years of life. This difficulty was also recorded in a paper by a scholar who said that receiving information has never been simple for students who have hearing impairments. In addition, Lo's (2012) study findings state that students who have hearing impairments have a more difficult time understanding language skills due to the varied cultural and linguistic backgrounds from which they come. This is because the quality of the culture in which a child with hearing impairment is domiciled is a significant factor in his /her development of language skills.

The authors assert that students with hearing impairments historically had a far more difficulties in acquiring the skills necessary to communicate effectively in English. Hearing-impaired students often lag behind their hearing classmates in terms of academic achievement (Howell and Luckner, 2005; Ymayer and Akamatsu, 2011; Moreno Perez and Rodriguez, 2015; Oung & Muir, 2010; Luckner and Handley, 2011). According to the findings of the study conducted by Rowsell, Kosnick, and Beck's(2008) study, increasing the amount of education that teachers receive in multiliteracies has the potential to generate improvements in students' social and linguistic abilities, particularly in the area of reading, using a variety of manual communication that aims to be a representation of English language vocabulary (Sign Exact English- SEE). This is because the teachers are skilled and skilled manpower trained and are able to promote the value of resources by using signs, gestures, and expressions to advance socialization, language skills, and communication in a class with learners with hearing impairments of diverse cultural and language backgrounds. They further suggested conducting research to determine the level of expertise of skilled manpower trained professionals in the use of Signing Exact English. According to the findings of the Census Bureau found in 2003 findings, there are at least 380 distinct languages spoken. In a classroom filled with students who are hearing-disabled students from a variety of cultural and linguistic backgrounds, it is easy to see how professionals can advance socialization, language skills, and communication via the use of signs, gestures, and expressions to promote the value of resources.

However, the research conducted by Brereton (2008) confirmed that students may get a sense of agency when they realize that reading does not have to be limited to written words alone. A trained professional who is constantly able to integrate kinetic, visual,

and auditory engagement with English word letters and ideas possesses sentences that reinforce many learning modalities and provide more comprehensive options in employing resources to assist lower grade learners in acquiring information and progressing in their English language abilities. Lee (2007) discovered that the possibilities for mastery and lifelong learning are linked through a combination of delivery modalities and the development of individual learners' belief in their capacity to execute behaviors to produce specific performance in the new skills they acquire for learning. He suggested conducting research into the many potential intervention options for determining the impact of early reading literacy resources in primary and special schools so that appropriate action may be taken. For the development of age-appropriate teaching for all lower primary school graders, the capacity to reach and comprehend English language skills is vital. These resources for reading and literacy provide this access.

Acquired Sign Language (ASL) in classes for the hearing impaired was recommended by Dennis and Azpiri (2005) as a natural assistance to attract the lower primary school graders' attention and assist them in concentrating on the professional teacher. In elementary classrooms where reading is the primary focus of teaching, teachers who use sign language report that there are successful options for reading with signing during circle time, in centers, in collaborative learning groups, and in topic area instruction. Educational opportunities to support themes, skills, and illustrated instructions in line with benchmarks, frameworks, and standards may be found through the use of sign language.

The current theory and research on the acquisition of English language skills by signing learners with Hearing Impairment have mostly employed studies of children who are already enrolled in school but have experienced a delay in the development of their reading abilities. Researchers investigate the role that skilled professionals may play in the scaffolding process by conducting studies with both trained professionals and students enrolled in educational programs.

Reading ability is thought to be vital in impacting part that arises out of its dependence on English language skills, and since it has been discovered that reading ability is dependent on English language abilities. This is due to the fact that reading skills are more often impacted by hearing impairment, in terms of those lower primary school graders who are afflicted by it. According to Young et al. (2006), the process of acquiring reading ability is shown as one that is both agonizing and very unpleasant. According to Hernandez and Monreal (2005), students who have hearing impairments have a more difficult time reading than their primary level counterparts who are at the same reading level. According to Albertini, Marshark, and Lang (2012), over one quarter of them graduate from elementary school without being able to read or write properly. For further process of learners with hearing impairments, the language is usually sign language.

In addition, authors like Goldin – Meadow (2011), Chamberlain (2009), and Luckner (2006) argue that familiarity with language and understanding the mapping between the two are two related but separate capabilities that are required in the activity of reading (Goldin – Meadow, 2011; Chamberlain 2009; Luckner 2006. It is necessary to have an understanding of what entails to transition from one's native language to the English

language being studied in order to have an understanding of the process of mapping (Goldin and Mayberry, 2010). Sign language is often used as the medium of communication throughout the learning process for lower-grade students who are hearing-impaired or have inner ear nerve damage.

Reading and writing are difficult for children with hearing impairments because of the challenges they face while having a discussion, whether it be verbal or physical (Adoyo, 2002). An additional suggestion made by Adoyo is that many learners have parents who can hear but are unable to communicate with them using signs. Additionally, the writer asserts that since children who are hearing impaired have friends and siblings who cannot use signs fluently, these youngsters of students have hearing parents who are unable to interact with them using sign language. Additionally, the author asserts that since hearing-impaired children are often surrounded by friends and siblings who are not fluent in sign language, these youngsters do not have the opportunity to be exposed to interacting with others in sign language.

Additionally, Svanthm (2012), those who are pre-lingual and acquire hearing impairment at birth before language acquisition have an advantage over the post-lingual who develop the condition at a later time. This writer goes on to say that individuals who are impaired at birth start signing at an early age, and those born to signing parents are more likely to know how to sign early in life via contact with people they meet that are sign language literate (Marschark, Lang, Albertini, 2002). Children raised by parents with significant hearing loss are more likely to use signs in their everyday environment and have a better chance of learning sign language at an early age. This is

because exposure to their hearing-impaired parents makes them converse in their natural setting and facilitates early and timely acquisition of sign language.

According to Hoffmeister (2000), it is not necessary for these learners to simultaneously communicate using signs, learn language, and acquire real information from the language. According to Melon et al. (2005), researchers believe that children with hearing loss who are born to hearing parents do not learn spoken language as readily as children without hearing loss. This is because the hearing parents are illiterate in signs and tend not to be close to their children.

Writers document that lower primary school graders start school when they have no language at all, whether spoken or signed (Leigh et al., 2010). Having a strong base in the English language is a prerequisite for learning to read (Andrew, Hushooley, and Joanise, 2014). Reading is a language literacy activity that transforms into a language learning process for hearing-impaired lower primary school graders (Wilbur, 2009; Golding and Mayberry, 2011).

2.2 Print Media and Acquisition of Literacy Skills

Maxwell and Scarfoss (2012) allege that children's dependence on writing and reading for self-expression happens when attempts to unite signed communication fail. Rotenberg (2009) found that children who are not developed in writing or drawing clear messages can use printed materials from the environment, such as charts, name tags, labels, and signs, to show communication to their parents. This cultural phenomenon can continue to be practiced throughout the lives of hearing-impaired adults.

Williams (2004) notes that although there is frequent use in written communication, the hearing-impaired lower primary school graders' letter-sound reliance relationships in English provide a significant problem for upcoming writers and readers. This may also be a big challenge for the hearing-impaired lower primary school graders who have parents who cannot read and write.

According to Williams (2009), the strategy of sounding without the ability to hear initial consonants in English words is not a useful approach for hearing-impaired lower primary school graders to generalize about starting sounds. This is based on what they see. This is done by signing the shapes of the word using their hands. Ruiz (2005) affirms that while this works for some words like names, there is overgeneralization by hearing-impaired lower primary school graders as they over-generalize and include other words without the corresponding sign for initial consonants. As they sign, they are not aware of the rules of signing, including the area of articulation, place of articulation, and shape of the sign.

A more developed strategy can be seen when lower primary school graders use finger spelling to record printed words (Padden and Ramsey, 2003). According to Williams (2004), as children connect finger spelling with written English language, it becomes more easily understood. Selection of important personal words and high-frequency words begins to appear in children's writing. According to Padden and Ramsey (2003), because finger spelling is part of daily communication used in Kenyan sign language, exposure to a variety of English words from birth is given to many children. The use of the written word format shows a more developed understanding of language. Linking Kenyan sign language with printed textbooks has created a ladder that is useful in

writing and reading words that are not familiar. The use of letters of a writing system and numerals using only the hands should be encouraged as a strategy for lower primary school graders who are deaf to remember spellings of difficult words.

According to Clark and Anderson (2011), reading books and enjoying them either alone or with friends is a viable learning experience for lower primary school graders with hearing impairments. This is especially true for all students in a given classroom situation. Exploring written words through drawing and writing benefits all lower grade students with hearing impairments. To ensure that they receive information in a clear and efficient manner, Adoyo (2002) suggests that key words, phrases, and assignments be boldly written on blackboards. He insists that visual aids should provide additional explanations to information presented in classrooms. Overhead projectors usage rather than chalkboards are also advantageous as they allow instructors to face the lower primary school graders during the learning process. From the projectors, the learners are able to see and use the look and sign method. Careful seating arrangements can be made to allow the lower primary school graders with hearing impairments to see and hear the teacher clearly. Here, the learners are allowed to sit in a horseshoe arrangement for each learner to have a clear view of all visuals as well as the skilled teacher instructor. This allows them to visualize what is going on in class as they are in direct contact with the skilled teacher.

Burgstahler (2009) argues that trained teachers in hearing impairment can also make use of closed-captioned videos to present new vocabulary to lower grade students before the actual lesson attendance. This method allows the use of electronic instructional materials, and lower primary school graders are able to identify words and signs during the lesson. In this way, comprehension is maximized as the learners are

able to visualize what is going on in class. Lower primary school graders can also be encouraged to raise their hands and be identified before signing or responding in class. This allows them to know who is speaking and what he or she is doing (Burman and Evans, 2006). It also shows that the skilled teacher can identify them through the use of their sign name.

Several schools of thought on teaching and learning processes of hearing-impaired lower primary school graders have emerged over time. Generally, scholars agree that teaching methods for hearing-impaired lower primary school graders need to adhere to individual learners' capabilities. These methods should address personal needs and different personalities (Enns, 2006; Hedge, 2005). The researchers confidentially say that the most common educational approach must involve Kenyan sign language or American Sign Language in the classroom (Hedge 2005). Bilingual-Bicultural approach. In this case, traditional English is taught through exposure to printed words on paper. Invariably, the auditory or oral method could be used where teaching of the English language through residual hearing and speech is issued instead of the normal teaching approach. Total communication combining auditory and visual communication for instruction like finger spelling can be combined where systems can be used. This can include Kenyan sign language; signed English speech with signed language can also be used simultaneously. Cued speech or other communication methods can also be employed (Luckner and Handley, 2008).

Otieno (2010) and Sheila (2011) suggest that there can be proper classroom considerations while teaching lower primary school graders with hearing impairment. Sheila (2011) suggests that lower primary school graders with hearing impairment

should be given modified classrooms that are well-designed with incorporated acoustics. She cautions that the classrooms should have little distracting noise and ought to have proper lighting for visuals. Each lower grader should have a clear view of all visuals as well as the instructors.

2.3 Non-print media and Acquisition of English language skills

Lucic *et al.* (2006) argue that sign languages can naturally be used for instructional purposes. This can be done through translations of English concepts rather than literal reading. In his research, Evans (2004) found that spoken English is minor in written English. Spoken English enables hearing-impaired children to understand the literal codes of spoken and written English language. It enables teachers to understand that sign language does not have a direct connection with the written English language. This has made it difficult to understand the intricacies of spoken and written English language. Most scholars do not support the use of natural sign language to facilitate the acquisition of literacy skills in English. However, their major concerns are with the modality through which the acquisition of literacy skills in English is gained (Sandra, 2005; Petty, 2004). Evans (2004) recommended that while using real, non-printed books, and boards, the instructor must allow lower primary school graders time to sign-read the messages written on them before commencing signing. He asserts that it is not possible for any learner to sign and lip-read at the same time. Similarly, it is impossible for lower primary school graders with hearing impairment to sign, read, and observe at the same time.

Scholars like Lucic *et al.* (2006) affirm that several factors should be considered when teaching such lower primary school graders.

Nunan (2009) describes realia as concrete objects that are used in the language classroom. He explains that these concrete objects are important in building background knowledge and vocabulary of lower primary school graders with hearing impairment. Concrete objects provide lower primary school graders with real experiences during learning. They are aimed at invoking the use of sensory abilities in learning (Williams, 2004). This can be solidly done, especially through realia, as hearing-impaired lower primary school graders can see, smell, taste, and touch the real objects. It is therefore imperative that real objects are used in teaching the English language as they enhance the perception of the skills being taught (Sheilla, 2011). Realia captures visuals that stay in memory for a long time. For most hearing-impaired lower primary school graders, the sense of sight, more so than hearing, smell, touch, or taste, is the most developed of the senses. Visuals show some kinds of messages better than words, and ideas or information difficult or impossible to express in words may be communicated more easily through visuals. Visuals reduce textual explanations (Luckner, Sebald, Cooney, Young, and Muir, 2006).

Koustoubou, (2004) writes that hearing-impaired lower primary school graders occasionally suffer from a lack of understanding what the teacher presents in class. This is because they have no chance to synthesize what they learn in the class to real-life situations. He advises that by using real objects and materials, hearing-impaired lower primary school graders are given opportunities to experience real life in the class environment. This facilitates and accelerates their learning processes. Medwell, Coates, Wray, Griffiths, and Minns (2006) report that using realia stimulates hearing-impaired lower primary school graders to maintain interest in studying. Mixing learning with

realia assists these kinds of lower primary school graders in getting involved in more powerful learning.

Burman, Nunes, and Evans (2006) report that teachers can help hearing-impaired lower primary school graders build confidence in participating in class activities. They allege that hearing-impaired lower primary school graders acquire positive attitudes towards language when real objects are used. The use of realia provides alternative teaching aids that ensure the learning process is easily remembered. Krashen and Terrell (2005) note that hearing-impaired lower primary school graders undergo learning through real-life arranged tools. They advise that realia, such pictures and flashcards, can be used to make learning an easy process. Researchers like Harmen (2001) vouch that pictures are teaching tools that awaken the lower primary school graders' imagination. They argue that pictures capture lower primary school graders' interests. Kilickaya (2004) insists that the use of pictures not only reduces anxiety in learning but also sought to increase a feeling of accomplishment in even low-achieving lower primary school graders. Kilickaya discusses the fundamental benefits of using authentic materials. He argues that the use of authentic materials motivates lower primary school graders positively to a large extent. Authentic objects that belong to the targeted culture of the language supply real cultural information and expose lower primary school graders to language with these materials. Authentic materials are likely to meet the learning needs, and they bring an imaginative approach to teaching and learning environments.

Researchers like Burman, Nunes, and Evans (2006) and Badger and White (2009) have written that authentic materials can be used as tools to stimulate lower grade students in the classroom.

They also make learning more interesting, appealing, and allow for full participation in classroom activities in the classroom. Conway (2005) states that the teachers of English language teachers should stimulate and expose hearing-impaired lower grade students to realia, in the teaching and learning of English language early on. In addition, they should provide lower grade students with opportunities to practice language use in the classroom. Visuals are regarded as triggers for bringing reality into the classroom. Realia stimulates class enjoyment and acquisition of language skills in the language efficiently.

Enns (2006) notes that hearing-impaired lower grade students, who are low-level achievers compared to their able counterparts, do not achieve what teachers present because they have no chance to compare what they learn in the class with real-life situations. The use of real learning aids gives lower primary school graders the opportunity to experience real life in the classroom situation, and this encourages and hastens their learning processes. Cancelas and Ouvina (2003) observe that if appropriate realia are used, lower grade students shall be stimulated to continue studying the language because realia helps in practicing language skills.

Clark, Gilbert, Anderson, and (2011) have asserted that English language teachers should consider a wider range of appropriate materials to be used in teaching and learning situations. They argue that if a variety of materials are brought into the class, they can perform too many activities based on language learning goals. They insist that real learning aids are materials used to sustain a wide array of societal and cultural influences of language. They assist the hearing-impaired lower primary school graders to easily attain language skills through thoughts, feelings, behavior, and outcomes in

real-life situations. In this way, the teacher creates a scene in which the lower primary school graders perform in accordance with the materials that promote and encourage communication in their real-life setups.

2.4 Electronic Media and English Language Skills

Digital learning is gaining popularity among lower primary school graders across the globe. It has revolutionized learning, reaching students of all ages, genders, and abilities. Students who wish to further their education have engaged in this mode of learning. Digital learning has created alternatives for full-time students. Learning through electronic media has several advantages. One major advantages of this means of teaching and learning is that it can reach many students across geographical regions in a short time. One teacher can access several students in different geographical regions. Another advantage can be traced in the audio visual, graphic, and video messages and visuals.

In the state's computer learning-oriented programs for the lower primary school graders with hearing impairments, is anchored in the state legislation. is specifically tailored to cater to the lower primary school graders with hearing disabilities. These efforts have led to a rise in teacher training colleges that produce skilled personnel who can mitigate challenges found in educating students with hearing impairments (Koustoubu, 2004). Early training of this caliber of teacher, sponsored by the government and film operators, has improved the supply of trained personnel in digital teaching and learning processes for students with hearing challenges across the United States. Learning conditions for these students have significantly improved since then (Rose and Badger, 2000; Harding and Trupe, 2001).

Scholars report that computers are used to tutor lower primary school graders. They report that, with the help of computers, games can be used to simulate and arouse interest in students grades Specific programs can be tailored to meet the interests of students with hearing impairments (Prinz and Adoyo, 2002). Some of the computer programs that can be used by lower primary school graders with hearing disabilities are interactive video disc systems, HiFi literacy projectors, among others. In developing countries, educators are using multimedia to address the challenges that lower primary school graders with hearing impairments are facing (Dickson, 2000). Educators are now able to present instructional materials using a variety of visual images. Images such as robots can be used to simulate the sounds of vowels or certain words accompanied by pictures of images.

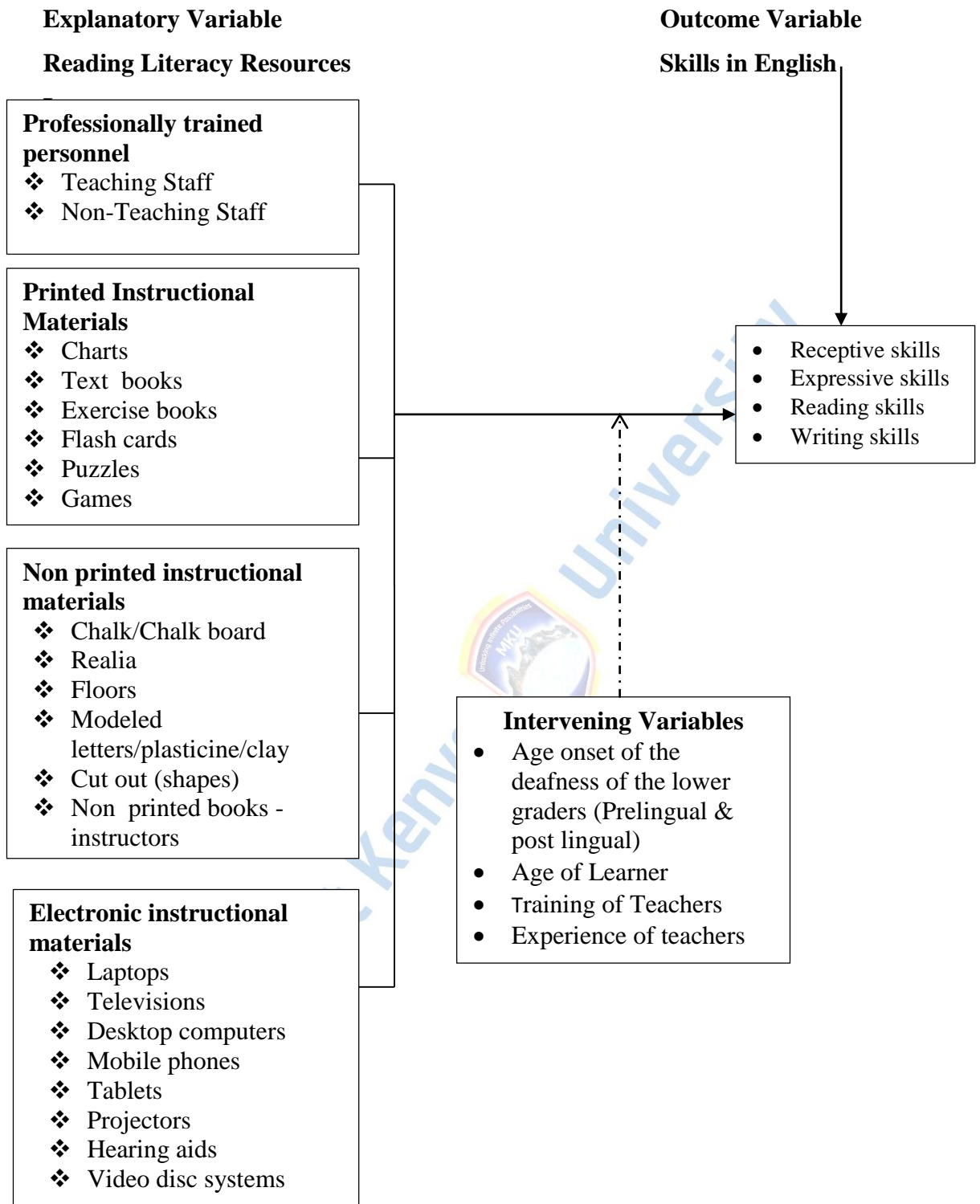
2.5 Theoretical Framework

Multiple theories might be used in an endeavor to elucidate and comprehend the foundational principles upon which the instruction of reading and writing is predicated. In this research, the theory of second language learning proposed by Krashen (2003) will be given preference. According to Krashen, the process of acquiring a particular language takes place inside a certain contextual context. The author posits that the process of language learning must align with the social dimensions of the cultural practices seen within human society. Educators responsible for instructing students with hearing impairments should exhibit a high level of patience while interacting with these lower primary school graders. It is conceivable that some lower primary school graders may possess additional debilitating problems. This is why teachers handling learners with hearing impairments should be very patient with the learners. There could be a possibility that some of these learners may have other challenges. Their linguistic

system encompasses complete reliance on visual perception, and their language involves total use of vision disabling conditions.

This research favors this theory due to its capacity to provide a calmer and more amicable approach to the process of acquiring knowledge. It allows for a more relaxed and friendly mode of learning. This approach facilitates personalized learning, enabling the student to go at their own preferred speed and explore knowledge that aligns with their own interests and surroundings. It is possible that a teacher may lack expertise in the language spoken by lower primary school graders with hearing impairments. It is possible that there exist hearing-impaired individuals, both children and adults, who possess a more advanced proficiency in Kenyan Sign Language than the instructor. Additionally, there may be members within the local hearing-impaired community who can be enlisted as valuable resources. This suggests that they have the potential to provide additional support in the field of education. Skilled manpower trained individuals play a crucial role in facilitating the education of individuals who are hearing impaired and remain at the fore front of ensuring the teaching of the learners with hearing impaired whereas Krashen (2003) advocates for development of language skills using the environment within which the learner dwells, it is prudent to note that the environment can also be a bottle neck to development of a language. In environments where experts are absent distortions of the language can easily be established. The growth of colloquial language sprouts from environments that support choreographing of the language. This theory therefore cannot adequately address the acquisition of English language skills using environment as a principal factor.

2.6 Conceptual Framework



Source: Researcher (2021)

Figure 2.1: Conceptual Framework Showing Interaction of Study Variables

The variables discussed in this study are skilled manpower trained personnel and acquisition of English language skills. Trained personnel entail teachers who are skilled

manpower trained in English language skills in hearing-impaired institutions. It also encompasses non-academic staff who have acquired English language skills through experience and practice over time. Both academic and non-academic staff with these skills have a universal impact on the facilitation of acquiring the skills.

Printed instructional materials that include charts, textbooks, exercise books, flashcards, puzzles, and games act as reference materials for the teachers and learners in pursuit of acquiring the desired English language skills. These materials can readily be availed for continued practice by learners in the development of reading and writing.

Non-printed instructional materials include chalk and chalkboard, realia, floors modeled letters using plasticine and clay, cut-out shapes, and non-printed instructors who act as reference materials basically act as reference materials for the learners and teachers in acquiring the skills in English language. Since hearing-impaired learners learn best through the sense of sight, chalkboard can be used for illustrations and demonstrations in the classroom setting. Realia and floors equally play a vital role as these learners can manipulate them and match them with English words. Modeled letters and cut-out shapes can be fixed on jigsaws and also completed on the English word puzzles. Through this practice, learners with hearing impairments develop reading and writing skills.

Electronic instructional materials include laptops, televisions, desktop computers, mobile phones, tablets, projectors, hearing aids, and video disc systems. Through the manipulation of these materials, learners with hearing impairments are able to use the look and say method and develop skills in the English language. From this conceptual

framework, it is assumed that the variables discussed above directly or indirectly influence the acquisition of English language skills at lower grades, without impairment in hearing, in the Western Region of Kenya.

Reading literacy resources are meant to assist lower primary school graders in acquiring English language skills. This implies that reading literacy resources are a major determinant of acquiring English language skills. This study considers reading literacy resources as a major determinant of acquiring English language skills in schools with HI learners in the Western region of Kenya. The teacher signs, and the learner observes, understands what is communicated, and responds effectively. Through printed instructional resources, a learner reads, practices what is seen in the book, and is able to do the same. Therefore, the independent variable in this study is the reading literacy resources categorized into four: available skilled manpower trained personnel, print instructional materials, none print instructional materials, and electronic/digital instructional materials. Thus, the effect of reading literacy resources on acquiring English language skills is measured through frequency counts in descriptive statistics.

2.7 Recap of Reviewed Literature

This study reviewed literature on the extent available skilled teachers and workers, printed, unprinted, and electronically designed resources (materials for classroom instructions) affect acquiring skills in the English language at lower primary school graders with an impairment in hearing ability in the Western region of Kenya.

Literature reviewed shows that most studies were done in developed countries. First, a small number have been cited in developing countries. A gap this study tries to bring out as a contribution to the knowledge body. Secondly, in Kenya, scholars have written on strategies used in teaching hearing-impaired lower primary school graders. The state and effect of available skilled manpower and other instructional materials in special schools in Kenya have not been recorded in writing by the time this study was being born. The researcher proposes to establish not only the status of available instructional resources in schools for lower-grade hearing-impaired students but also the extent to which these resources affect acquiring skills in the English language in schools having learners with hearing impairment.



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter discusses the methodology employed to actualize the study. It presents the research design, locale, population, sample size, and sampling procedures. It also discusses the study's piloting, validity and reliability, data collection instruments, data collection procedures. It has also discussed the methods used, data, and ethics considered in collecting data from the respondents.

3.1 Research Methodology

A research methodology can be viewed as the glue that holds all elements in a research work together. Mugenda and Mugenda (1999) advise that it is important to make an appropriate methodology that can allow a study to collect data easily.

3.2 Research Design

The design of this study was a cross-sectional survey design that utilized a mixed methods approach to quantify the influence of reading literacy resources on the acquisition of skills in the English language. Orodho (2003) asserts that cross-sectional survey design is used to reveal useful information concerning the nature of given phenomena. This study is exploratory in nature, and therefore, the researcher employed both qualitative and quantitative techniques in analyzing its data. This approach enabled the researcher to collect information from nine special schools for the hearing impaired. The researcher used questionnaires and interview schedules to collect data. The design enabled the study to gather explanations and opinions on the effects of early

reading literacy resources available in schools on acquiring skills in the English language for lower primary school graders with impairments in hearing ability in the Western region of Kenya.

3.3 Location of the Study

This study was conducted in the Western region of Kenya. It was done in four counties: Bungoma, Busia, Kakamega, and Vihiga. This area borders Uganda to the East and is located on the Western side of the Eastern Rift valley. The Western region of Kenya is neighbored by Trans Nzoia, Nakuru, and Nyanza counties. It covers an area of 7,400 km², the region lies between latitude 18° N and 24°S, longitude 34°W and 35°E. The area has a total population of 4,334,202. Kakamega County has 1,660,651 people, Bungoma County has 1,375,063 people, Busia has 743,946 people, and Vihiga has 554,622 people (Kenya Bureau of Statistics, 2009). It is mainly inhabited by the Luhya people, who consider disability a taboo. Quakerism is widely practiced here. The Western region of Kenya has nine schools for the hearing impaired. The region's oldest schools for the hearing impaired are thought to be endowed in performance since they are presumed to have already established derived infrastructure and brands (Haires and Keene, 2006). For the purposes of this study, all nine schools for the hearing impaired (100%) participated. A 100% sample is suitable when the sample size is small (Mugenda, 2000). The schools were therefore purposively selected according to Mugenda and Mugenda's (2000) and Orodho's (2003) recommendations.

3.4 Target Population

The study targeted 63 teachers of English Language, 4 county Directors of Education officials, 9 Heads of institutions, 333 lower primary school graders, and 80 non-teaching staff. The targeted population for the study was 489 respondents.

Table 3.1: Target Population

School for the Hearing Impaired	Target Population		
	Teachers (N)	Lower primary school graders (N)	Non-Teaching Staff (N)
St. Martins	14	44	12
Kakamega	8	36	8
Mwikhomo	6	33	7
Chekombero	7	39	10
Jivavei	4	33	6
Ebukuya	4	31	6
Webuye	7	42	11
Mundika	6	38	10
St. Augustine Milimani Special School for the Hearing Impaired (Likuyani)	7	37	10
Total	63	333	80

3.5 Sampling Procedure and Sample Size

For lower primary school graders, the researcher used 30% of the targeted populations in their stratified categories as follows: St. Martin's (30% of 44 = 13), Kakamega (30% of 36 = 11), Mwikhomo (30% of 33 = 10), Chekombero (30% of 39 = 12), Ebukuya (30% of 31 = 9), Jivavei (30% of 33 = 10), Webuye (30% of 42 = 13), Mundika (30% of 38 = 11), and St. Augustine Milimani (Likuyani) (30% of 37 = 11). This will give a total sample size of 100 lower primary school graders.

This formula also applies to finding the sample size of the non-teaching staff as follows: St. Martin's 30% of 12 = 4; Kakamega 30% of 8 = 2; Mwikhomo 30% of 7 = 2; Chekombero 30% of 10 = 3; Ebukuya 30% of 6 = 2; Jivavei 30% of 6 = 2; Webuye 30% of 11 = 3; Mundika 30% of 11 = 3; and St. Augustine Milimani (Likuyani) 30% of 10 = 3.

This formula gives a total sample size of 24 non-teaching staff, 100 lower primary school graders, 63 English language teachers, 9 heads of institutions, and 4 County Directors of Education officials who were sampled purposively. Balloting was used to obtain the required samples from the respondents. This gives a total sample size of 200 respondents.

Table 3.2: Target Population and Sample Size

School for the Hearing Impaired	Target Population and Sampled Size				
	Lower primary school graders (N)	Lower primary school graders 30% (N)	Non-Teaching Staff (N)	Non-Teaching 30% (N)	Teachers (N) (Census)
St. Martins	44	13	12	4	14
Kakamega	36 -	11	8	2	8
Mwikhomo	33 -	10	7	2	6
Chekombero	39	12	10	3	7
Jivavei	33 -	10	6	2	4
Ebukuya	31 -	9	6	2	4
Webuye	42	13	11	3	7
Mundika	38	11	10	3	6
St. Augustine M. Special School	37	11	10	3	7
Total	333	100	80	24	63

3.6 Data Collection Instruments.

The researcher used questionnaires to collect data from English teachers. Interview schedules were used to gather information from head teachers of institutions, County Directors of Education officials, and non-teaching personnel. Documents of the lower primary school graders' achievements in the schools were documented using a document checklist. Kombo and Tromp (2006) assert that questionnaires are appropriate for collecting data in social science. They allege that questionnaires are considered efficient in collecting data from many respondents in a short time with minimal costs.

3.7 Research Instruments

Orodho (2003) describes research instruments as tools that enable researchers to collect data from respondents. They enable the researchers to gather the necessary information required in a given study.

3.7.1 Questionnaire for the Teachers

A questionnaire for teacher respondents was designed. This questionnaire included closed-ended questions. They gathered information on the relationship between reading literacy resources and the acquiring skills in English language lower primary school graders with hearing impairments in Western region Kenya.

3.7.2 Interview Schedules for the Head Teachers

Interview schedules for the head teachers were used to gather information from the head of institutions. The interviews were reported verbatim.

3.7.3 Document Checklists for Lower primary school graders with Hearing Impairments.

Observation checklists for lower primary school graders with hearing impairments were used to gather documentary evidence on lower primary school graders' abilities in language skills.

3.8 Piloting of the Instruments.

Split-half split testing technique was used for piloting the study. It was done to test the reliability and validity of the research instruments at one of the schools for the hearing impaired. The respondents used in this pilot study were not allowed to participate in the main study.



3.8.1 Validity of the Research Instruments

Orodho (2003) describes validity as the meaning and accuracy of decisions made on the basis of results found. White (2005) asserts that it is asking a relevant question that is framed in the simplest possible manner. He maintains that it is an agreement between the study's actual reality and conclusion. This study used content validity to measure the accuracy of the questionnaires, interview schedules, and document analysis that were used. Mugenda (2009) writes that validity ensures that data being collected is reliable in representing a specific content of particular concepts. Supervisors and lecturers in the School of Education of Mt. Kenya University Kakamega Campus were requested to evaluate the appropriateness and applicability of the content, its adequacy, and clarity of the questionnaires, interview schedules, and document analysis.

3.8.2 Reliability of Research Instruments

Sekaran (2003) writes that reliability is a test of the internal consistency and stability of raw data from the field. He notes that the closer the Cronbach's Alpha coefficient, the higher the internal consistency. A pilot study was conducted in one of the special schools for the hearing impaired. Reliability of the instruments was said to be ensured only when the pilot study yielded a Cronbach's Alpha value of more than 0.70 coefficient.

3.9 Data Collection Procedure

An introductory letter was to be obtained by the researcher from Mount Kenya University. This gave her the opportunity to seek authority from school administrators to collect data in the special schools. This enabled the researcher to request a research permit from the National Commission for Science, Technology, and Innovations. The acquired permit was used to enable the researcher to obtain permission from the school managers and Ministry of Education officials to gather data. The researcher asked for appointments in all the sampled schools to brief them about the study. She also informed them about the instruments used and the documents required for analysis. All the participants were thanked for their opinions, time, and cooperation.

3.10 Data Analysis Methods

The collected data was cleaned before coding it. The researcher used Statistical Package for Social Sciences version 22.0 to analyze the raw data, as affirmed by Kombo and Tromp (2006). Scholars explain that analyzing data involves examining raw information collected from fields (Orodho, 2003, and Mugenda, 2000). Analysis involves extracting important variables and scrutinizing the collected information to

establish whether they have faults. In this study, the researcher analyzed data using both qualitative and quantitative methods. Qualitative data were analyzed using frequency counts and graphs as descriptive statistics.

Table 3.3: Data Analysis

Objective	Explanatory Variables	Outcome Variables	Measuring Tool
To establish the effect of available skilled manpower on acquiring skills in the English language at lower grades with impairment in hearing ability in the Western region of Kenya	Available skilled manpower (Teaching And Non-teaching staff) for	acquisition of English Language Skills	Frequency Counts
To find out the effect of printed instructional materials on acquiring skills in the English language at lower grades with impairment in hearing ability in the Western region of Kenya	Printed Instructional Materials	English Language Skills	Frequency Counts
To find out the effect of non-printed instructional materials on acquiring skills in the English language at lower grades with impairment in hearing ability in the Western region of Kenya.	Non Printed Instructional Materials	English Language Skills	Frequency Counts
To examine the effect of electronic instructional materials on acquiring skills in the English language at lower grades with impairment in hearing ability in the Western region of Kenya	Electronic instructional materials for	English Language Skills	Frequency Counts

3.11 Ethical Considerations

McMillan and Schumacher (2006) explain that ethical guidelines in research work include, but are not limited to, informed consent and avoiding deception. It also involves confidentiality, anonymity, safety of the respondents, and privacy. Education officers were consulted for informed consent to collect data from schools in the special

schools in the Western region of Kenya. Orodho (2009) says participation in research should be voluntary, as respondents have the right to refuse to divulge information they consider sensitive. For this purpose, each questionnaire had an introductory section which requested the respondents' consent to provide the necessary information. Therefore, confidentiality and anonymity were guaranteed by assuring the participants that information arising from the study would be kept confidential. The data obtained were used for the purpose of this research only. Mugenda and Mugenda (2003) assert that individual identities of respondents should always be protected. Concealing individual respondents' identities makes them feel free to give their honest and complete information.



CHAPTER FOUR

RESEARCH FINDINGS/RESULTS AND DISCUSSIONS

4.0 Introduction

In Chapter Four, the research findings and subsequent comments of the research are presented. This study examines the impact of reading literacy resources on the development of English language abilities in lower-grade students with hearing impairments in the Western region of Kenya. The research focuses on the impact of these resources after doing an analysis of response rates and demographic characteristics. The study primarily investigates the impact of skilled manpower qualified staff, as well as print, non-print, and electronic instructional materials on the development of English language abilities among lower-grade students with hearing impairments. The study was conducted in special schools located in the Western region of Kenya.

The researcher sent a total of 63 questionnaires to the teaching staff employed at nine specific schools located in the Western region of Kenya. A total of 60 surveys were completed and returned in accordance with the required guidelines. The response rate achieved was around 95.2%, indicating a generally good outcome. According to Frankel and Wallen (2006) and Orodho (2003), a response rate of 60% is deemed suitable, while other scholars consider a response rate of 80% to be good in both qualitative and quantitative research within the field of social sciences. Saunders, Lewis, and Thornhill (2007) suggest that a response rate over 85% is deemed exceptional in the context of self-administered surveys. Hence, the achieved response rate of 95.2% in this research was deemed commendable for conducting a comprehensive data analysis.

4.1 Demographic Information

Demographic information included gender, age of teachers in years, learners' age at the onset of hearing impairment in years, and the cause of hearing impairment. According to Orodho (2003) and Cohen and Manion (2003), the quality and demographic variables of respondents give value to the validity and reliability of the information they provide in research. This set of data was intended to determine whether the demographic variables of the sample had any influence on the research findings.

Table 4.1: Gender of Teachers

Variables		Frequency	Percent	Valid Percent
Gender	Males	28	46.7	46.7
	Females	32	53.3	53.3
	Total	60	100.0	100.0
Age of teachers of English for HI lower primary school graders in years	20-27	1	1.7	1.7
	28-35	16	26.7	26.7
	36-43	20	33.3	33.3
	44-51	15	25.0	25
	>52	8	13.3	13.3
	Total	60	25.0	100.0
Learner's age at the onset of HI in yrs	0 - 4	40	40	40
	5 - 8	33 -	33 -	33 -
	9 - 12	19	19	19
	13 – 5.0			
	5.0	5	5	5
	17 -12 6	3	3	3
	Total	100	100	100
Cause of Hearing impairedness	Hereditiy	50	50	50
	Disease	31 -	31 -	31 -
	accidents	12	12	12
	others	7	7	7
	Total	100	100.0	100.0

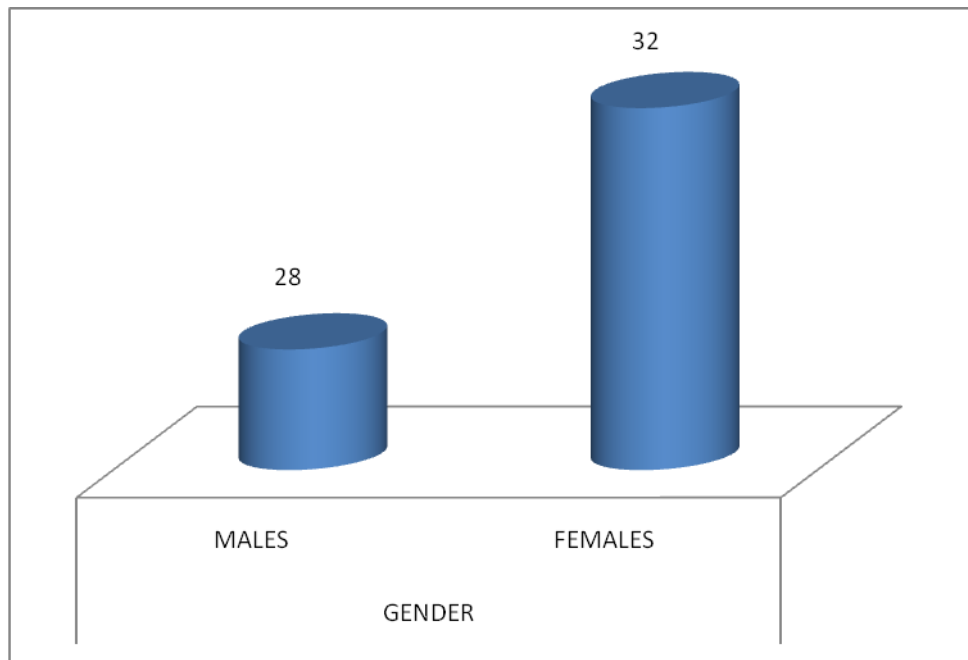


Figure 4.1: Gender of Teachers.

The findings shown in Table 4.1 and Figure 2 indicate that among the special schools in the Western region of Kenya, there were 32 (53.3%) female teachers and 28 (46.7%) male teachers. The female-to-male ratio was expressed as 8:7. The aforementioned ratio successfully satisfied the mandated criterion of two-thirds female representation as stipulated by the 2010 Constitution of Kenya. The aforementioned constitutional article aims to advance gender equality within the realm of public educational institutions. The staffing practices observed at special schools located in the Western region of Kenya exhibit commendable commitment to the principles of gender equality. Scholars see equity as the implementation of impartially granting equal advantages, consideration, or flexibility to all entities engaged. Equity plays a pivotal role in ensuring the fair allocation of financial resources, goods, and services among recipients, in conjunction with the principles of economy, effectiveness, and efficiency (Hedge, 2015; LO'S, 2012).

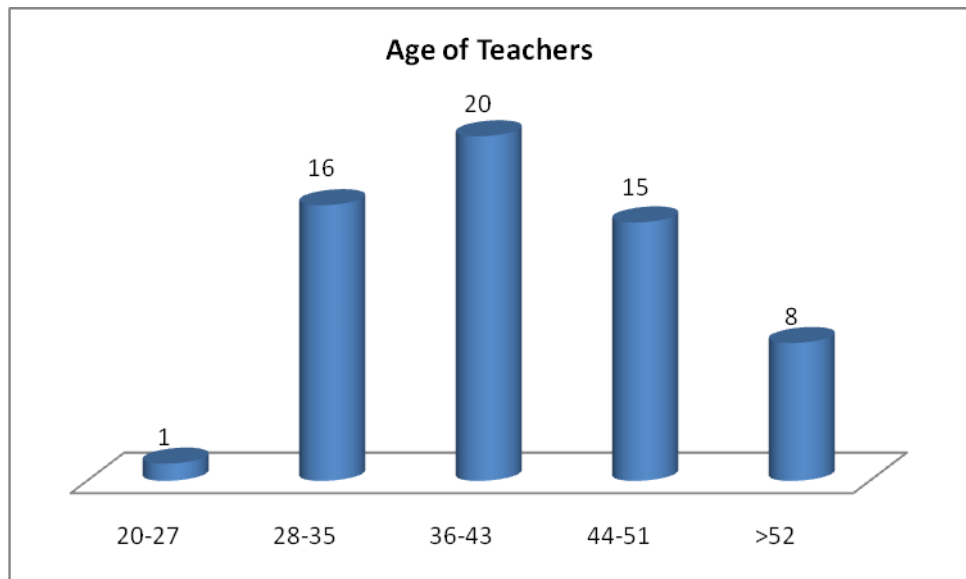


Figure 4.2: Age of Teachers of English in Years

Results in table 4.1 and Figure 3 showed that the majority of teachers 20(33.3%) were in the age bracket of 36-43 years followed by 16 (26.7%) in the bracket 28-35. They were closely followed by 15(25%) in the bracket of 44-51. Only one teacher was found in the bracket of 20-27 years old. There were eight teachers who were above 52 years old. These results imply that most of the teachers of English for lower primary school graders with hearing impairment in special schools in Western region of Kenya fall in the age bracket of 28 to 51 years. Scholars like Sheilla (2011), Rowsell, Kosnick, and Beck (2008) emphasizes that teachers become experienced and more knowledgeable as their age advances. Farooq, Ul-Hassan, Wahid, 2012 assert that teachers enthusiasm deteriorate due to boredom of teaching the same content over several years and having added responsibilities in academic administrative and research aspects. The wider age bracket of 28-51 years for teachers of English in grades one to three used in this study was therefore the most productive age set appropriate for teaching this set of lower primary school graders since they had a wealth of experience and knowledge required at this level of learning.

4.1.1 Learner's Age on Onset of Hearing Impairment in Years

Information in table 4 revealed that the majority, 40(40%), of lower primary school graders acquire hearing impairment in the age bracket of 0-4 years. 33(33%) acquire hearing impairment in the age bracket of 5-8 years. Between the ages of 9-12 years, about 19(19%) acquire hearing impairment, and at 13-16 years. Very few acquire hearing impairedness when they are between 17-20 years. These results showed that in Western region of Kenya special schools for the hearing impaired, lower primary school graders acquire hearing impairment when they are still young and in their early stages of intellectual development. Scholars like Ling (2009) found out that speech and language develop rapidly during the early years in children's lives. The motor skills required for speech can be learned at any age, but they are most likely transferred to the spontaneous age levels of children when they have firmly developed language patterns.

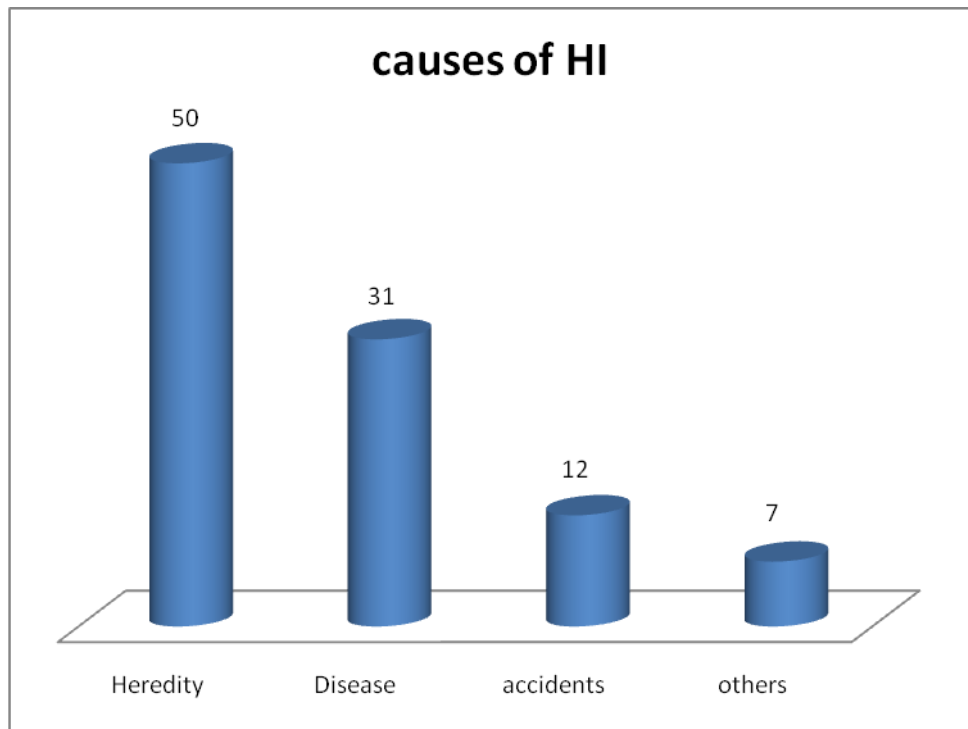


Figure 4.3: Causes of Hearing Impairment.

The findings shown in Table 4.1 and Figure 4 indicate that inherited factors account for 50% of the causes of hearing impairment among learners in impaired hearing schools located in Western region of Kenya. Diseases are responsible for 31% of cases of hearing impairment, whereas accidents are a contributing factor in 12% of instances of hearing impairment. Another element that accounts for seven percent is the presence of violence inside educational institutions and domestic settings. Academic discourse posits that the occurrence of birth difficulties, such as the existence of herpes, rubella, cytomegalovirus, toxoplasmosis, or other severe infections, oxygen deprivation, the need for a blood transfusion due to various factors, or preterm delivery, may result in congenital deafness among infants. According to their claims, infants with a birth weight below 3 pounds require certain pharmacological interventions to support their respiratory function as a result of being born prematurely, which may lead to hearing impairment.

4.1.2 Skilled Teachers and Support Staff Acquisition of Language Skills in English

The first objective of this study was to establish the effect of the available academic and none academic trained personnel on acquiring skills in English Language among low graders with impaired hearing ability in special schools in Western region of Kenya. To assess this effect of skilled teachers and support staff on acquiring skills in English Language, the researcher employed frequency tables and Pearson Correlation analysis. The researcher triangulated this information with interview schedules and observation checklist. The responses were recorded in table 4.2.

Table 4.2: Skilled Teachers and Support Staff Acquisition of Language Skills in English

Skilled teachers and Support Staff:-	SA	%	A	%	D	%	SD	%
Sign and finger spell letters of the alphabet to facilitate acquiring skills in English language at lower primary school graders with impairments in hearing ability	10	16.7	18	30	12	20	20	33.3
Teach and sign sounds (consonants, vowels, and syllables) to facilitate the acquiring skills in English language at lower primary school graders with impairments in hearing ability	18	30	12	20	11	13.8	19	31.7
Teach and sign simple words to facilitate the acquiring skills in English language at lower primary school graders with impairments in hearing ability	15	25	10	16.7	14	23.3	21	35
Use flashcards to facilitate the acquiring skills in English language at lower primary school graders with impairments in hearing ability	18	30	11	13.8	20	33.3	21	35
Teach and sign simple words to facilitate acquiring skills in English language at lower primary school graders with impairments in hearing ability	14	23.3	21	35	5	8.3	20	33.3
Help signing exact English to facilitate the acquiring skills in English language at lower primary school graders with impairments in hearing ability	20	33.3	10	16.7	20	33.3	10	16.7

Key: SA- Strongly Agree, A - Agree, D- Disagree, SD -Strongly Disagree

28(46.7%) teachers either strongly agreed or just agreed that signing and finger spelling letters of the alphabet has facilitated acquiring skills in English language at lower primary school graders with impairments in hearing ability in Western region of Kenya. Of English language skills among lower primary school graders with hearing impairments in specials in Western region of Kenya. 32(53.3%) did not agree with this item, meaning that teachers of English do not fully develop English skills in lower primary school graders with hearing impairments in specials in Western region of Kenya by signing and finger spelling letters of the alphabet.

Table 4.3: The Effect of skilled Teachers on acquiring skills in English Language.

		Teaching Staff	Acquisition of English Language Skills
Skilled teachers	Pearson Correlation	1	.189**
	Sig. (2-tailed)		.000
	N		60
Acquiring of skills in English Language	Pearson Correlation	.189**	1
	Sig. (2-tailed)	.000	
	N	60	

From table 4.3, the teaching staff had significant positive linear relationship of 18.9% ($r = 0.189^{**}$, $P < 0.01$) with acquisition of English language skills. A relationship of 18.9% indicates that there was a low effect of teaching staff on the acquisition of English language skills in schools for those with impairments in hearing ability schools in Western region of Kenya. This observed suggests that most teachers were not fully utilizing their acquired skills in instructing lower primary school graders in schools for the hearing impaired in special schools in Western region of Kenya.

Table 4.4: Changes in Acquisition of English Language Skills as a Result of Instructions by the Teaching Staff

R	R Square	Adjusted R Square	F Ratio	Sig Value
.171 ^a	.192	.164	18.632	.000 ^a

From the table 4.4 Adjusted R Square which is the coefficient of determinant with a value of 0.164 indicated that the teaching staff accounted for 16.4% variations in acquiring skills in English language. This small percentage change in acquisition of English Language Skills was statistically significant with $F(1, 60) = 18.632$, $P < 0.01$. This further means that teaching staff cause a positive change in acquiring skills in the English language by 16.4% in schools for lower primary school graders with hearing

impairments in the Western region of Kenya, leaving 83.6% variations that are accounted for by other factors that affect the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.

4.1.3 Effect of Printed Instructional Materials on Acquisition of English Language Skills

Objective two of this research sought to find out the effect of printed instructional materials on the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya. Again, the teachers were provided with a questionnaire to fill out while the opinions of the non-teaching staff were recorded and transcribed verbatim.

Table 4.5: Shows the analysis of the opinions of the teaching staff:

STATEMENT:	SA	%	A	%	D	%	SD	%
Printed								
Charts are being used to facilitate the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.	14	23.3	11	13.8	22	36.7	13	21.7
-								
Text Books are being used to facilitate the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.	18	30	12	20	11	18.3	19	31.7
-								
Exercise books are being used to facilitate the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.	19	31.7	19	31.7	18	30	4	6.7
-								
Flash cards are being used to facilitate the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.	10	16.7	11	18.3	18	30	21	35
-								
Puzzles are being used to facilitate the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya.	14	23.3	10	16.7	19	31.7	17	28.33
-								
Games are being used to facilitate the acquisition of skills in the English language among lower primary school graders with hearing impairments in the Western region of Kenya.	14	23.3	12	20	18	30	16	26.7

Key: SA - Strongly Agree A - Agree D - Disagree SD -Strongly Disagree

14 (21.7%) respondents strongly agreed that charts were being used to facilitate the acquiring of skill in English language at lower primary school graders with impairments with hearing ability in Western region of Kenya while 18.3% agreed. In general, 25 (41.7%) of them agreed with this suggestion. However, 35 (58.3%) teachers generally disagreed that charts were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya, meaning that many teachers in special schools in the Western region of Kenya do not fully utilize charts to facilitate acquisition of English language skills among lower primary school graders with hearing impairments. 18 (30%) teachers strongly agreed that **textbooks** were being used to facilitate the acquisition of skills in the English language among lower primary school graders with hearing impairments in the Western region of Kenya. While 12(20%) agreed. In general, 30(50%) of teachers agreed with this purpose. However, 30 (50%) teachers generally disagreed that textbooks were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya, use of textbooks to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments.

19(31.7%) teachers strongly agreed that exercise books were being used to facilitate the acquiring of skill in English language at lower primary school graders with impairments with hearing ability in Western region of Kenya, on average.7% just agreed. In general, 38(31.3%) of the teachers agreed with this suggestion. However, 22 (36.7%) teachers generally disagreed that exercise books were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya, meaning that many teachers in

special schools in the Western region of Kenya use only a few exercise books to facilitate the acquisition of English language skills among lower primary school graders with hearing ability in Western region of Kenya.10 (16.7%) teachers strongly agreed that **flashcards** were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments, on average.3% agreed. In general, 21(35%) of them agreed with this purpose. However, 39 (65%) teachers generally disagreed that flashcards were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya, that many teachers in special schools in the Western region of Kenya do not fully utilize flashcards to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments. Moreover,

14 (23.3%) teachers strongly agreed that puzzles were being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments, while 10(16.7%) agreed. In general, 24(40%) of them agreed with this suggestion. However, 36(60%) teachers generally disagreed that puzzles were being used to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments. This means that many teachers in special schools in the Western region of Kenya do not use puzzles to facilitate the acquisition of English language skills among lower primary school graders with hearing ability in Western region of Kenya., while 12(20%) just agreed. In general, 26(40%) of teachers agreed with the suggestion. However, 34(60%) teachers generally disagreed that games were being used to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing

impairments in the Western region of Kenya, meaning that teachers in special schools in the Western region of Kenya are not fully utilizing games to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing ability in Western region of Kenya.

Table 4.6: The Effect of Printed Instructional Materials on Acquiring Skills in the English Language.

		Printed Instructional Materials	Acquiring skills in the English language
Printed Instructional Materials	Pearson Correlation	1	.191**
	Sig. (2-tailed)		.001
	N	60	
Acquisition of English Language Skills	Pearson Correlation	.191**	1
	Sig. (2-tailed)	.000	
	N		60

From Table 4.6, Printed Instructional Materials had a significant direct linear relationship with the acquisition of English language skills with $r = .191^{**}$, $P < 0.01$. This indicates that the use of Instructional Materials had a significant positive effect of 19.1% on the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya. It can be further suggested that the extent to which teachers utilize Printed Instructional Materials to enhance the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya. By 19.1%.

Table 4.7: Shows changes in the acquisition of English language skills as a result of utilizing Printed Instructional Materials to instruct lower primary school graders

R	R Square	Adjusted R Square	F Ratio	Sig Value
.169 ^a	.3357	.2997	8.591	.000 ^a

From Table 4.7, the adjusted R Square, which is the coefficient of determinant with a value of 0.2947, indicates that 29.5% of the variations in acquiring of skill in English language at lower primary school graders with impairments with hearing ability in Western region of Kenya was accounted for by the utilization of Printed Instructional Materials. This change in the acquiring of skill in English language at lower primary school graders with impairments with hearing ability in Western region of Kenya. Statistically significant with $F(1, 58) = 8.591, P < 0.01$. This further implied that printed instructional materials significantly accounted for 29.5% variations in the acquiring of skill in English language at lower primary school graders with impairments with hearing ability in Western region of Kenya.

This left 70.5% variations to be accounted for by other factors affecting the acquisition of English language at lower primary school graders with impairments with hearing ability in Western region of Kenya.

4.1.4 Effect of Non-Printed Instructional Materials on Acquisition of English Language Skills

Objectives of this research sought to find out the effect of non-printed instructional materials on the acquisition of English language at lower primary school graders with impairments with hearing ability in Western region of Kenya. Sixty questionnaires were given to teachers to gather their opinions, while the views of non-teaching staff members were recorded and transcribed verbatim.

Table 4.8: Shows the analysis of the data collected on this item.

STATEMENT:	SA	%	A	%	D	%	SD	%
Non Printed								
Chalk/Chalkboards are being used to facilitate the acquisition of English language skills among lower primary school graders with hearing impairments. The hearing ability.	18	30	19	31.7	12	20	11	18.3
Realia is being used to facilitate acquiring of skills in English language at lower primary school graders with impairments with hearing ability.	10	16.7	12	20	19	31.7	19	31.7
Floors are being used to facilitate acquiring of skills in the English language for lower primary school graders with impairments with hearing impairments.	15	25.0	11	18.3	18	30	16	26.7
Modeled Letter/plasticine/Clay are being used to facilitate acquiring of skills in English language for lower primary school graders with impairments with hearing ability.	7	11.7	10	16.7	20	33.3	23	38.3
Cut Outs (shapes), non-printed being used to facilitate acquiring of skills in English language at lower primary school graders with impairments with hearing ability.	10	16.7	14	23.3	19	31.7	17	28.3
Non Printed Books and writing materials are all being used to facilitate the acquiring of skills in English language at lower primary school graders with impairments with hearing ability.	10	16.7	13	21.7	20	33.3	17	28.3

Key: SA - Strongly Agree A - Agree D - Disagree SD -Strongly Disagree

27(45%) teachers either strongly agreed or agreed that the use of chalk/Chalkboards facilitate acquiring of skills in the English language for lower primary school graders with impairments with hearing impairments. However, 33(55%) did not agree with this item, indicating that teachers of English do not fully utilize chalk/chalkboards to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments. Additionally, 22(36.7%) teachers

either strongly agreed or agreed that the use of realia is being used to facilitate the acquisition of in the English language for lower primary school graders with hearing impairments. However, 38(63.3%) did not agree with this item, meaning that teachers of English do not fully utilize realia to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments.

Furthermore, 26(40%) teachers either strongly agreed or just agreed that the use of floors is being used to facilitate the acquisition of English language skills in lower primary school graders with hearing impairments. However, 34(60%) did not agree with this item, indicating that teachers of English do not fully utilize floors to facilitate the acquisition of skills in English language at lower primary school graders with hearing ability. Finally, 17(28.3%) teachers either strongly agreed or just agreed that the use of modeled letters, Plasticine/clay is being used to facilitate the acquisition of English language skills in lower primary school graders with hearing impairments. However, 43(71.7%) did not agree with this item, meaning that teachers of English do not fully utilize modeled letters/Plasticine/clay to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments.

24(40%) teachers either strongly agreed or just agreed that the use of cutouts (shapes) are being used to facilitate acquiring of skills in English language at lower primary school graders with hearing impairments. However, 36(60%) did not agree with this item, indicating that teachers of English do not fully utilize cutouts (shapes) to facilitate the acquisition of English language skills in lower primary school graders with hearing impairments in specials in the Western region of Kenya. Additionally, 23(38.3%)

teachers either strongly agreed or just agreed that the use of non-printed books and Writing Materials are being used to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments. However, 37(61.7%) did not agree with this item, indicating that teachers of English do not fully utilize non-printed books and writing materials to facilitate the acquisition of skills in the English language for lower primary school graders with impairments with hearing impairments.

Table 4.9: Non-printed instructional materials

		Non Printed Instructional Materials	Acquiring of skills in English Language
Non Printed Instructional Materials	Pearson Correlation	1	.249**
	Sig. (2-tailed)		.000
	N	60	
Acquiring of skills in English language	Pearson Correlation:	.249**	1
	Sig. (2-tailed):	.000	
	N		60

From Table 4.9, non-printed instructional materials have a significant direct linear relationship with the acquisition of English language skills, with $r = .249^{**}$, $P < 0.01$ at a 99.9% confidence level. This indicates that there is a significant relationship of 24.9% with instructional materials on the acquisition of English language skills in schools for the hearing impaired in the Western region of Kenya. This further suggests that teachers utilize non-printed instructional materials to the extent of 24.9% in instructing lower grade students in schools for the hearing impaired in the Western region of Kenya.

Table 4.10: Changes in the acquisition of English language skills as a result of utilizing Non Printed Instructional Materials in instructing lower primary school graders

R	R Square	Adjusted R Square	F Ratio	Sig Value
.188 ^a	.2357	.2232	7.588	.000 ^a

From the table 4.10 Adjusted R Square, which is the coefficient of determinant with a value of .2232, indicates that 22.3% of the variations in the acquisition of English language skills was accounted for by the utilization of Non Printed Instructional Materials. This percentage change in the acquisition of English language skills was statistically significant with $F(1, 54) = 7.588, P < 0.01$. This further indicates that Non Printed Instructional Materials significantly account for 22.3% variations in the acquiring of skills in English language for lower primary school graders with hearing impairments in the Western region of Kenya

of English language skills among hearing-impaired lower primary school graders in special schools in the Western region of Kenya. This leaves 77.3% variations to be accounted for by other factors that affect the variation in English language skills by lower primary school graders with hearing impairment in Western region of Kenya.

4.1.5 Effect of Electronic Instructional Materials on Acquisition of English Language Skills.

Objective Four of this research sought to examine the effect of electronic instructional materials on the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya.

The teachers were provided with 60 questionnaires to fill out, while the opinions of the non-teaching staff were recorded and transcribed verbatim. Table 14 presents the analysis of the opinions of the teaching staff's opinions.



Table 4.11: Electronic Instructional Materials for Acquisition of English Language Skills.

STATEMENT:	SA	%	A	%	D	%	SD	%
Electronic Material								
Lap Tops are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	10	16.7	7	11.7	23	38.3	20	33.3
Televisions are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	7	11.7	7	11.7	24	40	22	36.7
Desk Top Computers are used to facilitate acquiring of English Language at lower primary school graders with impairments with hearing ability.	5	8.3	10	16.7	20	33.3	25.0	41.7
Mobile Phones are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	8	13.3	10	16.7	20	33.3	22	36.7
Tablets are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	4	6.7	7	11.7	19	31.7	20	33.3
Projectors are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	10	16.7	11	18.3	20	33.3	19	16.7
Hearing Aids are used to facilitate acquiring of skills in English Language at lower primary school graders with impairments with hearing ability.	9	15	10	16.7	20	33.3	22	36.7
Total								

Key: SA - Strongly Agree, A - Agree, D - Disagree, SD -Strongly Disagree,

17(28.3%) teachers either strongly agreed or agreed that use of laptops are being used to facilitate the acquisition of skills in English Language in Western region of Kenya for lower primary school graders with impairments with hearing impairments.

However, among grade one, two, three students with hearing impairments in specials in Western region of Kenya, 43(71.7%) did not agree with this item, that English teachers do not fully utilize laptops to facilitate the acquisition of skills in English Language in this region. 14(23.3%) teachers either strongly agreed or just agreed that the use of televisions is being used to facilitate the acquisition of English language skills among lower-grade students with hearing impairments in specials in the Western region of Kenya. 46(76.7%) did not agree with this item, meaning that teachers of English do not fully utilize televisions to facilitate the acquisition of skills in English Language in the Western region of Kenya.

15(25%) teachers either strongly agreed or just agreed that the use of desktop computers is being used to facilitate the acquisition of English language skills among lower-grade students with hearing impairments in specials in the Western region of Kenya. 45(75%) did not agree with this item, meaning that teachers of English do not fully utilize desktop computers to facilitate the acquisition of English language skills in lower-grade students with hearing impairments in specials in the Western region of Kenya. 18(30%) teachers either strongly agreed or just agreed that the use of mobile phones is being used to facilitate the acquisition of English language skills among lower-grade students with hearing impairments in specials in the Western region of Kenya. 42(70%) did not agree with this item, meaning that teachers of English do not fully utilize mobile phones to facilitate the acquisition of English language skills in lower-grade students with hearing impairments in specials in the Western region of Kenya.

11(18.3%) teachers either strongly agreed or just agreed that the use of tablets is being used to facilitate the acquisition of skills in English Language in the Western region of

Kenya among lower-grade students with hearing impairments in specials in the Western region of Kenya. 49(81.7%) did not agree with this item, meaning that teachers of English do not fully utilize tablets to facilitate the acquisition of skills in the English language in the Western region of Kenya. 21(35%) teachers either strongly agreed or just agreed that the use of projectors is being utilized to facilitate the acquisition of skills in the English language in the Western region of Kenya. 39(65%) did not agree with this item, meaning that teachers of English do not fully utilize projectors to facilitate the acquisition of English language skills in lower primary school graders with hearing impairments in specials in the Western region of Kenya.

19(35%) teachers either strongly agreed or just agreed that the use of projectors is being utilized to facilitate the acquisition of skills in English Language in the Western region of Kenya. 39 (65%) did not agree with this item, meaning that teachers of English do not fully utilize hearing aids to facilitate the acquisition of skills in English Language in the Western region of Kenya.

Table 4.12: The Effect of Electronic Instructional Materials on Acquiring Skills in English Language.

		Electronic Instructional Materials	Acquiring Skills in English Language
Electronic Instructional Materials	Pearson Correlation	1	.111**
	Sig. (2-tailed)		.000
	N		60
Acquisition of English Language Skills	Pearson Correlation	.111**	1
	Sig. (2-tailed)	.000	
	N	60	

From table 4.12, the use of electronic instructional materials in teaching had a significant positive linear relationship of 11.1% ($r = 0.111^{**}$, $P < 0.01$) with the acquisition of English language skills. A relationship of 11.1% indicates that the use of electronic instructional materials for acquisition English language skills in English Language in the Western region of Kenya is as low as 11.1%. It can be suggested that most teachers are not fully utilizing electronic instructional materials when instructing lower primary school graders in schools for hearing impairments in Western region of Kenya.

These findings are in line with Rose and Badger, Harding and Trupe, and Prinz and Adoyo (2002), who reported that computers are used to tutor lower grade students. They recommended that with the help of computers, games can be used more often to stimulate and arouse interest in lower grade students with hearing impairments. Dickson (2000) affirms that educators are now able to present instructional materials using a variety of visual images, such as robots that stimulate the sounds of vowels or certain words accompanied by pictures of images. Interview results showed that non-

teaching staff do not use electronic instructional materials because most of them are computer illiterate. They remarked, “Computers are not easily available to us by the school administration.” The researcher opines that teachers should embrace digital learning as it fast-tracks learning by creating artificial scenarios that stimulate imaginations in lower grade students. Learning can be achieved through gadgets like laptops, which have been provided by the MOE in Kenya. Through this, learning can reach many children across various geographical regions within a short time.

Table 4.13: Changes in the acquisition of English language skills as a result of utilizing electronic instructional materials in instructing lower grade students.

R	R Square	Adjusted R Square	F Ratio	Sig Value
.147 ^a	.1892	.0991	4.815	.000 ^a

From Table 4.13, the Adjusted R Square, which is the coefficient of determination with a value of 0.0991, indicates that 9.9% of the variation in the acquisition of skills in English Language in the Western region of Kenya was accounted for by utilizing electronic instructional materials. This percentage change in the acquisition of English language skills was statistically significant with $F(1, 58) = 4.815, P < 0.01$. This further indicates that electronic instructional materials significantly account for 9.9% variations in the acquisition of English language skills for hearing-impaired lower primary school graders in special schools in the Western region of Kenya. This leaves 90.1% variations to be accounted for by other factors that affect the acquisition of skills in English Language in the Western region of Kenya among lower primary school graders with hearing impairment in Western region of Kenya.

4.1.6 The extent to which children have acquired English Language Skills

The study used an observation checklist to determine the extent to which children have acquired skills in English Language in the Western region of Kenya. The analysis of the observations was done using a three-point Likert scale of weightage: Exceeding expectations = 3; Meeting expectations =2; Approaching expectations = 1. In this scale, the highest mean is 3.00 while the lowest mean is 1.00. The results of the analysis have been recorded in Table 4.14

Table 4.14: The extent to which children have acquired English Language Skills

Extent of acquired English language skills	Category			Average mean
	Exceeds expectations 3	Meets expectations 2	Approaches expectations 1	
Receptive skills	0.1972	1.3895	0.9904	1.20345
Expressive skills	0.1761	1.4794	0.9997	1.26555
Reading skills	0.1376	1.2059	0.9019	1.10985
Writing skills	0.1261	1.1235	0.9995	1.184525

Likert Scale Weightage: *Exceeds expectations = 3; Meets expectations =2; Approaches expectations = 1; P=0.05%; Highest Mean = 3.00; Lowest Mean = 1.00*

Results in Table 4.14 showed that the highest mean recorded for receptive skills was 1.3895. This mean significantly differs from the standard mean of 2.00 for meeting expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya do not meet expectations in receptive skills as expected in English language. The mean for approaching expectations on receptive skills was 0.9904, which was close to 1.00, the standard mean for children approaching expectations. This implies that lower primary school graders with hearing impairments in the Western region of Kenya are just approaching expectations on receptive skills.

The analysis also showed that the highest mean recorded for expressive skills was 1.4794. This mean again significantly differed from the standard mean of 2.00 for meeting expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya do not meet expectations in expressive skills as expected in English language. The mean for approaching expectations on expressive skills was 0.9997, which was close to 1.00, the standard mean for children approaching expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya are just approaching expectations on expressive skills.

The analysis also shows that the highest mean recorded on reading skills was 1.2059. This mean significantly differs from the standard mean of 2.00 for meeting expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya do not meet expectations in reading skills as expected in English language. The mean for approaching expectations on reading skills was 0.9019, which was close to 1.00, the standard mean for children approaching expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya are just approaching expectations for reading skills.

These results also show that the highest mean recorded on writing skills was 1.1235. This mean significantly differs from the standard mean of 2.00 for meeting expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya do not meet expectations in writing skills as expected in English language. The mean for approaching expectations on writing skills was 0.9995, which was close to 1.00, the standard mean for children approaching expectations. This implies that lower grade students with hearing impairments in the Western region of Kenya are just approaching expectations on writing skills. In general, the analysis

shows that lower grade students with hearing impairments in the Western region of Kenya are not meeting expectations for English language skills.

4.2 RESEARCH FINDINGS AND DISCUSSIONS

Objective one of this study established the effect of the available academic and none academic trained personnel on acquiring skills in English Language among low graders with impaired hearing ability in special schools in Western region of Kenya. The results showed that the teaching staff had a significant linear teaching relationship of 18.9 % with the acquisition of English language skills. Printed instructional materials had a relationship of 19.1% with the acquisition of English language skills.

The analyzed results agree with the findings of Rowsell, Kosnick, and Beck (2008), which indicated that increased teacher education in multiliteracies has the potential to enhance lower primary school graders' social and language abilities. According to Brereton (2008), the research findings confirmed that lower primary school graders have the potential to experience a sense of empowerment when they realize that reading is not limited to spoken communication alone. Professionals who possess the ability to seamlessly integrate visual, aural, and kinesthetic elements into the presentation of letters, words, ideas, and sentences have the potential to enhance different learning modalities. This comprehensive approach offers lower primary school graders a wider range of resources to effectively comprehend and improve their English language abilities. The findings of the interview conducted between the researcher and the non-teaching staff revealed that individuals who have received professional training possess the necessary expertise to effectively educate and enhance the English language proficiency of lower primary school graders. The researcher concurs that trained

teachers, equipped with the requisite skills for instructing students with hearing impairments, have a professional responsibility to foster the development of language skills in these lower primary school graders.

The second objective of the research sought to find out the effect of printed instructional materials on the acquisition of skills in the English language for lower primary school graders with hearing impairments in the Western region of Kenya. The study established that Printed instructional materials had a significant direct linear relationship of 24.9% and electronic instructional materials had a significant positive linear relationship of 11.1% with the acquisition of English language skills.

Its findings are in line with researchers like Scarfoss, Williams, and Rotenberg (2009), who found that children who are not developed in writing or drawing clear messages can use printed materials like charts, name tags, labels, and signs to show communications to their parents and peers. Padden and Ramsey (2003) argued that this is a more developed strategy that can be seen when lower primary school graders do finger spelling for the record of printed words. They further recommended that exposure to a variety of English words from birth is given to many children. According to Williams (2004), as children connect finger spelling with written English language, it becomes more easily understood. During the interview discussions between the researcher and the non-teaching staff, the respondents remarked, "Reading books and enjoying them either alone or with friends is a viable learning experience for lower primary school graders with hearing impairments." It was also the researcher's view that since hearing-impaired lower primary school graders acquire knowledge by seeing, there should be more printed materials available to benefit them in a classroom setting.

Exploring written words through drawing and writing benefits all lower primary school graders with hearing impairments since they can imitate or mimic the printed pictures and letter hand shapes.

Objective three of this research sought to find out the effect of non-printed instructional materials on the acquisition of English language at lower primary school graders with impairments with hearing ability in Western region of Kenya. The results showed that teachers in the Western region of Kenya were not fully utilizing their acquired skills, printed, non-printed. These findings are in line with Sandra, Petty, and Evans (2004), who recommend that instructors using realia, non-printed books, and boards, the instructor must allow lower grade students time to read the messages written on them before commencing to speak.

Scholars such as Lucicheret et al. and (2006) affirm that several factors should be considered when teaching such lower primary school graders. Nunan (2009), realia, which are concrete objects, are used in language classroom. He further explains that these concrete objects are important in building background knowledge and vocabulary for lower primary school graders with hearing impairments. Non-teaching staff were of the view that “concrete objects provide lower primary school graders with real experiences during learning, allowing they are able to observe and manipulate them. The concrete objects provide lower primary school graders with real experiences during the learning process. This study argues that teachers should use non-print materials more than any other instructional materials because they aim to invoke the use of sensory abilities in learning. This can be solidly done, especially through realia, as

hearing-impaired lower primary school graders can see, smell, taste, and touch the real objects.

Objective Four of this research sought to examine the effect of electronic instructional materials on the acquisition of English language skills among lower primary school graders with hearing impairments in the Western region of Kenya. The results indicated that electronic instructional materials are rarely used when instructing lower primary school graders with hearing impairments. These findings are in contrary with Rose and Badger, Harding and Trupe, and Prinz and Adoyo (2002), who recommends that computers should be used to tutor lower grade students. They recommended that with the help of computers, games can be used more often to stimulate and arouse interest in lower grade students with hearing impairments.

Dickson (2000) affirms that educators are now able to present instructional materials using a variety of visual images, such as robots that stimulate the sounds of vowels or certain words accompanied by pictures of images. Interview results showed that non-teaching staff do not use electronic instructional materials because most of them are computer illiterate. They remarked, “Computers are not easily available to us by the school administration.” The researcher opines that teachers should embrace digital learning as it fast-tracks learning by creating artificial scenarios that stimulate imaginations in lower grade students. Learning can be achieved through gadgets like laptops, which have been provided by the MOE in Kenya. Through this, learning can reach many children across various geographical regions within a short time.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

The paper investigated the effects of reading literacy resources on the acquisition of skills in the English Language in Western region of Kenya among lower primary school graders with hearing impairment in the Western region of Kenya. The chapter was divided into three sections: summary of findings, conclusions, recommendations, and suggestions for further research of the study.

5.1 Summary of the Findings

The study analyzed the respondents' demographic details that ranged from their gender, age of teachers in years, lower primary school graders' age at onset of hearing impairment in years, and the cause of hearing impairment. It established that the ratio of female to male teachers was 8:7. These ratios met the required threshold of two-thirds gender rule of the new constitution of Kenya 2010 that aims to enforce gender equity in all public educational institutions. The majority of teachers in these schools are found in the age bracket of 36-43 years. This bracket consists of the most productive age bracket of the teachers in the profession. The study also found out that the majority of lower primary school graders acquire hearing impairment in the age bracket of 0-4 years. Very few acquire hearing impairment when they are between 17-20 years. In most cases, diseases account for 31% of hearing impairment while accidents contribute 12% of the disability.

5.1.1 Skilled manpower trained personnel and acquisition of English language skills:

The first objective of this study was to establish the effect of available skilled manpower trained personnel on the acquisition of English language skills among lower primary school graders with hearing impairments in special schools in Western region of Kenya. The study established that the teaching staff **had a** significant positive linear relationship of 18.9% with the acquiring of skills in English Language in Western region of Kenya a relationship of 18.9% showed a low effect of teaching staff on acquisition of English language skills in schools for hearing impaired in Western region of Kenya. Most teachers were not fully utilizing their acquired skills in instructing lower primary school graders in schools for the hearing impaired in these special schools.



5.1.2 Effect of Printed Instructional Materials on Acquisition of English Language Skills

Objective two of this research sought to find out the effect of printed instructional materials on acquiring of skills in English Language in Western region of Kenya among lower primary school graders with hearing impairments in Western region of Kenya. The study found that Printed Instructional Materials had a significant direct linear relationship of 19.1% with the acquiring of skills in English Language in Western region of Kenya. It is therefore assumed that that Printed Instructional Materials influences acquiring of skills in English Language in Western region of Kenya to the extent of 19.1% only.

5.1.3 Effect of non-Printed Instructional Materials on acquisition of English language skills:

Objective of this research sought to find out the effect of non-printed instructional materials on acquiring of skills in English Language in Western region of Kenya. This study found out that non-printed instructional materials had a significant direct linear relationship of 24.9% with the acquiring of skills in English Language in Western region of Kenya. This meant that teachers utilize non printed instructional materials to a small extent of 24.9% in instructing lower primary school graders in schools for hearing impaired in Western region of Kenya. 76% of the teaching is therefore done without the use of non-printed instructional materials such as blackboards, chalkboards, and electronic media.



5.1.4 Effect of Electronic Instructional Materials on Acquisition of English Language Skills

Objective four of this research aimed to examine the effect of electronic instructional materials on the acquiring of skills in English Language in Western region of Kenya among lower primary school graders with hearing impairments in Western region of Kenya. Electronic instructional materials in teaching had a significant positive linear relationship of 11.1% with the acquiring of skills in English Language in Western region of Kenya. A relationship of 11.1% indicated that the effect of electronic instructional materials on the acquiring of skills in English Language in Western region of Kenya in schools for the hearing impaired in Western region of Kenya was as low as 11.1%. It can be suggested that most teachers were not fully utilizing electronic

instructional materials when instructing lower primary school graders in schools for hearing impaired in Western region of Kenya.

5.2 Conclusions

The study established that the teaching staff had a significant positive linear relationship of 18.9% with the acquiring of skills in English Language in Western region of Kenya. A relationship of 18.9% showed a low effect of teaching staff on acquisition of English language skills in schools for hearing impaired in Western region of Kenya. This study concluded that teachers in special schools in Western region of Kenya were not fully utilizing their acquired skills to instruct lower primary school graders with hearing impairments.

The study also found that Printed Instructional Materials had a significant direct linear relationship of 19.1% with the acquisition of English language skills. This implies that Printed Instructional Materials influence the acquisition of English language skills to the extent of 19.1% only.

Objective of this research sought to find out the effect of non-printed instructional materials on acquiring of skills in English Language in Western region of Kenya among lower primary school graders with hearing impairments in Western region of Kenya. This study found out that non-printed instructional materials had a significant direct linear relationship of 24.9% with the acquisition of English language skills. Additionally, the study found that teachers only utilized non-printed instructional materials to a small extent (24.9%) when instructing lower primary school graders in schools for the hearing impaired in Western region of Kenya.

Objective four of this research aimed to examine the effect of electronic instructional materials on the acquiring of skills in English Language in Western region of Kenya among lower primary school graders with hearing impairments in Western region of Kenya. Electronic instructional materials in teaching had a significant positive linear relationship of 11.1% with the acquisition of English language skills. The effect of electronic instructional materials on the acquiring of skills in English Language in Western region of Kenya in schools for the hearing impaired in Western region of Kenya was low. This can be concluded that most teachers were not fully utilizing electronic instructional materials in instructing lower primary school graders in schools for hearing impaired in Western region of Kenya.



5.3 Recommendations for Practice

- 1) Since the study's findings, that the teaching staff had a small but significant positive linear relationship of with acquisition of English language skills. This study recommends that teachers in special schools in Western region of Kenya should be encouraged to fully utilize their acquired skills in instructing lower primary school graders with hearing impairments to improve the acquisition of English language skills.
- 2) The results of the study on the influence of printed instructional materials on the acquisition of English language skills was to a small extent significant. Additionally, this study recommends that teachers in special schools in Western region of Kenya should be encouraged to fully utilize printed instructional materials when instructing lower primary school graders with hearing impairments to improve the acquisition of English language skills.

- 3) The results of objective of this research found that non-printed instructional materials had a significant direct linear relationship with the acquisition of English language skills. This relationship was low. This study recommends that teachers utilize more of electronic instructional materials, it instructs lower primary school graders in schools for hearing impaired in Western region of Kenya.
- 4) Objective four of this research found that electronic instructional materials had the lowest significant positive linear relationship with the acquisition of English language skills. Since this effect was low, the study recommends that teachers utilize more printed instructional materials to instruct lower primary school graders in schools for hearing impaired in Western region of Kenya.

5.4 Recommendations for Further Studies:

1. Further research of the same magnitude should be done in upper graders in different regions for the purposes of result comparisons
2. Same research can also be carried out in high schools with learners challenged in hearing impairments in other places of the world.

Mount

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APPENDICES

Appendix I: Research Tools

Teachers' Questionnaire

Christine Ludenyi Luvai

Tel. 0722 926205

E-mail: christineludenyiluvai@gmail.com

Dear Respondent,

I am a student at Mount Kenya University, in the School of Education. I am currently undertaking a master's degree in education (Special Needs Education) in Mount Kenya University. The aim of this questionnaire is to gather information on "*Effect of reading literacy resources on acquisition of English language skills among lower primary graders with hearing impairment in Western Kenya*". The information you provide is completely confidential, will only be used for statistical purposes and will not be released or reported to any other body. Please read each question carefully and **answer by TICKING the appropriate box or FILLING in the blank spaces provided**. If you have any problems completing the questionnaire, please ask for assistance. For anonymity, kindly do not write your name on this questionnaire.

PART A: Demographic Data

1. Gender: i. Male [] ii. Female []
2. Age of teachers in years
 i. >20 [] ii. 21 - 30 [] iii. 31 – 40 [] iv. 41 – 50 [] v. Over 50 []
3. Learner's Age 0on onset of hearing impairedness in years
 i. 0 – 4 [] 5 - 9 [] ii. 10 - 14 [] iii. 15 – 19 [] iv. 20 - 24 [] Over 25 []
4. Cause of Hearing impairedness
 i. Heredity []
 ii. Disease []
 iii. Accidents []
 iv. Others []

PART B:

Objective One: To establish the effect of available skilled manpower on acquiring skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya. .

Please tick (√) the most appropriate response for each of the questions above.

Statement	Skilled Manpower	Frequency of Responses				
		SA	A	N	D	SD
Skilled manpower						
Sign and finger spell letters of alphabet to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					
Total Communication						
Teach and sign sounds (consonants, vowels & syllables) to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					
Total Communication						
Teach and sign simple words to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					
Teach and sign simple sentences to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					
Total Communication						
Illustrate using total communication to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					
Total Communication						
help signing exact English to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability.	Teaching Staff					
	Workers in School					

Key: SA- *Strongly Agree* A – *Agree* N- *Neutral* D- *Disagree* SD -*Strongly Disagree*

Objective Two: To find out the effect of printed instructional materials on acquiring of skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya.

Please tick (✓) the most appropriate response for each of the questions above.

STATEMENT:	SA	A	N	D	SD	Total
Printed						
Charts are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Text Books are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Exercise Books are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Flash cards are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Puzzles are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Games are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						

Key: SA- *Strongly Agree* A – *Agree* N- *Neutral* D- *Disagree* SD -*Strongly Disagree*

Objective Three: To find out the effect of non-printed instructional materials on acquiring of skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya.

Please tick (√) the most appropriate response for each of the questions above.

STATEMENT: Non Printed	SA	A	N	D	SD	Total
Chalk/Chalkboards are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Realia are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Floors are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Modeled Letter/Plasticine/Clay are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Cut Outs (Shapes) are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Non Printed Books and Writing Materials are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						

Key: SA- *Strongly Agree* A – *Agree* N- *Neutral* D- *Disagree* SD -*Strongly Disagree*

Objective Four: To examine the effect of electronic instructional materials on acquiring of skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya.

Please tick (√) the most appropriate response for each of the questions above.

STATEMENT: Electronic Material	SA	A	N	D	SD	Total
Lap Tops are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Televisions are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Desk Top Computers are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Mobile Phones are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Tablets are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Projectors are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						
Hearing Aids are used to facilitate acquiring skills in English language at lower primary school graders with impairment in hearing ability						

Key: SA- *Strongly Agree* A – *Agree* N- *Neutral* D- *Disagree* SD *-Strongly Disagree*

Interview Schedule for Non-Teaching Staff

- i. Do you help to facilitate the acquiring of skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya? **PROBE FURTHER** on how Non-Teaching Staff facilitate the acquisition of English language skills among learners.

.....
.....
.....
.....

- ii. Which types of **Printed Materials** do you use in facilitating the acquisition of English language skills in this school? **PROBE FURTHER** on how the Non-Teaching Staff use the printed materials.

.....
.....
.....
.....

- iii. What type of **Non Printed Materials** do you use in facilitate the acquiring skills in English language at lower primary school graders with impairment in hearing ability? **PROBE FURTHER on how** Non-Teaching Staff facilitate the acquisition of English language skills in learners.

.....
.....
.....
.....

- iv. Are there electronic devices in the school that you use in facilitating the acquisition of English language skills? How do you use them?

.....
.....
.....
.....

- v. In your own words how best can you facilitate the acquiring of English language skills among grade one to three learners with hearing impairment?

.....
.....
.....
.....


Thank you

Document Check List

A record of learners' achievements (Scores) in acquiring of skills in English language at lower primary school graders with impairment in hearing ability in Western region of Kenya.



Appendix II: ERC Certificate


Mount Kenya University

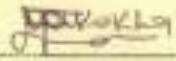
APRIL 4, 2019

Ref. No. MKU/ERC/1182


CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that the proposal titled “EFFECTS OF READING LITERACY RESOURCES ON ACQUISITION OF ENGLISH LANGUAGE SKILLS AMONG GRADE 1 – 3 LEARNERS WITH HEARING IMPAIRMENT IN WESTERN KENYA” whose Principal Investigator is Christine Ludenyi Luvai (MEDSE/46738/2016) has been reviewed by Mount Kenya University Ethics Review Committee (ERC), and found to adequately address all ethical concerns.

Dr Francis W. Makokha
Secretary, Mount Kenya University ERC

Sign:  Date: 4.04.2019

Prof. Francis W. Muregi
Chairman, Mount Kenya University ERC

Sign:  Date: 4/04/2019

The Chairman
Mount Kenya University
Ethics Review Committee

Main Campus, General Kago Road, P.O. Box 342-01000 Thika. Tel: +254 67 2820 000,
Cell: +254 720 790 700, 0709 153 000
Email: ethics@mkcu.ac.ke, erc@mkcu.ac.ke, www.mkcu.ac.ke

Appendix III: Introduction Letter from MKU

CHRISTINE LUDENYI LUVAI
MEDSE/46738/2016
S.N.E (AUTISM)

Mount Kenya University

OFFICE OF THE DEAN, SCHOOL OF POSTGRADUATE STUDIES
INTERNAL MEMO

TO: DIRECTOR, KAKAMEGA CAMPUS FROM: DEAN, SCHOOL OF POSTGRADUATE STUDIES

REF: MKU00/PG/027/2019/273

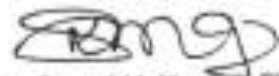
DATE: 14TH NOVEMBER, 2019

SUBJECT: EXAMINATION OF THESES/PROJECTS

Following your request dated October 1 2019 and the recommendations of the 94th Board of Postgraduate Studies, the following 16 students out of 28 documents can be examined. It is however noted that the last two (2) were not on the originally submitted list.

Attached is the list of students.

Thank you.



Dr. Samuel M. Karenga, Ph.D
Dean, School of Postgraduate Studies
SK/ask

Mount Kenya University
Dean, School of Postgraduate Studies
P. O. Box 342 - 01000
THIKA

Copy to

- ✓ Deputy Vice-Chancellor, Academic and Research Affairs
- ✓ Registrar, Academic Administration
- ✓ Deputy Director, Academic and Research Affairs – Kakamega Campus
- ✓ Principal, College of Graduate Studies & Research
- ✓ Postgraduate Coordinators



Introductory Letters - Kakamega Campus

Sn.	Student Name	Reg. No.	ERC	Introduction Letter	NACOSTI Permit
1.	Margaret Lievu Ambale	MECS/2014/63167	√	x	√
2.	Aggripinah Akweyu	KAK/E/MELIN/411/02006	√	x	√
3.	Christine Ludenyi Luvayi	MEDSE/46738/2016	√	x	√
4.	Odila Khavayi Natala	MECS/2014/64674	√	x	√
5.	Linet Atieno Hongo	MEDSE/33248/2015	√	x	√
6.	Caroline Ochami	MEDSE/2015/33679	√	x	√
7.	Esther Khamala	MEDSE/46842/2016	√	x	√
8.	Everlyne Vomogi	MECS/2013/46496	√	x	√
9.	Joseph Khalawe	MECS/2013/47334	√	x	√
10.	Modesta Imbuka	KAK/MEC/54940/2013/2014	√	x	√
11.	Nixon Teke Nakuku	MCP/49881/2016	√	x	√
12.	Jackton S.O. Wabwire	MCP/50093/2016	√	x	√
13.	Stephen Amisi Ngoda	MED/2015/26102	√	x	√
14.	Violet Isheminye Vulima	MECS/2013/46500	√	x	√
15.	Emmy Kalechi Muryega	MEDSE/2014/97435		x	
16.	Roselyne Dembeke	MELIN/2014/63551		x	
17.	Hylean Katie Okoth	MELIN/2014/69904		x	
18.	Purity Bagada Sayo	MAH/2014/72687		x	
19.	Rose Ombugeh	KAK/M-HIST/411/01936		x	
20.	Juliet Warsha Afandi	MAHS/2014/54955		x	
21.	Collins Muchada	MARS/2014/71412		x	
22.	Edwin Muchora Miheso	MED/20415/26352		x	
23.	Betty Manyasa Orony	MEDSNE/52767/2016		x	
24.	Thomas Were Amuyeka	MEDSE/2015/33483		x	
25.	Doreen Muchalwa	MEDSNE/51859/2016		x	
26.	Keneth Mulochi Buchachi	MED/2014/64991		x	

Additional Students who were not in the previous list

Sn.	Student Name	Reg. No.	ERC	Introduction Letter	NACOSTI Permit
1.	Mwaya Aggrey Siva		√	x	√
2.	Atsango Victor	MED/2013/46094	√	x	√



Consent Form

My name is **CHRISTINE LUDENYI LUVAI**. I am a post graduate student at Mount Kenya University and carrying out a study on the **Effect of reading literacy resources on acquisition of English language skills among lower primary graders with hearing impairment in Western Kenya**. This research shall determine effects of reading literacy resources on acquiring skills in English language at lower primary school graders with impairment in hearing ability special schools in Western region of Kenya.

Being one of the respondents, you have been selected to participate in this study. If you consent to answering the questionnaire or giving an interview, you will be treated with utmost confidentiality and will be used for academic purposes only.

The study will not cause any disadvantages to your school or you as a teacher. If you agree to participate in the study, you will be doing it so skilled manpower and voluntarily and they will be no any monetary returns. Any benefits of the research will largely be to contribute knowledge and evidence in order to improve policy and practice in the Ministry of Education in Kenya.

Teachers will acquire skills, knowledge and attitudes in teaching and learning activities for hearing impaired learners. Hearing impairment lower primary school graders. Low graders will acquire skills and knowledge in receptive, expressive, reading and writing in English language and non-teaching staff as well as will be furnished with knowledge on how early reading literacy resources facilitate acquiring of English language at lower primary school graders with impairment hearing ability. You are free to ask any question before and after filling the questionnaire or interview schedule. You are at liberty not to respond to questions you are not comfortable answering. The filing of the questionnaire or interview will take approximately 30 minutes. Kindly note that if you have any questions as far as ethical issues are concerned, do not hesitate to contact the chairman, MKU IREC, P.O. BOX 342 – 01000, Thika

Thank you.

Appendix IV: NACOSTI Research License

REPUBLIC OF KENYA



**THE PRESIDENCY
MINISTRY OF INTERIOR & CO-ORDINATION OF
NATIONAL GOVERNMENT**

Office Mobile No: 0707 085260
Email-cckakamega12@yahoo.com

When replying please quote

Ref No: ED/12/1/VOL.IV/154

COUNTY COMMISSIONER
KAKAMEGA COUNTY
P O BOX 43-50100
KAKAMEGA.

Date: 18th June, 2019

**CHRISTINE LUDENYI LUVAI
MOUNT KENYA UNIVERSITY
P O BOX 342-00100
THIKA**

RE: RESEARCH AUTHORIZATION

Following your authorization vide letter Ref: NACOSTI/P/19/33886/30429 dated 7th June, 2019 by NACOSTI to undertake research on *"Effects of reading literacy resources on acquisition of English language skills among Grade 1-3 learners with hearing impairment in Kakamega county, Kenya ."* I am pleased to inform you that you have been authorized to carry out the research on the same.

 **COUNTY COMMISSIONER
KAKAMEGA COUNTY**

**V. CHERONO
FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY**

Appendix V: Field Entry/ Research Authorization



REPUBLIC OF KENYA

MINISTRY OF EDUCATION

STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telephone

**SUB-COUNTY DIRECTOR OF
EDUCATION**

Fax.....

MUMIAS WEST

When replying please quote

P.O. BOX 352 - 50102

Email: deomumias@gmail.com

MUMIAS

18th JUNE, 2019

Christine Ludenyi Luvai

Mount Kenya University

p.o. box 3

42- 01000

THIKA

RE: REASERCH AUTHORIZATION

The above has been granted permission by national commission for science, technology and innovation vide their letter Ref no. NACOSTI/P/19/33886/30429 dated 7TH JUNE, 2019 to carry out research on **"Effects of reading literacy resources on acquisition of English Language Skills among Grade 1 -3 learners with hearing impairment in western Kenya, Kakamega County"**, for a period ending 6th June, 2020.

Please accord her any necessary assistance she may require.

REV. FRANCIS SHIKANDA



SUB-COUNTY DIRECTOR OF EDUCATION

MUMIAS WEST SUB-COUNTY



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/33886/30429**

Date: **7th June, 2019.**

Christine Ludenyi Luvai
Mount Kenya University
P.O. Box 342-01000
THIKA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Effects of reading literacy resources on acquisition of English language skills among Grade 1-3 learners with hearing impairment in Western Kenya.”* I am pleased to inform you that you have been authorized to undertake research in **Kakamega County** for the period ending **6th June, 2020.**

You are advised to report to **the County Commissioner, and the County Director of Education, Kakamega County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kakamega County.

The County Director of Education
Kakamega County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified



MINISTRY OF EDUCATION

STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telephone: 056 – 30411
Fax : 056 – 31307
E-mail : wespropde@yahoo.com
When replying please quote

COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY
P. O. BOX 137 - 50100
KAKAMEGA

REF: KAK/C/GA/29/17 V/21


18th June, 2019

Christine Ludenyi Luvai
Mount Kenya University
P. O. Box 3
42 – 01000
THIKA

RE: RESEARCH AUTHORIZATION

The above has been granted permission by National Commission for Science, Technology and Innovation vide their letter Ref: NACOSTI/P/19/33886/30429 dated 7th June, 2019 to carry out research on “**Effects of reading literacy resources on acquisition of English language skills among Grade 1-3 learners with hearing impairment in Western Kenya, Kakamega County**”, for a period ending 6th June, 2020.

Please accord her any necessary assistance she may require.


**COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY**
DICKSON O. OGONYA
COUNTY DIRECTOR OF EDUCATION
KAKAMEGA COUNTY

CC
The Regional Director of Education
WESTERN REGION

EFFECT OF READING LITERACY RESOURCES ON ACQUISITION OF

by ludenyi luvai


Submission date: 27-Apr-2024 10:34AM (UTC+0300)

Submission ID: 2320173812

File name: EFFECT_OF_READING_LITERACY_RESOURCES_ON_ACQUISITION_OF.docx (3.72M)

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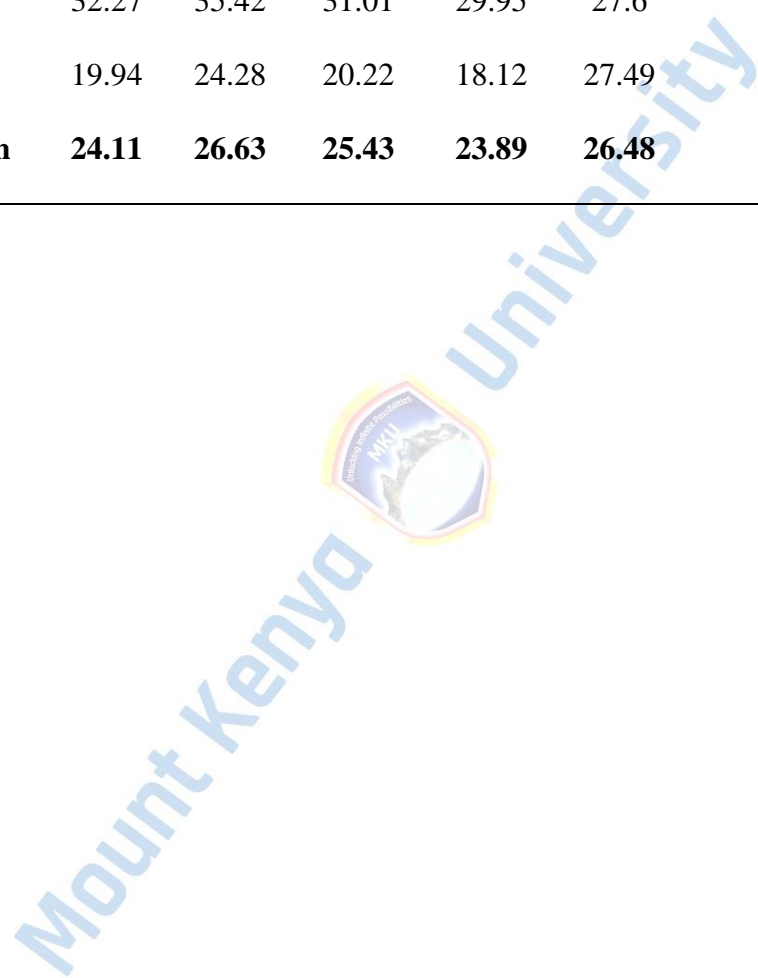
Appendix VII: Research Site Maps

Map of Western region of Kenya showing the location of the Four Counties



Appendix VIII: Learners Scores in English Language Skills Since 2016 in Western region of Kenya

Year / County	2016	2017	2018	2019	2020	Average Mean
Vihiga	20.19	19.35	21.62	17.28	16.46	18.98
Bungoma	24.02	27.49	28.9	30.2	34.39	29.0
Kakamega	32.27	35.42	31.01	29.95	27.6	31.25
Busia	19.94	24.28	20.22	18.12	27.49	22.01
Average Mean	24.11	26.63	25.43	23.89	26.48	25.31



Appendix IX: Research Permit

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 25192

CONDITIONS: see back page

National Commission for Science, Technology and Innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

THIS IS TO CERTIFY THAT:

MS. CHRISTINE LUDENYI LUVAI
of MOUNT KENYA UNIVERSITY,
398-50102 MUMIAS, has been permitted
to conduct research in Kakamega
County
on the topic: EFFECTS OF READING
LITERACY RESOURCES ON ACQUISITION
OF ENGLISH LANGUAGE SKILLS AMONG
GRADE 1-3 LEARNERS WITH HEARING
IMPAIRMENT IN WESTERN KENYA
for the period ending:
6th June, 2020

Permit No. : NACOSTI/P/19/33886/30429
Date Of Issue : 7th June, 2019
Fee Received :Ksh 1000

[Signature]
Applicant's Signature

[Signature]
Director General
National Commission for Science,
Technology & Innovation

