

**PERSPECTIVES OF LEARNERS WITH HEARING IMPAIRMENTS  
TOWARDS INCLUSIVE LEARNING AT AN INCLUSIVE PRIMARY  
SCHOOL IN HOMA-BAY COUNTY, KENYA**

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**A RESEARCH THESIS SUBMITTED IN THE SCHOOL OF  
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**OCTOBER, 2025**

## **DECLARATION**

I declare that this thesis is my original work and has not been presented in any other university/ institution for consideration of any certification. This research thesis has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

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## **DEDICATION**

This thesis is dedicated to my loving and supportive husband, Ayere Oluoch, for all the love, his full presence, encouragement and support during the study and my spiritual father and mentor, Okelo Omwasi, for his unceasing prayers and always believing in, encouraging and challenging me to pursue my dreams.

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**TABLE OF CONTENTS**

**DECLARATION..... ii**  
**DEDICATION..... iii**  
**ACKNOWLEDGEMENTS ..... iv**  
**TABLE OF CONTENTS ..... v**  
**LIST OF TABLES ..... viii**  
**LIST OF FIGURES ..... ix**  
**ABBREVIATIONS AND ACRONYMS..... x**  
**ABSTRACT..... xi**

**CHAPTER ONE: BACKGROUND AND CONCEPTUALIZATION OF THE**

**STUDY ..... 1**  
1.1 Introduction..... 1  
1.2 Background to the Study..... 1  
1.3 Statement of the Problem..... 8  
1.3.1 Purpose of the Study ..... 9  
1.3.2 Research Objectives..... 9  
1.3.3 Research Questions ..... 9  
1.4 Significance of the Study ..... 10  
1.5 Limitations and Delimitations..... 11  
1.5.1 Limitations of the Study..... 11  
1.5.2 Delimitations of the Study ..... 11  
1.6 Assumptions of the Study ..... 12  
1.7 Theoretical Framework and Conceptual Framework ..... 12  
1.7.1 Theoretical Framework..... 12  
1.7.2 Conceptual Framework..... 14  
1.8 Operational Definition of Terms..... 17  
  
**CHAPTER TWO: REVIEW OF RELATED LITERATURE ..... 18**  
2.1 Introduction..... 18

2.2 Academic Experiences of Learners with Hearing Impairments in Inclusive Classrooms .....	18
2.3 Instructional Strategies used in Inclusive Classrooms.....	24
2.4 Classroom Modifications for Inclusive Learning .....	32
2.5 Challenges Faced by Teachers in Inclusive Classrooms .....	37
2.6 Summary of Identified Knowledge Gaps from the Review.....	43
<b>CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY .....</b>	<b>45</b>
3.1 Introduction.....	45
3.2 Research Design.....	45
3.3 Variables of the Study.....	46
3.4 Location of the Study.....	46
3.5 Target Population.....	47
3.6 Sampling Techniques and Sample Sizes.....	47
3.6.1 Sampling Techniques.....	47
3.6.2 Sample Size.....	48
3.7 Research Instruments .....	49
3.7.1 Semi-structured Interview Guide .....	49
3.7.2 Focus Group Discussion Guide .....	50
3.7.3 Observation Checklist.....	51
3.8 Piloting Study.....	52
3.8.1 Validity of the Instruments .....	53
3.8.2 Reliability of the Instruments.....	53
3.9 Data Collection Techniques .....	54
3.10 Data Analysis .....	54
3.11 Logistical, Ethical Considerations and Legal Considerations .....	55
3.11.1 Logistical Considerations.....	55
3.11.2 Ethical Considerations .....	55
<b>CHAPTER FOUR: FINDINGS, INTERPRETATION AND DISCUSSION .....</b>	<b>57</b>
4.1 Introduction.....	57

4.2 General and Demographic Information .....	57
4.2.1 General Information.....	57
4.2.2 Demographic Information.....	58
4.3 Academic Experiences of Learners with Hearing Impairments on Inclusive Learning .....	61
4.4 Instructional Strategies for the Inclusion of Learners with Hearing Impairments.....	64
4.5 Classroom Modifications and Accommodations for Inclusion .....	69
4.6 Challenges that Hinder the Implementation of Inclusive Learning by Teachers.....	72
<b>CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</b>	<b>77</b>
5.1 Introduction.....	77
5.2 Summary of Key Findings .....	77
5.2.1 Inclusive Education Policies and Implementation:.....	77
5.2.2 Instructional Strategies for Inclusion: .....	77
5.2.3 Classroom Modifications and Accommodations for Inclusion: .....	78
5.2.4 Challenges and Support for Inclusive Learning.....	78
5.2.5 Inclusion and Interaction.....	78
5.3 Conclusions.....	78
5.4 Recommendations.....	80
5.5 Recommendations for Further Research.....	80
<b>REFERENCES</b> .....	<b>81</b>
<b>APPENDICES</b> .....	<b>93</b>
Appendix i: Research Instruments .....	93
Appendix ii: Consent Form.....	99
Appendix iii: Graduate School Research Approval Letter .....	102
Appendix iv: Graduate School Research Authorization Letter .....	103
Appendix v: Study Area Map .....	104
Appendix vi: Research Permit From NACOSTI .....	105
Appendix vii: County Research Authorization.....	107

## LIST OF TABLES

Table 3.1 Population and Sample Size .....	49
Table 4.1 Gender of the Teachers .....	58
Table 4.2 Gender of the LHIs .....	59
Table 4.3 Level of Professional Training .....	60
Table 4.4 Special Needs Education Training.....	60

## LIST OF FIGURES

Figure 1.1 Conceptual Framework .....	16
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## **ABBREVIATIONS AND ACRONYMS**

<b>CRPDs</b>	Convention on the Rights of Persons with Disabilities
<b>FM</b>	Frequency Modulation
<b>HI</b>	Hearing Impairments
<b>LDs</b>	Learners with Disabilities
<b>LHIs</b>	Learners with Hearing Impairments
<b>MoE</b>	Ministry of Education
<b>SDG</b>	Sustainable Development Goal
<b>SL</b>	Sign Language
<b>SNE</b>	Special Needs Education
<b>UDL</b>	Universal Design for Learning
<b>UN</b>	United Nations
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>USAID</b>	United States Agency for International Development

## ABSTRACT

This study purposed to investigate the perspectives of learners with hearing impairments towards inclusive learning at an Inclusive Primary School in Homa-bay County, Kenya. Study objectives were: to establish the academic experiences of LHIs at an Inclusive Primary School, to establish the instructional strategies that enable the inclusion of LHIs within a primary school context at an Inclusive Primary School, to determine the classroom modifications that are meant to enable the inclusion of LHIs at an Inclusive Primary School and to identify the challenges faced by teachers in promoting IL of LHIs in a Primary School context. Bronfenbrenner's Ecological Systems Theory (1989) guided this study. Case study design was used. The study was conducted at an Inclusive Primary School in Homa-Bay County, Kenya and targeted all the 17 teachers and all the 24 LHIs. Study sample of 26 respondents comprised Head Teacher, 13 IC teachers and 12 LHIs was purposively sampled. The study was based on qualitative research methodology. Data collection instruments were semi-structured interview guide, observation checklist, interview schedule and focus group discussion guide. The instruments were triangulated to increase results validity and credibility. Content validity was achieved through consultations with the professional supervisors who were experts in the area studied, to ensure that the instruments were appropriate in language, clarity and addressed all the research objectives. The researcher's fellow peers also reviewed this work to validate it. Reliability of data collection instruments was assessed through test-retest technique. Qualitative data was analyzed according to themes derived from the research objectives. NVivo software was used for analysis that involved systematic coding and organization to identify recurring themes. Direct quotations from the respondents were presented in verbatim. The study findings established that the Inclusive Primary school had IE policy, reflecting a commitment to creating an IL environment. All classes were inclusive of LHIs. Teachers employed strategies like speaking loudly and clearly, maintaining visual contact and emphasizing proper pronunciation to facilitate effective communication and learning for LHIs. Instructional methods used included collaborative teaching, discussion groups, project-based learning, practical demonstrations, use of visual aids, realia and use of songs. Classroom modifications included preferential seating, proper lighting, raised windows and painted doors to ensure conducive learning environment. IEPs were used to tailor instruction to the needs of LHIs. Challenges included inadequate number of trained teachers, lack of assistive devices, no sign language interpreters, time management during lessons, lack of specialized teaching methods, large class sizes and limited teaching aids. The study concluded that LHIs were positive towards IL they got challenged by their peers to do better and drew immense support from learners without HIs. They strongly acknowledged the extra support given by their teachers. Teachers audibly spoke with clarity while facing learners. The study recommends ensuring that classes are decongested by the government, through the MoE, to maintain the standard teacher to learner ration to enable LHIs to benefit from IL in the ICs. This requires the creation of more or expansion of existing schools and providing adequate number of trained teachers.

# CHAPTER ONE

## BACKGROUND AND CONCEPTUALIZATION OF THE STUDY

### 1.1 Introduction

This chapter comprises background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, limitations of the study, delimitations of the study, assumptions of the study, theoretical framework, conceptual framework and operational definition of terms.

### 1.2 Background to the Study

Education is a basic human right (UNESCO, 2025). No child should be discriminated against on any grounds to be denied the opportunity to access and fully participate quality education (UNESCO, 2024). Increased accessibility to free and quality educational opportunities reduces poverty and inequality, empowers girls, supports the development of children and promotes inclusive and sustainable societies (Human Rights Watch, 2025).

It is imperative to ensure that equitable access is provided to the learning content in the national curriculum so that the diversity of learners equitably accesses education, for instance, teaching and learning materials should be inclusive and be made based on Universal Designs for Learning (UDL) principles (Anne, *et al.*, 2018). Assistive technologies should be provided and used as a crucial intervention to provide the learning content. Sustainable Development Goal (SDG) 4 declares that in order to guarantee that no learner is left behind, all learners have the right to a high-quality, inclusive education (IE). Thus, highlighting the right to an inclusive quality education by learners with

disabilities. UN Convention on the Rights of Persons with Disabilities (CRPDs) Committee General Comment (CGC) number four on Article 24 (CGC, 2016) defines IE as:

*“process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all learners of the relevant age range with an equitable and participatory learning experience and the environment that best corresponds to their requirements and preferences.”*

It is critical to implement Article 24 of the CRPD on the right to education for learners with hearing impairments (LHIs) (Murray, *et al.*, 2018). All governments bear the responsibility of providing quality education and equitable access to all learners (Asayo & Malenya, 2020). Global Education Monitoring (GEM) Report by UNESCO (2020) highlighted the challenges working against the realisation of the Article 24 of the CRPDs as being related to unavailable teacher supports, data absence about those excluded from access to education, different understandings of and perspectives on inclusion, unsafe and inaccessible school buildings and facilities, persisting parallel systems and schools for learners with disabilities, untargeted budgeting and finance, no political good will and community mechanisms of support, lack of coordinated governance and numerous, inconsistent and unimplemented policies and laws. When transforming to be inclusive and achieve equity, schools should retool the teachers, and all other school staff with the right knowledge, requisite skills and resources that are required for learning by the diversity of learners in inclusive and safe learning spaces (DfID, 2017). School leaders are key to eradicating educational inequalities. They should foster enabling and safe

inclusive environments, set clear visions, encourage innovations on pedagogy and manage resources strategically (GEM Report, 2025). Inclusive schools should be led by inclusive leaders to effectively implement inclusive education (GEM Report, 2024).

Silvestri and Hartman (2022) found four models of educating LHIs in their study in the United States of America. These were full inclusion model, cluster programs + co-enrollment, general education classroom with services and schools for learners who are deaf. In full inclusion, the LHIs, were placed in regular classrooms for almost a full day with limited or no possibility of externally interacting with adults and other LHIs (Murray, *et al.*, 2020). General education classroom with services had related services for LHIs being availed to them as they attended the general classroom. Speech therapy, counseling, special needs teachers, instructors of learners who were deaf and other consulting experts were among the available support services. Other accommodations included note-takers, aural technology, seating preferentially, sign language interpreters among others (Allman, *et al.*, 2019). These services, Silvestri and Hartman indicated that, were provided for through the United States 1973 Rehabilitation Act Section 504 and were designed to legally guarantee the equitable treatment of LHIs in regular school classrooms.

The third model, cluster programs + co-enrollment, which was referred to as Integrated Classrooms on 504 and Individualized Education Plans (IEPs), involved one regional program or cluster site, was located centrally in a school with consolidated services for LHIs in the participating districts. These services included staff and resources. The programs in some cluster settings included specialized learning spaces which were of

specific designs to be used by the learners who required a curriculum with significant modifications that involved intensive or moderate intervention in a specific assigned room that took longer hours daily. The cluster settings also had programs that included some learners who spent most hours in the regular learning spaces (Antia, *et al.*, 2019), and/ or those who were co-enrolled with other LHIs. Co-enrollment model included SNE and mainstream educators or hearing teachers and those who were deaf who worked jointly as a team in some settings (Valente, 2017). The cluster programs provided greater opportunities for the provision of quality-related services for specialized educators and support staff who were working with LHIs, including pull outs. Co-enrollment models were found to contribute to improved learning outcomes among LHIs who were included in the regular classrooms alongside their hearing peers. The last model, the schools for learners who were deaf were generally considered to be more restricted placements. They were safe places for many LHIs in a continuum of placements, despite the fact that they were removed from their home community and had few opportunities to contact with their hearing peers (Babbidge, 2022).

The best placement options for LHIs who communicated through sign language were residential or day schools (Babbidge, 2022; Murray *et al.*, 2020). These environments allowed LHIs to be amongst other peers and adults with hearing impairments (HIs) with greater access to language and communication there by promoting their access to teaching and learning. Teachers stated that they were not well-equipped to handle varied learning requirements in spite of all these models to guarantee the inclusion of LHIs (U.S. Department of Education, 2021).

UNESCO (2021) informed that basic education in Albania was compulsory for all learners between six years and sixteen years. Both public and private schools enrolled learners, including LHIs and this included regular schools and schools offering special needs education (SNE). Considerable progress had been made towards the inclusion of LDs, including LHIs, into regular schools. However, there still existed schools offering SNE, which provided a more specialized service, including two national institutes: the institute of learners who are blind and institute of learners who are deaf. There was also home education that was provided in exceptional cases, such as: blood feud, illness or other circumstances that prevented learners from attending school.

Research by Adewumi, *et al.*, (2019) in South Africa, found the inclusion of LDs including LHIs being implemented in some select learning institutions but was affected by some challenges on the process of implementing the programme. These challenges included: inadequate number of competent educators, inadequate in-service training scarce educational materials and inefficient support networks. The available education policy allowed certain teachers who were not specialists to participate in the implementation of including LHIs. LHIs were provided with special classes where educators also rendering social work and managerial services that supported the LHIs and functional classrooms consisted of multiple grades were operational. However, some reports suggested that inclusive classroom teachers lack the necessary resources and feel unsupported in order to adequately include LHIs (Pillay *et al.*, 2022).

In Ghana, UNESCO (2018) found that IE National Steering Committee was tasked with the oversight responsibility to ensure that IE was successfully implemented. Ghana

Education Services and Ministry of Education (MoE) ran reforms that ensured preserve training and school curriculums were relevantly responsive to the diversity of needs of LHIs. They created provisional pertinent modules that supported inclusive in-service teacher training for preschool and junior high learners. UNESCO also reported findings that Head Teachers and teachers were positive about IE, noting that, they accepted to enroll and support LHIs in regular classrooms. The IE policy of 2016 was oriented towards capacity building activities on IE practice, which included inclusive teaching and learning. The teachers and headteachers trained to implement IE were sensitizing the school fraternity to understand and embrace diverse learners. Learners without HIs learnt in the same classrooms, supported, and interacted with LHIs in schools.

According to Damiani, *et al.* (2021), In October 2018, for the first time ever, USAID, UNICEF, the World Bank, and the Government of Kenya joined forces to fund a technical learning event on IE with a focus on sub-Saharan African countries through the Disability-IE in Africa Program Trust Fund and the IE Initiative, demonstrating that Kenya was at the forefront of IE in sub-Saharan Africa (USAID, 2018; World Bank, 2019; World Bank, 2018). A meeting was convened by the World Bank of more than seventy stakeholders that were drawn from twelve countries in Africa including: Tanzania, Rwanda, Ghana, Liberia, Ethiopia, Malawi, Kenya, Senegal, Lesotho, Zambia, Uganda and The Gambia. Over the course of three days, the converged with these objectives:

- a) Promote south-to-south interchange and disability-IE solutions that are local, (b) raise adequate disability IE understanding, groundwork and strategy while aiming to leverage on the sensitization resources that exist, (c) consolidate networks in

the African region and countries that would encourage disability-IE (World Bank, 2018).

According to the 2010 Kenyan constitution, all children have the right to receive a high-quality education. With the implementation of the Free Primary Education policy in 2003, the government established IE. The 2013 Basic Education Act's enactment reaffirmed the Kenyan government's commitment to and duty to provide free and compulsory education (Damiani, *et al.*, 2021). The education reforms were to re-align education to the development blueprint, the Kenya Vision 2030, which includes the Competency-Based Curriculum, which is highly responsive to IE. Kenya has been progressive in terms of her deep and comprehensive SNE policies. However, the implementation of the 2009 SNE policy failed because it lacked implementation guidelines (Government of Kenya, 2018).

LHIs have been attending Boarding Special Schools far away from their homes or Day Special Units attached to regular Primary Schools closer to their homes. In these special units, the LHIs are taught in separate classes but only socialize with their hearing peers during breaks. The Boarding Special Schools admit LHIs nationally while the Day Special Units admit LHIs from the surrounding school community. Education Sector Policy for Learners and Trainees with Disabilities of 2018 spells out IE as its first policy statement: “mainstream and provide for inclusive education and training at all levels of learning” but in reality, accommodations are very basic in regular primary schools to support the inclusion of LHIs for equitable learning (WHO, 2019). This therefore was the

basis of this research, which, the researcher was seeking to investigate the perspectives of LHIs on inclusive learning (IL) in the inclusive classrooms (ICs) within a regular school.

### **1.3 Statement of the Problem**

The 2018 education Sector Policy for Learners and Trainees with Disabilities clearly spelt out IE in its first policy statement: “mainstream and provide for inclusive education and training at all levels of learning.” This inscribed inclusion into education across all the educational institutions, thereby instilling educational access as critical to all children in Kenya. However, this is never the case because of a shortage of teachers with the appropriate training and skills, limited or unavailable teaching and learning resources, and a lack of goodwill among school administrators, teachers, and support staff. It is imperative to ensure that necessary accommodations and modifications that are responsive to the unique needs of and that ensure equal opportunities for LHIs in the general classrooms are made available before they are included in order to optimise their academic experiences. However, this is hardly the case in most public schools since accommodations and access to resources, support services, instruction in the language understood by the LHIs and responsibilities are usually lacking or very inadequate availed (UNESCO, 2025). This therefore does not accord LHIs full and equal participation in learning, thus, the basis of this study.

This study aimed at gaining practical insights based on lived experiences by investigating the perspectives of LHIs towards IL in ICs at an Inclusive Primary School to establish if they were actually included and benefited from IL or were simply mainstreamed into the school. The study highly considered that accommodations must be reasonable, be made

readily available and be in tune with the needs of the LHS for them to gain equal access and full participation like their peers in ICs.

### **1.3.1 Purpose of the Study**

This study purposed to make an establishment of the perspectives of learners with hearing impairments towards inclusive learning. This case study had an Inclusive Primary School in Homa-bay County of Kenya as the focus.

### **1.3.2 Research Objectives**

1. To establish the academic experiences of learners with hearing impairments in inclusive classrooms at an Inclusive Primary School.
2. To establish the instructional strategies that enable the inclusion of learners with hearing impairments within a primary school context at an Inclusive Primary School.
3. To determine the classroom modifications that are meant to enable the inclusion of learners with hearing impairments at an Inclusive Primary School.
4. To identify the challenges faced by teachers in promoting inclusive learning of learners with hearing impairments in a Primary School context.

### **1.3.3 Research Questions**

1. What are the academic experiences of learners with hearing impairments in inclusive classrooms at an Inclusive Primary School?

2. What instructional strategies are used to enable the inclusion of learners with hearing impairments within a primary school context at an Inclusive Primary School?
3. Which types of classroom modifications are applicable for the inclusion of learners with hearing impairments at an Inclusive Primary School?
4. Which challenges are faced by the teachers who are promoting inclusive learning of learners with hearing impairments in a primary school context?

#### **1.4 Significance of the Study**

The findings of this study could cater to inform the policy makers at the Ministry of Education (MoE) on the necessary support systems to institute and appropriate funding in order to make inclusion of LHIs a success. The practical insights may be helpful in coming up with policies and strategies of addressing the struggling inclusion attempts by schools.

The study may also inform the Homa-Bay County MoE and Education Board on the necessary steps to take and accommodations required to make inclusion of LHIs a reality. This would benefit all the Homabay County schools and transform them to being inclusive of LHIs.

Other institutions of learning may also benefit from the study findings by applying the recommendations at their levels. Embracing the recommendations would open them up to being relevant, supportive and welcoming to the many excluded LHIs around their localities.

## **1.5 Limitations and Delimitations**

### **1.5.1 Limitations of the Study**

This research study was done as a requirement for the award of Master of Education in Special Needs Education by Thesis option. The duration allowed for conducting the study was time-bound, which restricted the researcher to ensure that the research, data analysis, and report writing were completed within the allotted time. The researcher however ensured that all the due diligence was attained within the set period and finished within the time limits.

The study findings can only be generalized to schools with similar characteristics. Some of the respondent LHIs and IC teachers were not readily willing to share their experiences during the interviews. The researcher assured them of their anonymity and confidentiality of the data and that the collected data would be used only for the purpose of the study.

### **1.5.2 Delimitations of the Study**

The LHIs, IC teachers, and the head teacher only constituted the study sample. The Inclusive Primary School in Homabay County was chosen because it implements IE and is includes LHIs. The school was among five pilot IE schools in Western Kenya since 2001 (Boit, 2016) and has been implementing IE since then. The study being focused on only one inclusive school may limit its generalizability to other inclusive schools.

This study focused on LHIs only and therefore cannot be applied to other schools of learners with other impairments or regular schools. Also, the school was primary, thus,

the findings may not apply to institutions below primary and above primary level of learning in the county.

## **1.6 Assumptions of the Study**

Assumptions held by the researcher were that: IL influenced academic experiences among LHIs leading to better motivation in their studies, support system and accommodations for LHIs were not adequate to allow them to fully utilize their abilities. The study also assumed that every study respondent would genuinely inform.

## **1.7 Theoretical Framework and Conceptual Framework**

### **1.7.1 Theoretical Framework**

The Ecological Systems Theory by Bronfenbrenner (1989) guided this study. The theory explains how a complex series of interacting systems within the environment around a learner affects the way he or she develops (Bronfenbrenner, 1979). The theory consists of five systems that are nested: microsystem, mesosystem, exosystem, macrosystem and chronosystem.

Microsystem level comprises elements that immediately present in the environment of a learner. They give very direct, particular and efficacious understanding of relationships between the academic classroom setting of the learner, teachers, parents, peers and the community (Bronfenbrenner, 1979). Parents are vital partners in supporting and promoting IL. They are integral support providers to teachers, schools and their communities. They give direction to and back the academic progress of their children. High levels of parental involvement in their children's education have been linked to

better learning outcomes, higher attendance rates, less preference for SNE schools, fewer dropouts, and a smoother transition to higher education levels, according to previous studies (Shourbagi, 2017). Amplification devices, sign language interpretation, captioning services, classroom organization and adjustments, IEPs and peer connections are some of the elements in the educational system which directly affect the LHIs in inclusive learning spaces.

The second level, the mesosystem, involves interrelated systems with active participation of the learner. These include: collaborating professionals, teacher-parent collaboration and peer groups. Excellent outcomes in IL are the consequence of well-coordinated professional collaboration between educators and other professionals, as well as between educators and other educators, who collaborate in order to better support the LHIs. Coordinated efforts to support learning, transition, and academic advancement are made possible by teacher-parent collaboration. Learning is impacted by how LHIs interact with their hearing classmates in ICs, both inside and outside of the classroom.

The exosystem, which is the third level, includes the contexts in which the learner does not participate, even though they influence the LHI, or the LHI is impacted the environmental events (Ettedal & Mahoney, 2017). It comprises the influence of administrators, for instance, those who make and implement policies and businesses (Horton, 2016). The fourth level, the macrosystem, is defined as the "consistencies in the form and content of lower-order systems that exist at the level of the subculture or the culture as a whole, along with any belief system or ideology underlying such consistencies" (Bronfenbrenner, 1979). By making education accessible to everyone,

schools and classrooms should be built based on universal designs in order to remove all access and participation barriers that restrict the LHIs from reaching their full potential. This ensures equitable learning opportunities for all in ICs.

This theory was a successful link to the study that was carried out. IL holds the notion that all the required provisions for support must be made existing in all grades of learning, learning institution and community. This ensures access, equal opportunity, full participation and realization of full potential by LHIs in ICs.

### **1.7.2 Conceptual Framework**

The inclusion of LHIs into ICs requires that the learning environment which includes the school and classrooms are prepared by making the necessary modifications and adaptations before bringing in the LHIs. The independent variables included classroom modifications and under this, the study assessed whether there was preferential seating, where LHIs are seated in front of the class to allow them the proximity to the board and the teacher as this makes it easy for those became deaf post-lingual to lip-read during instruction. The study also assessed if the classrooms were carpeted, if the LHIs used cushioned seats, whether the classrooms were well-lit and spacious and if the windows were painted or raised above the heads when learners were seated. Carpeting the classrooms and LHIs using cushioned seats helps with noise reduction that led unnecessary distractions to those LHIs with residual hearing. Well- lit and spacious classrooms are a requirement for the inclusion of LHIs in ICs since adequately lit learning spaces ensure that there are no shadows around the learners and teachers.

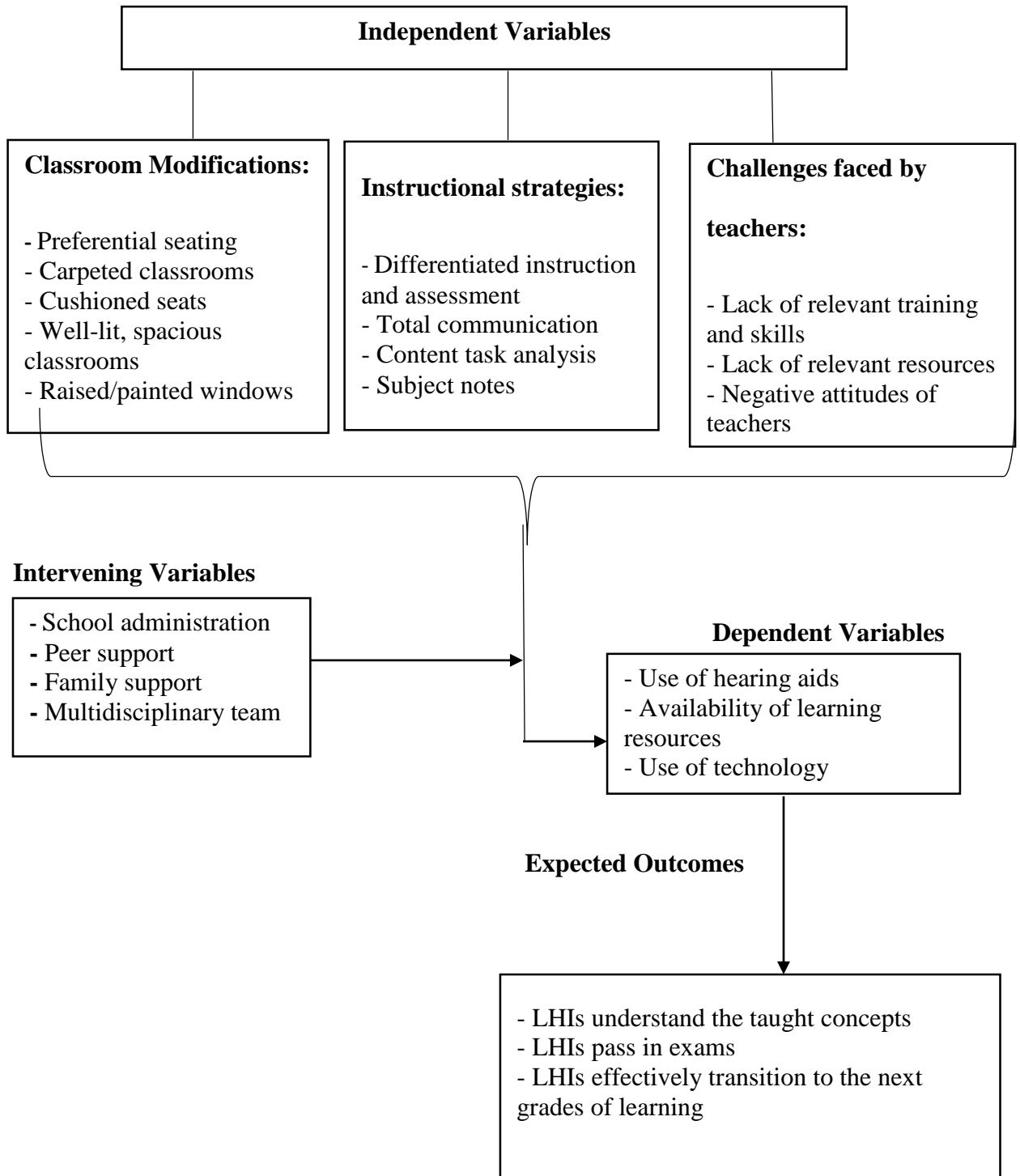
Spacious classrooms are good for healthy learners by allowing the free circulation of air and easy movement within the classroom.

The second independent variable studied was instructional strategies. Under it, four components were assessed that included differentiated instruction and assessment, total communication, content task analysis and subject notes. LHIs have unique learning and assessment needs unlike their hearing peers in ICs. Differentiating instruction and assessment ensures that the needs of LHIs are taken care of for educational equity.

The third independent variable studied was challenges faced by teachers. Under this variable, four components were studied: lack of relevant training and skills, lack of relevant resources, negative attitudes of teachers and availability and implementation of IEP.

The study had three dependent variables which included the use of hearing aids, availability of learning resources and use of technology. The study however took cognizance of intervening variable that the researcher had no control over but with the understanding that they may be of impact to the research. These were: school administration, peer support, family support and multidisciplinary team.

**Figure 1.1 Conceptual Framework**



## **1.8 Operational Definition of Terms**

**Accommodations:** these are support modifications and adaptations that are made with the intention of including LHIs into the regular classrooms.

**Differentiation:** this is the tailoring of instruction to meet the individual learners' needs which includes content, process and/ or the learning environment.

**Learners with Hearing Impairments:** this includes both hard of hearing and deaf learners.

**Inclusive Learning:** this is whereby all the learners who have varied educational abilities and disabilities learn together, are taught by the same teachers within the same learning space.

**Sign Language:** this is language expressed through the manual signs in combination with non-manual elements.

**Sign Language Interpreter:** this is an expert with training to facilitate what is communicated by making known the information by both speaking and signing to allow the full interaction between LHIs and their peers without HIs.

**Total communication:** this refers to the use of various means of communication to deliver the content to the learners.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter review was based on previous research findings that were directly or indirectly related to the perspectives of learners with hearing impairments (LHIs) on inclusive learning (IC), which includes their academic experiences, instructional strategies used by the teachers in ICs, classroom modifications that enable the inclusion of LHIs and the challenges encountered by the inclusive classroom teachers that affect the inclusion of LHIs in ICs. The research study objectives guided the review. An overview of the gaps in research that captures what is unknown about the studied problem is included in this chapter.

#### **2.2 Academic Experiences of Learners with Hearing Impairments in Inclusive Classrooms**

The government of Kenya is a signatory to varied international conventions and has domesticated policies to emphasise the rights of Learners with Hearing Impairments (LHIs). This has led to increased fairness in the provision of and access to quality education to every citizen (Adoyo, 2019). The enacted laws and policies comprise: the 2001 Children's Act; Kenya Education Sector Support Programme, 2005; 2003 Persons with Disabilities Act; Sessional Paper No.14, 2012; National Special Needs Education Policy Frameworks, 2009; Kenyan Constitution, 2010; Kenya Vision 2030; Basic Education Act, 2014 and the Sector Policy for Learners and Trainees with Disabilities, 2018 (Adoyo, 2019).

Necessary accommodations in the general classroom must be put in place to enable every learner access quality education. Prior arrangements for support systems must be made in order to include LHIs (Odhiambo, *et al.*, 2024). The existing SNE system in Kenya can be made more inclusive by increasing advocacy and awareness, revamping the curriculum, incorporating learning technology and adapting instruction to enable the inclusion of LHIs effectively into inclusive classrooms (ICs). Increased understanding of the diverse learning needs of LHIs and the belief in their capacity when given the right support yields high academic achievements (Dudley, *et al.*, 2019). It is crucial that LHIs have access to the instructional language for them to academically gain during all the lessons. It is imperative, therefore, that sign language (SL) is used. The use of SL is correctly within the realm of human rights. Language and communication for the inclusion of LHIs should to be practically real because it not only enhances their learning and academic experiences but also promotes their participation in class work, interaction with teachers and peers and diversity of languages.

Alanazi (2021) explored the methods of inclusive communication with LHIs in mainstream schools in Saudi Arabia. The research applied a case study design, using qualitative methods to gather information through semi-structured interviews with ten education specialists in the education of LHIs from Saudi Arabian universities. The findings revealed that these communicative strategies were preferred by LHIs: bilingual cultural approaches, sign language, holistic communication methods and spoken and written Arabic. Additionally, the results showed that sign language was the most favored approach identified by the participants, as it was the preferred means of communication for students with hearing challenges. The study indicated that future research should

examine the effectiveness of different communication strategies for students with hearing impairments in integrated educational settings. The previous study identified various communication methods favoured by LHIs, but it did not include input from the very LHIs as respondents, who are the direct users of the communication styles. This research was conducted in an inclusive primary school and involved both LHIs and their IC teachers to understand their perspectives on IL in ICs.

Learning is best effective when instruction is given in the language that is best understood by the learner (Sambu, *et al.*, 2015). Language of instruction affects the uptake of all subjects by the learners. LHIs are most affected in this case because they need information to be communicated in accessible formats, of which, sign language is key. Most of the IC teachers, however, may not know SL or understand the communicational needs of LHIs and in most cases, there are no educational SL interpreters in the ICs (Mulat, *et al.*, 2018). This communication barrier prevents LHIs from equal and full participation in class, interacting with peers and engaging with teachers to achieve positive educational outcomes; leading to lower academic achievement of LHIs in the ICs. This could be explained by the lack of the necessary support to enhance their participation in learning (Mulat *et al.*, 2018). LHIs who are profoundly deaf, for instance, those who are pre-lingually deaf, are faced by challenges when learning mainly requires auditory ability and this leads to them dropping out of ICs as a result of absence of the provision of SL interpretation. The slow knowledge acquisition rate by LHIs, particularly in languages and developing literacy skills, aiming at the use of accommodations and modifications in teaching and curriculum like the use of cued speech, technology with visual component and visual phonics.

Properly taught fingerspelling ensures candid reading skills. Alasim and Pau (2018) contend that LHIs who are educated in ICs have a higher academic achievement and better academic experiences, thus, all the school staffs should ensure that they effectively build a context in which LHIs are able to freely and most often have interaction to engage their mates without HIs and build friendship. Alasim and Pau add that some researchers also established that negativity of teachers and learners without HIs in ICs towards LHIs play an important basis to the challenges of interacting socially, thereby limiting the extent of LHIs participating in ICs. The most vital point that ensures the LHIs are included into ICs is the collaboration between IC instructors, SNE educators and other support professionals in modifying the IC routines, accommodations and modifications (Mulat *et al.*, 2018).

A study by Diaz (2024) in the Philippines on the lived experiences of LHIs in a mainstream education system. The study sample comprised 10 LHIs, where 6 were from college while 4 were drawn from high school. The study employed qualitative approach that used a phenomenological research design. The findings showed that most difficulties encountered by the LHIs were due to language barrier and this affected the academic performance of the respondents. Diaz also found that the LHIs felt lonely and negative during school time. This study was conducted in an inclusive school primary school in Kenya and focused on the perspectives of learners on IL in ICs. 12 respondent LHIs drawn from grades 4 to 8 were involved. It applied qualitative approach of research and a case study design.

In their research, Rohmatuszahroh, *et al.* (2025) did a qualitative case study of classes of Tahfidz. The study focused on IL strategy based on a braille module that was designed to particularly facilitate Muslims who were blind and those with low vision within Semarang, Indonesia. The study also explored teachers, learners and guardians of the learners about their kind of experience as they studied one of the holy books that was highly regarded in their lives. Data collection was done using in-depth interviews with respondents that included the Tahfidz house administrators and director, 3 learners with low vision and 3 learners who were blind, 3 teachers, and 3 guardians. All were sampled purposively. The study findings indicated that the learning module of Braille Al-Qur'an facilitated and accelerated the learning process of the Al-Qur'an by the learners who were blind and those who had low vision. The module also served as a medium of learning and also boosted the self-confidence of learners' and made them enthusiastic about learning. This study was done in Kenya and had LHIs, IC teachers and the head teacher as the respondents.

A study by Mukuna and Maizere (2022) in a mainstream school in Zimbabwe explored the experiences of enrolled LHIs. This study was based on qualitative approach and a narrative case study design. The study sample was selected purposively and comprised 3 girls and 2 boys of ages 13 and 14. Data was collected through face-to-face semi-structured interviews. The study found that LHIs were able to develop friendships with their peers without hearing impairments but they experienced mental health behavioural challenges that included labelling, the lack of support and discrimination. The previous study focused on experiences of LHIs in a mainstream school in Zimbabwe, utilising a qualitative approach and a narrative case study design. This study was based on

qualitative approach and case study design, having used various data collection tools that included an, interview schedule, observation checklist, FGD and semi-structured interviews. It was conducted in an inclusive school in Kenya and it focused on the perspectives of LHIs on IL in ICs.

In their research, Ogembo and Bunyasi (2025) sought to investigate the dynamics of access to learning resources and how they impact LHIs' performance, particularly with regard to a few public junior secondary schools in Kisii County, Kenya. The study was guided by Universal Design for Learning framework. 188 purposively selected respondents participated in the study. A descriptive research approach was employed. Interviews, direct observations and questionnaires were used to gather data. Both descriptive and inferential statistics were used in the analysis. The results of the study demonstrated that having access to learning resources, particularly reading materials, significantly improves the academic performance of LHIs. Accessibility was hampered by frequent power outages, a dearth of specialized resources and textbooks, out-of-date materials, and inadequate maintenance of already-existing instruments. The reviewed study was conducted in public junior secondary schools in Kisii County, Kenya. It investigated the dynamics of access to learning resources and how they impact LHIs' performance. The reviewed study had 188 purposively respondents and was based on a descriptive research approach. This study was based on case study design and was conducted in Homabay County of Kenya, in an inclusive school that includes LHIs.

Nyambere (2019) investigated the influence of communication techniques on the academic performance of LHIs in IL environment in Migori County, focusing on total communication, verbal and manual methods, as well as the difficulties faced by LHIs. The study employed a descriptive survey framework, where data was collected from learners, teachers and head-teachers through observational methods, interviews, and surveys. The results showed a strong relationship between academic achievement and the use of total communication, with Kenyan Sign Language being a key component. The study recommended working together to provide inclusive schools with the resources and instruction they require. The reviewed research was conducted in Migori County, Kenya. This study was conducted in Homabay County of Kenya.

### **2.3 Instructional Strategies used in Inclusive Classrooms**

The "one-size-fits-all" approach to instruction immensely affects the inclusive learning (IL) systems due to its assertion of the uniformity principle among all learners, which is not true (Pagaduan & Natividad, 2025). Pagaduan and Natividad (2025) assert further that there is a significant challenge in the coexistence between uniformity and addressing the unique and diverse needs of all learners. In inclusive classrooms (ICs), "one-size-fits-all" does not apply (Basic Education Coalition, 2023). A natural classroom comprises a diversity of learners with different abilities, strengths and areas of need. It is thus crucial to apply instruction that can be accessed by every learner. Leifler (2020), during a study of ICs, evinced that effectively implementing IL leads to an increase in being involved socially, improved learning outcomes and personal well-being in comparison to learning that takes place in institutions of segregation. It is important to use education technologies (EdTechs), reduce distracting elements within the classroom by setting up

the space appropriately, seating preferentially the LHIs with residual hearing to lip-read and respect all of the learners (Odhiambo, *et al.*, 2024). Differentiating curriculum materials, assessment techniques, and instructional style is necessary for effective teaching in a varied class of learners; SNE teachers and general education teachers must collaborate to create curricula and instruction that are sensitive to the unique areas of need of all the learners (Jorun & Jeyaprabhan, 2016). Differentiating instruction ensures that the needs and abilities of every learner are considered (Muega, 2016). The use of differentiated instruction, for instance, multilevel instruction, activity-based learning, collaborative skills like co-teaching help to effectively include LHIs into regular classrooms. Methods such as cooperative learning and peer tutoring contribute to better learning achievement by all learners (Muega, 2016). Flexible grouping of learners allows for cooperation and eradicates stigmatization (Jorun & Jeyaprabhan, 2016).

The principles of universal design for learning (UDL) should guide how content is presented in instruction (Hayes et al., 2018). For example, it should be presented in a variety of formats, such as verbal and visual instruction. The use of dual coding makes information to be more recalled when presented verbally and visually (Njuki, 2017). To help LHIs understand abstractness and other ideas, teaching materials should contain interactive models, realia, and audiovisuals. Making use of EdTechs, carefully arranging the classroom to reduce any possible source of distraction, considering preferential seating and embracing respect to all the learners. It is essential to provide the learners adequate "think time" to process the content, provide more practice examples, draw their attention before instruction begins, and assess their comprehension.

There is a guarantee for all learners to the same right to access IL opportunities (UNICEF, 2017). The teaching material must to be systematic, simple in structure and easy to be understood. It is crucial to communicate and pronounce words clearly and audibly while facing the students in order to enable lip-reading by LHIs, particularly those who have residual hearing. The nature of the diversity of classes that teachers handle have an impact on the instructional practices. The class level has factors that might affect the practice of a teacher during instruction and includes: the sizes of classes, how classes is composed and the classroom context that may be either inclusive, regular or for learners with disabilities only (Lindner, *et al.*, 2021). The consideration of the size of classes to possibly predict the instructional strategies was established by many studies that the two variables are associated (Blatchford, 2016). Research shows that the sizes of classes have a direct effect on the methods of group formation with regard to the size and numbers of the very groups when educators organize their learners to small groups, for instance, a small number of learners in a particular class leads to the formation of fewer groups of learners (Blatchford & Russell, 2019). Usually, a class comprising a considerable number of learners with varied areas of need limit the ability of teachers to attend to each learner (Khaleel, *et al.*, 2021) and can lead to increased feeling of frustration by some of the teachers and loss of track of the level of progress and support needs of each LHIs.

The available methods of instructing LHIs in ICs limit their access to the curriculum because the necessary supports are either very basic and, in most cases, only the use of SL is employed by the teachers, who may have inadequate experience and knowledge of adapting the curriculum to suit the diverse areas of need presented by the LHIs. Some

teachers are not proficient in SL; hence, they struggle to instruct the curriculum. This affects the LHIs, who, may only get the contents of the curriculum and ultimately limits their performance and study advancements. According to Bagabas (2016), LHIs who have the opportunity to study using computerized instructional packages achieve more than those who study without them. Teachers need to employ total communication during instruction so that the learners can benefit from the mode of communication that they each prefer, break monotony of instruction and make learning more captivating. Closed captioning can be used to provide LHIs with access to the words that are being spoken as well as important sounds that are part of a video (Yuknis, *et al.*, 2017).

Mullen and Fleming (2024) conducted a qualitative study to examine the instructional strategies used in the inclusive K–12 classroom. Data was gathered via interviews. 9 seasoned general and special educators (co-teachers) from elementary, middle, and high schools in Virginia, USA, made up the study's responders. The findings demonstrated IE practices and leaders' participation in coaching. The interviews delved into co-teaching tactics, administrative requirements, and advice for potential partners. Other topics of focus were the expectations, duties, tasks, and communication between individual partners. The research was aided by examining how co-teaching teams teach and view administrative support. Crucially, the viability and efficacy of instructional collaboration depend on the interaction between co-teaching and leadership. This current qualitative study was conducted in Kenya, in an inclusive primary school that includes LHIs. The study participants included 1 head teacher, 13 IC teachers and 12 LHIs. The targeted classes were grades 4 to 8.

Erbas (2017) conducted a study in the Midwestern United States. The study sought to analyse whether general education classroom instructors employed teaching methods that encouraged inclusion of LHIs. The study sample consisted of K-6 elementary IC teachers. 3 regular classroom teachers participated. Data was collected through the use of observations and interviews. The findings pointed that general classroom teachers employed a variety of teaching methods during lesson instruction. These strategies included verbal instruction and short instructions, a variety of very engaging instructional activities, lesson notes on the board, opportunities for interaction between all learners with and without hearing impairments, and the ability to repeat information as well as questions and responses from other students. Classes included integrating EdTechs, sign language interpretation, speaking clearly and audibly, class discussions, individual exercises, asking learner succinct and intelligible questions, both individual and group instruction and independent study. While some learners collaborated with their peers, others were directly engaged by the teacher. In every subject, the instructor incorporated the use of visual aids. This reviewed study was conducted in the United States and focused on inclusion at the elementary level while the study sample comprised 3 K-6 general education teachers. This research was conducted in an inclusive school in Kenya. The respondents included the 12 LHIs drawn from grades 4 to 8, the 13 IC teachers and 1 head teacher.

Açar and Demiralp (2025) in their study in Turkey on IE for HI, explored the technological aids (for instance, devices used to enable projecting work and smartboards), methodologies, and teaching methods (for instance, interactive teaching techniques) with a focus on teaching and learning strategies that support academic and

social growth of the LHIs in an inclusive learning environment. The study employed a qualitative approach. Data was collected using FGDs and in-depth interviews. The study sample comprised 12 special education teachers who actively participated in the lesson instruction of LHIs. The results highlighted the difficulties educators face in obtaining appropriate materials and resources, skillfully applying distinct communication methods like lip reading and sign language, and the educational advantages gained from these initiatives. The findings of the research established that technological resources and customized approaches designed for the education of LHIs allowed them to achieve greater success and build confidence within their learning environments. Although this previous study delved in teaching and learning strategies that support the academic and social growth of the LHIs in an inclusive learning environment, it did not include the LHIs who are the direct beneficiaries of the technological aids, methodologies, and teaching methods. The study was also conducted in Turkey. This study was conducted in Kenya and included LHIs as key respondents during data collection.

In Finland, Takala and Sume (2018) conducted a study to investigate the kind of support that LHIs received from their teachers and if inclusion was really functioning. A questionnaire with both open-ended and closed-ended questions was used to gather data. The study had a sample of 109 Finnish teachers, all of whom taught LHIs in mainstream classes, at either secondary or primary level. The study found that special pedagogical support was diverse. Teachers preplanned by reading texts to enable the LHIs to lip-read to promote listening comprehension. Written instructions for exercises were provided and learners went to resource rooms for structured teaching. They were taught by both regular and SNE teachers. Sign-based communication was used in primary education and Finnish

Language was taught as a second language. Preferential seating was arranged according to the needs of the learners. Technical support included lighting, acoustics, long curtains to offer barrier to echo, wheeled chairs for easier turning towards the speaker in class to enable lip-reading and special equipment like hearing aids, smart boards, microphones and frequency modulation (FM) devices were provided. These supported the equal participation of LHIs in inclusive learning (IL). The results showed that categories of support were mainly technical and pedagogical. 48% of the teachers, however, did not support in any way. The respondent teachers reported that inclusion was successful.

Everly and Susan (2025) investigated the strategies and experiences of teachers aiming to provide a friendly and supportive learning environment for LHIs in regular classroom settings. It was conducted in the Malaybalay City Division during the 2023–2024 school year using a phenomenological study approach. Nine receiving teachers who were part of a purposively chosen sample took part in the in-person interviews. The interview data was analyzed in this study using thematic analysis. Research results showed that teachers prioritized sign language communication, personal accomplishments, inspiration, motivation, and empathy for LHIs, as well as their satisfaction and ongoing personal development while teaching them. Strategies included asking for peer support, using a variety of teaching techniques, and making use of multimedia materials. A diverse learning environment, equality of treatment, and inclusiveness were among the themes. To provide a supportive learning environment for LHIs, teachers adopted cutting-edge pedagogical strategies like sign language, visual aids, and gestures in spite of obstacles. For LHI teachers, the researcher highlighted the importance of an inclusive, IC environment by advocating for visual aids, assistive technology, open communication,

and ongoing instruction on deaf culture. The study recommended collaboration between school administrators, teachers, parents, and local governments to enhance support for LHIs through visual aids, assistive technology, specialized education, professional development, inclusive policies, and community involvement. The lived experiences of secondary school teachers with regard to promoting IL settings for LHIs in mainstream learning spaces were the main subject of this reviewed study, which was conducted in the Philippines. The perspectives of LHIs regarding IL in ICs in an inclusive primary school were the main subject of this study. The research was carried out in Kenya's Homabay County.

Differentiating curriculum materials, assessment techniques, and instructional methodology is necessary for effective teaching in a diverse class. Regular teachers and SNE teachers must collaborate to create curricula and instructional methods that are sensitive to the various needs of each learner in the class (Jorun & Jeyaprathaban, 2016). Learning resources are essential to the effective execution of any educational curriculum. Having access to resources for instruction and learning improves school efficiency and aids LHIs in succeeding academically. Teaching necessitates the use of instructional materials that not only grab learners' interest but also enable them to identify their own passions and abilities. In an IC, using SL interpretation for instruction is not only required, but also a mandatory support service for the LHIs. EdTechs make the curriculum and learning more accessible (Takala & Sume, 2018). The curricular for the LHIs should include shorter lengths of reading assignments, adapting or eliminating phonics assignments and adapting written assignments to shorter lengths. Inclusive instruction should include: providing resources to supplement to support the taught

concepts, remediation, drawing the learners' attention prior to instruction is essential and the information should be sequential and simple in structure. Clearly enunciated speech enables the learners to process the content taught, repeating or rephrasing information is necessary and frequently checking learners' understanding is important.

Nyabuto (2014) employed a descriptive survey design, targeted a population of 380 teachers, and used proportionate and stratified random sampling to select a sample of 114 respondents for her study on the factors influencing the implementation of the IL programme in Primary Schools for LHIs in Mbeere South Sub County, Kenya. She administered questionnaires for data collection and analyzed her data using Ms Excel and Statistical Package for Social Sciences. Descriptive statistics was computed and data presentation through tables was done. The study findings pointed that IL programme implementation for LHIs was influenced by institutional physical structures in the public schools as was reported by 74.6% of the respondents. Most of the inclusive schools had very few teachers trained in inclusive education skills. This was reported by 92.1% of the respondent teachers. And that inclusive schools mostly drew support from non-governmental organizations, the government and other donors. This was case study research, that was conducted in an inclusive primary school that includes LHIs in Homa-Bay County, Kenya. The study respondents included LHIs, ICs and the head teacher.

#### **2.4 Classroom Modifications for Inclusive Learning**

Effective provision of inclusive learning (IL) requires that certain classroom modifications are put into place including an inclusive pedagogy, which attends to the individual needs of all the learners while actively avoiding the marginalisation of LHIs.

Leifler (2020) states that the classroom should be set up to encourage LHI participation by getting rid of everything that could cause disruptions, such noise. This raises the LHI concentration level. To help with noise control, it is crucial to carpet the classrooms and use sound-proof materials for the walls. Doors and windows in the classrooms should be oriented away from the school gates and any other locations that can distract LHIs from staying focused, such as meeting rooms and dining halls. When learners are seated in class, windows should be raised over their heads or painted if they are relatively low. Long window curtains assist reduce echo, and cushions on seats also help reduce noise (Morin, 2023). There should be rubberized chair legs, sufficient ventilation to allow air to circulate, and appropriate lighting to light up the classrooms and avoid shadows. For the LHIs, writing supplies should be in a variety of colors to avoid monotony.

Sensory challenges should be taken into account while designing an IL classroom in order to meet the needs of the diverse learners in the ICs. Clear sightlines, preferred seating, and visual input for classroom content are a few examples of increased accessibility for visual input. LHIs benefit from captioning, fewer visual distractions and clutter in the classroom, proper turn-taking, hand raising, and other visual strategies (Allman et al., 2019). The visual appeal of ICs and the participation of all LHIs can be improved by the provision of posters, photos, efficient furniture, and displays of learning tools and equipment since colored classrooms are aesthetically pleasing and improve learning, comfort levels, and health for all the learners (Ackah-Jnr & Danso, 2019). Ackah-Jnr and Danso (2019) further contend that schools must be devoid of characterization such as ridicule, teasing, name-calling or being negative and hostile to the LHIs so that they can feel a sense of belonging to the school and in the classrooms.

Miller (2022) conducted a qualitative study based on case study design on the perspectives of educators, administrators, learners and parents, regarding the educational experiences of LHIs. the study was carried out in 2 inclusive elementary/ middle schools in Yerevan, Armenia. 33 respondents that included 12 learners of ages nine to fifteen, 15 educators and 6 parents were took part in the study. A total of 13 classroom observations and 23 interviews were conducted. According to the research, respondents believed that inclusion was crucial for LHIs since it fostered camaraderie, equality, and acceptance. Staff expertise and administrative support were credited with making inclusion for these LHIs a success. However, they thought that a number of factors were obstacles to the successful integration of the LHIs. these included: background noise, occasional use of FM systems, a lack of professional growth, a reluctance to use sign language, poor condition of blackboards, cumbersome and old furniture and a lack of cooperation. This current research focused on the perspectives of LHIs on IL in ICs in an inclusive school in Kenya with 26 respondents.

A study by Priestley (2023) in Ghana aimed at assessing how successful IE for LHIs was in Ghanaian regular schools. 16 respondents that included 8 teachers and 8 parents participated in the qualitative research study. Convenience sampling method was applied. Secondary sources of information and semi-structured interviews were used to collect data. According to the study findings, parents and educators in both public and private schools acknowledged the value of inclusive education. There were some concerns that were voiced by every respondent regarding its applicability or overall effect. The study established that Ghanaian regular schools' resource sufficiency was viewed negatively by both parents and educators. The Ghana Education Service's

prescribed curriculum, according to all the teachers, needed to be enhanced in order to successfully integrate LHIs. The nature of the school's curriculum, however, confused the parents. The research study also found that the teachers' use of technology and visual aids to encourage the inclusion and accessibility of the class material by LHIs was woefully insufficient. These LHIs, who had only been physically present in the classrooms, were consequently excluded. Lack of resources, according to Priestley, was a significant obstacle to the inclusion of LHIs into the regular classrooms. The reviewed study was conducted in Ghanaian regular school, where convenient sampling was applied. Respondents included 8 teachers and 8 parents. Even though the study was assessing the success of IE for LHIs, it did not have any LHI as a respondent to voice their own perspectives on the extent to which including them was. This was a case study conducted in an inclusive school in Kenya that includes LHIs. Purposive sampling method was applied.

Interactive whiteboards, SL applications, computer games, and other accessibility features like speech-to-text software are some of the classroom tools that are beneficial for LHIs. Every LHI's success and accommodation is guaranteed when tactile learning materials and audio-visuals are incorporated into classroom instruction (Silvestri & Hartman, 2022). Integrating more methods by teachers gives better guidance to LHIs by making inclusive connections with the curriculum that benefits every learner within an IC (Silvestri & Hartman, 2022). LHIs with additional disabilities to the HI draw benefits from Augmentative and Alternative Communication resources that consist of simple gadgets containing line drawings and objects or more high technology gadgets which comprise gadgets that generate speech (Nelson & Bruce, 2019). Captioning services,

digital or personal note takers, SL interpreters, and amplification systems that incorporate personal hearing aids, tactile devices, and cochlear implants should also be included in the physical environment adjustments. With the use of EdTechs, LHIs can learn well and gain access to education.

Wamae (2021) examined the effectiveness of LHI teachers in Kenyan special units and evidence-based teaching methods. The study used a convergent design and a mixed techniques methodology. The study used structured questionnaires as quantitative methods and focus group discussions and structured observations as qualitative approaches. The 23 responders from Kenya's Kiambu and Nairobi Counties were selected using the snowballing method. According to the study, learners sat in rows and faced the front. According to the study, under this setup, the LHIs could only get one focal point of the teacher. Additionally, the survey indicated that visual aids such labels, objects, charts, flash cards, posters, and photographs were being used. An inclusive school in Kenya's Homabay County served as this present study's site. Purposive sampling was used in the study to obtain the study respondents.

To meet the demands of every learner, it is essential to set up the seats in an IC appropriately. The ideal seating arrangement in an IC with LHIs is a horseshoe-shoe pattern, with preferential seating for LHIs who can perceive some sounds and/ or lip-read. Teachers must consider their positions within the classroom while being mindful of the LHIs. They must always make sure that the LHIs can see their faces and should never turn their backs on them. In order to prevent the LHIs from guessing and leaving the ongoing lecture, they should, for example, not cover their faces or face away from the

learners when speaking or providing instructions to the class. This also applies to the SL interpreter, if one is provided in the classroom. Mustaches should be kept in check, and appropriate hairstyles and proper clothing requirements should be followed in order to prevent being the center of attention during the class rather than helping the students learn.

## **2.5 Challenges Faced by Teachers in Inclusive Classrooms**

There is no single system of education that can work without teachers as either educational instructors or facilitators of learning. This fact about teachers makes it imperative to find out the factors that surround and affect their practice. In order for IL to be practical, bearing in mind that a majority of schools still employ the full-time services of teachers to translate teaching and learning content directly to learners, even in the face of education technology (EdTech), the integral duty of teachers cannot be put aside. Learners experience the educational content through the cognitive connections as a result of academic content translation to them by their teachers, whether through face-to-face, remote or blended learning mode. This therefore means that teachers carry the greatest weight in ensuring that their classes and lessons are inclusive of the diverse population of learners that they may have. IE as a philosophy must be translated adequately by the teachers in order to be practical and evident in their classrooms and lessons i.e., they must be inclusive of all learners, allow for equal and full participation, be safe welcoming spaces and allow all the learners to explore and make mistakes without being judged. Teachers, thus, play the most fundamental role towards the realisation of inclusive classrooms (ICs) (Unterhalter, 2019).

IC teachers bear the deliberate responsibility of influencing their classes and lessons to be inclusive of LHIs and this may come with some challenges, especially in an inclusive school, where learners have various intersecting identities that define who they are – first, as humans and two, as learners in ICs. This is the basis of studying the challenges that these IC teachers may be experiencing as they discharge their core duties, so that inclusion of LHIs is not compromised by these challenges but are established and addressed for the benefit of the LHIs. Teachers are the most indispensable factor in the effective administration of quality education in an inclusive classroom (Sambu *et al.*, 2015) and therefore, to guarantee that LHIs can receive the required instructional support for their academic success, educational procedures and policies must be adaptable (Yue, 2024). Despite there being a strong support for including LHIs in ICs, teachers may be reluctant due to a lack of resources and training to address LHI unique needs (Sai, *et al.*, 2025). The lack of appropriate requisite training on how to implement IL and include LHIs is on its own a major challenge for educational instructors (Mokhampanyane, 2024).

Teachers with high self-efficacy and positive interest contribute to significant academic achievement of the learners (Ouko, 2018). Most teachers prefer training in general education or SNE instead of IE. Teachers who have a training on IE have more positive attitudes towards LHIs because they have an understanding of their diverse needs (Koliqi & Zabeli, 2022). Once the teachers receive the required training on how to teach their classes, they feel comfortable teaching them (Khaleel, *et al.*, 2021). When teachers with general education training get empowered with more methods of supporting and handling LHIs in ICs, they become more positive towards their inclusion than those without who

only assert their distress regarding the high workload that they feel they have as a result of having LHIs in their classes (Saloviita & Schafus, 2016).

ICs must include every learner to fully participate in learning (Ramos, 2022). Teachers must address how all learners can get to interact together and fully engage in learning activities during the lessons. Different forms of communication should be used in a diverse class to enable teachers to lead a united class. Ngadni, *et al.* (2023) contend that it could be challenging for some teachers, particularly those who have never worked with LHIs, to modify their usual lesson plans and teaching strategies to a more specialised and differentiated approach in order to accommodate LHIs. It might be difficult for many educators to adopt universally designed inclusive teaching strategies that support IL for a variety of reasons. The barrier of instructors who are not adequately trained resonate to the situation of most public schools, where most teachers are not only underqualified but also do not have access to professional development opportunities in IE (UNESCO, 2020).

Many schools moving toward ICs that include LHIs are still faced with several obstacles that must be resolved (Ramos, 2022), for instance, not all teachers have competence to support LHIs and a good attitude towards them (Gulzar, 2021). This kind of teachers consider LHIs as a disruption to their classes who cause interruptions that prolong the length of lessons because of the extra attention that LHIs require (Ngadni *et al.*, 2023). As a result, they tend to completely disregard them instead on carrying out their instructional preparations. Ngadni *et al.* additionally mention that there are not many resources accessible and that a lack of facilities and trained teachers is a consequence of a

lack of funding, which has a negative effect on IL and its successful implementation. When handling ICs, teachers who lack the necessary knowledge, skills, and experience in basic behavior management, unique teaching methods for different learning areas, curriculum criteria for learners in different ability and need groups, psychodiagnostics fundamentals, academic and research factors that influence child development and learning techniques face immense difficulties (Karynbaeva, *et al.*, 2020).

Ngadni *et al.* (2023) sought to examine the problems and difficulties that teachers encounter in an inclusive Early Childhood Education (ECE) classroom. The study employed phenomenological qualitative research with open-ended interview session. 14 participants comprising teachers who worked or had teaching experience in ICs in ECE settings from a range of backgrounds and regions. The study revealed some difficulties that the IC teachers encountered. The other challenges faced by the IC teachers included time consumption during lessons, a shortage of personnel, a lack of training and expertise, and a lack of resources. This reviewed study was conducted in Malaysia in an ECE IC. The study employed a phenomenological qualitative investigation with all the 14 respondents being IC teachers. This study was carried out in an inclusive primary school in Kenya where LHIs are included and were part of the study respondents. It applied a qualitative case study design. Study respondents included 1 head teacher, 13 IC teachers and 12 LHIs.

A research study by Nishan (2018) in the Republic of Maldives on IE aimed to investigate the difficulties typical teachers encountered when implementing IE in classrooms. Interviews and survey questionnaires were used to collect data in this mixed-

method study. Randomly chosen regular teachers (N=125) from 11 schools and 6 locations were given a survey questionnaire. Data was collected from 12 mainstream teachers using a semi-structured interview guide. Large class sizes, a lack of resources, a shortage of qualified teachers, a lack of time, and a lack of understanding were the study's findings of the difficulties regular teachers had when implementing IE in regular schools. The present investigation was carried out in an inclusive school in Kenya that includes LHIs. A qualitative case study was used. Twelve LHIs, thirteen IC teachers, and one head teacher participated in the study.

In her study to probe teaching strategies that influence academic outcomes for LHIs in select integrated secondary academies in Kagera Region of Tanzania, Kalist (2025) applied descriptive survey design in mixed methods research. The study had thirty-one respondents: 16 LHIs, 13 teachers and 2 principals. Data was collected using interview protocols, surveys and observation forms. The study found that majority of the teachers in integrated secondary schools relied heavily on spoken language when teaching, while LHIs preferred the use of sign language to enable their learning. Note-taking, writing instructions, letting LHIs participate, and matching LHIs with their hearing peers were common teaching strategies found to be used by the teachers. There were not enough educational resources available for LHIs. The study found that because of teacher communication styles, large class sizes and a lack of resources, the instructional methodologies used did not sufficiently fulfill the educational needs of LHIs. This reviewed research was conducted in Tanzania. Mixed methods and descriptive survey design were applied. The study was carried out in integrated secondary schools that

mainstream LHIs. This research was a qualitative case study and was conducted in an inclusive primary school in Kenya, where LHIs are included.

Mungai (2015) used a descriptive survey design to investigate the challenges of IE implementation in public elementary schools in Kenya's Kirinyaga County's Mwea East District. The study's target respondents were head teachers and instructors chosen from 66 public elementary schools in the Mwea East District. A simple random selection method was used to choose schools, and teachers and school administrators were specifically sampled. The data was collected by questionnaires. This study found that the main barriers to implementing IL were limited parent-teacher interaction, a rigid curriculum, a lack of staff and resources, stressors that hinder job satisfaction, and ineffective teacher training. The study did not try to ascertain whether instructors would be facing any challenging situations while engaging with ICs; instead, it just recognised them as important members of the school community. This study, which used a case study approach and a purposively selected study sample, was carried out in an inclusive primary school in Homabay County.

When teachers who are not familiar with SL are unable to communicate with the LHIs, they may feel frustrated and helpless. SL should be used as a communication medium between teachers and LHIs as well as a teaching tool. The breakdown in communication is a contributor to poor performance, also due to negativity that is directed by educators to the LHIs in addition to educators always being unprepared to deliver effective inclusive lessons (Kayeye, *et al.*, 2016). Literature evidences a great concern on lack of skilling and retooling of teachers in the promotion of inclusion of LHIs (Carew, *et al.*,

2019). The guides used by the teachers together with teaching materials may be excellent in presentation, however, it is essential for the educators to get the opportunity of discussing and reflecting on the current methods of teaching so that they can make improvements by collaborating with each other (Holmqvist, 2017). When teachers leverage their efforts on the strengths of supportive school administrators, teacher collaboration, parental involvement and carers, including access to educational resources together with other professionals including when planning and developing the IEP, they are thus enabled to promote IL than when they work as individuals but when there is no support system, they have to deal with every situation by themselves. This, then, definitely leads them to underperform in their core duty of instruction (Themane & Thobejane, 2019).

## **2.6 Summary of Identified Knowledge Gaps from the Review**

The literature review reaffirmed the importance of fostering high-quality IL and the fact that LHIs can flourish in ICs with the implementation of support systems and accommodations. The reviewed literature evidenced that LHIs gain better academic and IL experiences when EdTech is integrated into teaching and learning because LHIs are visual learners. However, the review revealed that these EdTechs are usually not readily available, inaccessible, unreliable or too outdated to be relevant in use or in some cases, the teachers are not conversant with how to make them useful to enrich their instruction. The reviewed literature did not reveal any evidence on the perspectives of LHIs on IL. Attached to this are other teaching and learning resources like textbooks, teaching aids (visual aids) and relevant curriculum are key to ensuring that LHIs are effectively

included and are enabled to fully belong and participate during lessons and in any given classwork.

The review found sign language as the language of instruction as the most critical necessity for LHIs. This is because every learner learns best in their own language. The dire situation that negatively affects LHIs in ICs as relates to their learning is the fact that most IC teachers do not know or use sign language to instruct but instead rely heavily on verbal instruction. This is the biggest reason why LHIs do not usually attain better or high academic outcomes compared to their hearing peers in the same classrooms.

The review exposed teacher burn-outs and frustrations due to very large class sizes in ICs. This coupled with poor or inadequate teacher preparation, which is a consequence of lack of requisite training to effectively handle the LHIs or an IC, which includes their ability to translate the learning and communicate it in sign language for LHIs. Lack of continuous professional training for the teachers as well lack of support to teachers by the school administration hinders the successful implementation of inclusion of LHIs. These gaps compelled the need to conduct the study in order to understand and make an establishment on the perspectives of LHIs on IL.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter consists of: research design, variables, research methodology, location of the study, target population, sampling techniques, sample size, research instruments, piloting study, validity, reliability, data collection technique, data analysis and logistical and ethical considerations.

#### **3.2 Research Design**

This study was based on case study design and qualitative research method. Case study was the most suitable research design. The design made it possible for the researcher to obtain specific, in-depth, contextual, and significant insights on the perspectives of LHIs concerning IL and it allowed for exploring of the meanings from the perspective of the case and its essential features (McCombes, 2023). LHIs and their teachers described their perspectives towards IL at a public primary school of inclusion in Kenya.

Islam, and Aldaihani, (2022) posit that qualitative research is preferred as the best methodology to apply in a case study because it adequately allows for the capturing of the specific perspectives where there are inadequate or no existing studies on the topic, targeted sample or context. The duo adds that qualitative research methodology allows a researcher to accurately comprehend the case being studied in their own environments. The adoption of the qualitative research approach enabled the gathering and then analyzing of non-numerical data by the researcher to understand the perspectives of LHIs

on IL, the opinions and lived experiences of LHIs and their teachers in their own natural setting and language (Bhandari, 2023).

### **3.3 Variables of the Study**

The **independent variables** for this study were: instructional strategies, classroom modifications and challenges faced by teachers while the dependent variable were: use of hearing aids, availability of learning resources and use of technology. Intervening variable was: school administration, peer support, family support and multidisciplinary team. Elements of a research study include both the variables that act as predictors and those that point to the end result (or outcome). Better academic attainments as a result of an inclusive and supportive environment among the LHIs were the expected outcome.

### **3.4 Location of the Study**

This research was carried out at an Inclusive Primary School in Homabay County. The school enrolls learners with and without HIs and implements IE in Kenya. This school was selected because it is the pioneer in the implementation of IE in Kenya and includes LHIs in all the classrooms with appropriate adaptations (Boit, 2016). According to Boit, the school has been an influencer and champion for IE to the schools found within its location and a benchmark for IE in the Western region of Kenya. The learners and teachers in the school therefore had lived experience of inclusive practices. Having worked with *Tusome*, which was national project that was implemented in all Kenyan public primary schools, and having directly supported schools with project implementation, the researcher knew that the school was inclusive of LHIs across all its Grades. The LHIs in the school therefore had lived experiences with inclusive learning

and so were their teachers. This was the basis for the choice of the school because the researcher was keen on understanding and making candid establishments on the perspectives of LHIs' on inclusive learning based on their lived experiences, narrated in their own languages.

### **3.5 Target Population**

The study targeted all the teachers and all learners with hearing impairments at the study Inclusive Primary School, out of which, the researcher selected the sample size and drew conclusions. The researcher purposively targeted all the 17 teachers and all the 24 LHIs at the Inclusive Primary School. This was a total of 41 respondents.

### **3.6 Sampling Techniques and Sample Sizes**

#### **3.6.1 Sampling Techniques**

Purposive sampling was applied in the identification of the study population and the respondents who gave relevant, reliable and genuine information required. The purposive sampling allowed for the selection of respondents who had characteristics that the researcher was keen on in the research study (Nikolopoulou, 2023). Purposive sampling was most suitable to have been used because it was in-depth research that was based on a relatively smaller sample, in order to select only the respondents who shared specific similarities (Nikolopoulou, 2023).

Homabay County is one of the counties in Western Kenya and was the first county to pilot and implement IE, including LHIs. The researcher purposively selected the study school because it was among the first five pilot schools for inclusive education in

Western Kenya 2001 and has been implementation of inclusive education for learners with and without disabilities and particularly including LHIs (Boit, 2016).

At the school, the researcher requested the Head Teacher, who worked with class teachers to identify the LHIs in their classes. This meant that the researcher was dependent on the teachers' support but also joined them to screen the learners in order to get the actual LHIs who were the target population for the study. This joined effort and screening brought out a total of 24 LHIs from Grade 1 to 8. LHIs struggle with language development, including the acquisition of signing skills which, in most cases, begins when they join school and having taught and worked in projects that support people and children with disabilities, the researcher understood this. This was the reason why the study sample of the 12 LHIs was drawn from Grades 4 to 8, because they could self-express in writing, speech (for those who were hard of hearing post-lingual), and through Kenyan Sign Language. The researcher was fluent in all these modes of communication.

### **3.6.2 Sample Size**

There were 26 respondents in the study sample. This comprised the Head Teacher, 12 LHIs who had been enrolled in ICs for a minimum of a year, and 13 teachers who had been teaching in ICs for a minimum of a year in order to share their perspectives and personal experiences about IL (Sumagang & Balano, 2025). LHIs were selected from Grades 4 through 8, excluding those without HIs. The selected LHIs were able to articulate their lived academic experiences on IL in effectively. The inclusive school was chosen for the study because it accepts LHIs and those without HIs and had been integrating LHIs into the ICs. The sample size satisfied the threshold since, according to

Creswell and Creswell (2018), a sample size of 5-25 respondents is ideal for case study qualitative research.

**Table 3.1**

*Population and Sample Size*

<b>Respondents Total</b>	<b>Population</b>			<b>Respondents Total</b>	<b>Sample Size</b>		
	<b>Male</b>	<b>Female</b>			<b>Male</b>	<b>Female</b>	
Learners	15	9	24	Learners	8	4	12
Teachers	6	10	16	Teachers	5	8	13
Head Teacher	1	0	1	Head Teacher	1	0	1
Total	22	19	41	Total	14	12	26

**3.7 Research Instruments**

The instruments used to collect the data were: classroom observation checklists, focus group discussion guide for IC teachers, semi-structured interview guide to interview the respondent LHIs and interview schedule for the Head Teacher to collect data during the study. The use of different sources of data and respondents ensured an in-depth study of greater credibility (Creswell, 2015; Creswell & Creswell, 2018).

**3.7.1 Semi-structured Interview Guide**

This interviewing technique was suitable for the study because it allows for open-ended responses and two-way communication between the researcher and the respondents, which lead to collecting of more detailed data on the research topic (Islam, & Aldaihani, 2022). Semi-structured interview of respondent LHIs allowed them to confidently give

their combined perspectives and opinions freely, willingly and actively participate in the discussion in the presence of their peers to openly voice their perspectives on IL, including on very sensitive issues, thus, better access to their thoughts and feelings and experiences in their own natural language while exploiting their values and beliefs regarding the IL ( Bhandari, 2023; Fobi, *et al.*, 2018; Ajagbe, *et al.*, 2015). Putting the LHIs together during the interview made the bold enough to voice out their experiences and varied perspectives on IL in the ICs. The interview should have been audio recorded at best, but was not because the Head Teacher had during the pre-visit declined having any learners and teachers recorded, mentioning that other previous visitors had misused their videos and audio recordings. Him being the head of the school, he therefore deemed it fit to refuse any such requests. The researcher thus obliged. The researcher therefore noted all the responses in her field research note book. The LHIs took turns to respond to the questions. This interview lasted for 25 minutes.

### **3.7.2 Focus Group Discussion Guide**

Focus group discussion (FGD) with the IC teachers yielded multiple positive responses which were very useful to the study because the teachers were able to easily and freely participate more deeply in the FGD that enabled the researcher to understand and capture their lived experiences and personal perspectives on IL (Anders, 2023). All the respondent teachers spoke authentically in their own words. The FGD also enabled the researcher to explore complex matters associated with the inclusion of LHIs into ICs. The FGD also made the researcher to find out more from the IC teachers who were confident and willing to inform in the best way they could concerning IL. The FGD lasted for 30 minutes.

### **3.7.3 Observation Checklist**

The direct observations helped the researcher to follow some of the taught lessons in ICs with LHIs to see the accommodations and modification made to enable the inclusion of LHIs, thus gain the first hand experience and information on IL and IC practices at the school. According to Uwamusi and Ajisebiyawo (2023), observation schedule allows for the collection of data by the researcher's own active involvement in and observation of the classroom physical environment, lesson activities and learner behaviours of the class under study. The duo adds that through observation, a researcher can describe the classroom organization, modifications and acoustics, instructional methods evident from the teachers and the teaching aids and EdTechs used during the lessons. The researcher attended the scheduled lessons, according to the school timetable, and took notes during the direct lesson observations. Using the observation schedule, the researcher collected data on the teaching methods that were employed by the IC teachers, the number of LHIs included within ICs that were observed, the suitability and accessibility of the classroom physical environment and the availability and types of learning resources for all learners (Mijares, *et al.*, 2023). This information allowed for gaining of better understanding by the researcher of the level of ensured access to and learning opportunities for the LHIs. Each lesson took 35 minutes to conclude and the researcher stayed the full lesson time.

### **3.7.4 Interview Schedule**

Interview schedule for the Head Teacher was able to inform the researcher about how the administration supported the inclusion of LHIs, his experiences with IL as the one who translates the policies to the teachers and in-depth insights regarding the included LHIs. The interview schedule had been preferred because it provided important information on

key issues on the case under study (Creswell, *et al.*, 2020). This interview should have been audio recorded at best, but the Head Teacher had declined being recorded for whatever reason and the researcher respected the Head Teacher's take. The researcher therefore keenly noted down, in her field research notebook, all the responses from the Head Teacher during the interview session with him. This interview scheduled took 20 minutes to conclude. It was noted that the Head Teacher had been in the school for only one academic term (3 months) and therefore, he could not richly provide sufficient information to the study. This was countered by triangulating the data collected from the FGD and the semi structured interview together with the interview schedule to cross-verify data.

### **3.8 Piloting Study**

The data collection instruments were piloted at an Inclusive Primary School in Kisumu County. The school was purposively selected because it was implementing IE and including LHIs. The pilot school sample consisted of the school Head Teacher, 3 teachers and 5 LHIs. The instruments that were to be used to collect data during the research were first piloted to ensure that they were both valid and reliable. The actual research did not include the pilot school. Piloting was conducted to enable the identification and fixing of any short falls related to the administration of the data collection tools by the researcher. The piloting also made it possible for the researcher to assess how questions were relevant and clear; thus, a validation of the instruments was attained.

### **3.8.1 Validity of the Instruments**

Validity of the instruments was achieved through the consultations with the professional supervisors who were experts in the area studied, to ensure that the instruments were appropriate in language, clarity and addressed all the research objectives. Content validity was attained by aligning the items in the interviews with the objectives of the study. Piloting of the tools was done at an inclusive school in Kisumu County to detect any weaknesses with the tools in order to effect necessary corrective measures before the main study. The feedback received from the piloting activity was incorporated into the tools before preparing final copies that were used during actual research. The developed questions were clear. Researcher's fellow peers also reviewed this work to validate it. The data collection instruments that included interview schedule guide, observation checklist, semi structured interview guide and focus group discussion guide were triangulated for cross-verification of the data and this increased the results validity and credibility. This tested their validity and from the responses obtained, ambiguities, inadequacies and superfluity were adjusted and improved to ensure that validity of the tools was enhanced (Abubakar, 2019). Key terms were clearly defined to ensure the respondents' understanding and interpretation of the questions were consistent, thus eradicating any risk of misinterpreting the questions. Guidelines for data analysis were prepared and case findings reporting was done.

### **3.8.2 Reliability of the Instruments**

Reliability was attained by applying the test-retest technique of the data collection instruments after one week during piloting of the instruments at an inclusive school in

Kisumu County. After which, comparison of data was done. This process was done to enable the determination of worthiness and truthfulness of data tools.

### **3.9 Data Collection Techniques**

A working rapport and familiarization with the study school were established by the researcher by visiting the school before the actual data collection day. A go-ahead to carry out the study was given by the Head Teacher to the researcher during the visit. The researcher also made arrangements for data collection. The researcher collected data using observation checklist during the direct lesson observations in ICs. During the observations, the researcher took notes in her field research notebook as the lessons progressed to the end. After the lesson observations, the researcher administered semi-structured interview to the twelve LHIs inside the Senior Teacher's office. The researcher took notes as the LHIs responded to the questions during the interview. FGD guide was administered to the IC teachers inside the school staffroom by the researcher. The researcher read questions from the guide and the teachers took turns to respond. The researcher took notes of the responses on her field research notebook. Lastly, the researcher interviewed the Head Teacher from within his office after the FGD with IC teachers. During the interview guide, the researcher took notes of the responses given by the Head Teacher on her field research notebook. The data was then transferred to a password-protected computer for confidentiality.

### **3.10 Data Analysis**

This was fully qualitative research. Using the different tools to collect data made it possible to triangulate the information from the respondents and this increased the

credibility of the study. The analysis and presentation of the data focused on an objective-oriented approach and scope of the study. The data analysis, which included methodical coding and organization to find recurrent themes, was conducted using NVivo software. To facilitate a thorough investigation and uncover linkages and correlations, data was imported, coded, and categorized into larger themes and subthemes. Important insights and well-informed study findings were produced by the iterative procedure. When the respondents directly quoted anything, the data was presented verbatim.

### **3.11 Logistical, Ethical Considerations and Legal Considerations**

#### **3.11.1 Logistical Considerations**

Letter of introduction from Kenyatta University Graduate School was obtained by the researcher before conducting the study. Research permit that authorised conducting the study was then secured from National Council of Science and Technology (NACOSTI). After this, the researcher sought for research permission from the Homa-Bay County Education Office. Informal appointments were booked by the researcher to deliberately create a working relationship with the school and the respondents.

#### **3.11.2 Ethical Considerations**

The consent of the respondents was first sought for by the researcher before the data collection tools were administered. They were assured of the confidentiality of the information that they would provide during the research. The respondents were also assured that the collected data would be used for the intended purpose only and that they would remain anonymous. Besides, the respondents filled in the consent form. The

community culture and traditions were respected. Both the young and the old were accorded due respect.

## **CHAPTER FOUR**

### **FINDINGS, INTERPRETATION AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the findings, interpretations and discussion according to the research objectives. The research objectives guided this analysis. They included:

1. To establish the academic experiences of LHIs in ICs at an Inclusive Primary School.
2. To establish the instructional strategies that enable the inclusion of LHIs within a primary school context at an Inclusive Primary School.
3. To determine the classroom modifications that are meant to enable the inclusion of LHIs at an Inclusive Primary School.
4. To identify the challenges faced by teachers in promoting IL of LHIs in a Primary School context.

#### **4.2 General and Demographic Information**

##### **4.2.1 General Information**

This research comprised a sample of 3 classroom observations, 1 FGD comprising of 13 IC teachers, 1 semi structured interview for 12 LHIs and 1 interview guide for the school Head Teacher (HT). All the targeted respondents were reached achieving 100% of the sample size.

#### 4.2.2 Demographic Information

Analysis was done of the collected demographic data of the respondents. The data was classified based on gender, specific area of educational training, level of education and number of years of service at the school and the grade levels of the LHIs. Each variable was analyzed and presented separately. The interview schedule of the HT revealed the gender of the teachers and the LHIs, which was confirmed by the teachers during their focus group discussion (FGD).

**Table 4.1**

*Gender of the Teachers*

<b>Gender</b>	<b>Frequency</b>
Male	6
Female	8
<b>Total</b>	14

Table 4.1 shows that there were slightly more female teachers (8) than male teachers (6) at the school. The FGD with the teachers and the classroom observations revealed that there was more passion expressed by female teachers compared to their male colleagues towards supporting the LHIs. Lazarus (2019) found during his study that female teachers were always hopeful and positive about educating and supporting the LHIs. This position was also drawn by Lee, *et al.*, (2017). The trio had their study examine the relationship among learner-gender, teacher-gender and performance level and found the male teachers achieving lower than the female teachers in terms of the teaching styles. Lazarus (2019) also found that gender differences were obtained in terms of teacher attitudes towards their roles in the education of LHIs. The female teachers had a higher mean score of

attitudes than male teachers. These findings, however, contradicted those of Wanakacha, *et al.*, (2018) and Moses, *et al.*, (2016) study findings when they investigated gender differences in teacher performance of the core functions and teacher motivation in ICs. They all found that there were no differences related to gender on extrinsic and intrinsic motivation of teachers in the performance of the core functions in the ICs. They shared corresponding knowledge levels on the leadership and teaching duties.

**Table 4.2**

***Gender of the LHIs***

<b>Gender</b>	<b>Frequency</b>
Male	8
Female	4
<b>Total</b>	12

Table 4.2 shows that male LHIs were more (8) than female LHIs (4). During the semi structured interview with the LHIs, all the girls could hear when the researcher’s voice was projected slightly above the conversational tone while all the boys could not. Again, the boys had to sit closer to the researcher during their interview to lip-read, with continuous prompts of “*please increase your voice more than that.*” One of the boys confessed to not being able to perceive any sound at all even when seated in front. These findings confirmed previous study findings that loss of hearing and the degree of the loss are more inclined on the male gender than the female gender (Qayyum, *et al.*, 2023; Bhat *et al.*, 2022; Asghari *et al.*, 2017).

**Table 4.3*****Level of Professional Training***

<b>Level of Training</b>	<b>Frequency</b>	
	<b>Male</b>	<b>Female</b>
Bachelor of Education	1	2
Diploma in Education	5	2
Certificate in Education	0	4
<b>Total</b>	<b>6</b>	<b>8</b>

**Table 4.4*****Special Needs Education Training***

<b>Gender</b>	<b>Frequency</b>	<b>Trained in SNE</b>
Male	6	3
Female	8	2
<b>Total</b>	<b>14</b>	<b>5</b>

There were only a few teachers trained in SNE (5). The rest were trained in general education. According to Orakcı, *et al.* (2016), previous studies that were conducted to determine the attitudes of teachers with or without IE towards IL practices mostly concluded that having studied SNE or IE courses led to improved quality of instruction, positive attitudes of teachers on IL and better support mechanisms for the LHIs. This was confirmed by the teachers who lacked training in SNE who said that they faced challenges teaching ICs and would always seek for the guidance of those trained in SNE. These findings were consistent with those of Yuwono and Okech (2021) who evinced that educational reality of ICs requires that teachers have adequate training in SNE or IE in order for them to provide adequate support and intervention to the LHIs.

### **4.3 Academic Experiences of Learners with Hearing Impairments on Inclusive Learning**

In pursuit of the first research objective, to establish the academic experiences of LHIs in ICs, the researcher conducted a semi-structured interview to glean insights directly from the LHIs. This theme encapsulated the perspectives of LHIs on their educational journey within the IC setting. Under this sub theme, the researcher explored whether the LHIs were indeed included in the ICs. The HT said during his interview schedule:

*“Our school is inclusive of LHIs and other learners with other disabilities as well as those without disabilities. Learners are taught together without any segregation or discrimination. We treat learners equally to the best of our abilities. The school does well – above average – in academics and this includes LHIs.”*

The responses of learners during their semi structured interview were unanimous in confirming their presence and participation in IL. When asked: Do you learn in ICs? All the respondent LHIs responded affirmatively: “Yes.”

L1OI23 continued:

*“In this school, all classmates are taught together. There is no different class with teachers different from ours. Teachers teach us and give us same exam.”*

These responses shed light on the fulfillment of the first research objective, indicating that LHIs were included into ICs at the Primary School. The LHIs said during their semi-structured interview that IL in ICs benefited them a lot academically and even socially. While being specific on the areas that were advantageous to them academically, they stated that their peers without HIs were very supportive of them and helped them to understand better the concepts that they did not understand during a lesson, they got more challenged and motivated to work as hard as their hearing peers since they were taught

together by the same teachers and same content in differentiated methods that enabled their access to teaching and learning.

L4OI23 said:

*“As for me, I was transferred to this school from another because I was not hearing well. If I compare this school to the one I was, this one is very much good. Here, teachers care about us and my fellow learners help me when I ask them what I have not understood properly. I feel encouraged to want to do better. My friends really talk to me good about education.”*

L7OI23 said:

*“In our class, we are mixed – boys and girls, with and without hearing problems. When I miss something, my fellow group members tell me. Our teachers try to use different ways to teach us. Like group discussions, sometimes one of us is the one who explains things instead of teacher. When many ways are used, many of us, if not all understand.”*

They also said that the teachers support them more after classes whenever they reach out to them.

L2OI23 said:

*“Our teachers support us when lesson is finish, some of them say we see them to help us. When you don’t understand, teacher explain more and also give example. Some teachers are very good; they help me much. Some help me just small. Teacher help make me better.”*

These findings suggested that the IL efforts of the school had resulted in the desired academic inclusion of LHIs. The study findings confirmed those of Alasim and Pau (2018), who established during their study that LHIs who were educated in ICs had higher academic achievement and better academic experiences.

The teachers, during their FGD, underscored the significance of tailoring their instructional approaches to cater to the diverse needs of LHIs. They highlighted strategies

aimed at enhancing academic experiences of LHIs. For instance, teachers emphasized the importance of speaking loudly and clearly during classroom instruction.

T12OI23 shared:

*"LHIs benefit from clear speech. Speaking loudly with proper mouth shapes ensures that they can follow the lesson effectively through lip-reading. So, we try as much as we can to articulate words and letters quite well. Like for me, I teach English, I even have to go through the content to teach again and again to see where the learners with hearing difficulties may be challenged depending on my pronunciations. I confirm pronunciations from the dictionary and google"*

This practice aligned with the broader objective of ensuring that some of the LHIs, who were hard of hearing, could perceive loudly spoken content, while those who were post-lingually deaf could lip-read. Furthermore, the teachers acknowledged the value of facing learners when addressing them. Maintaining visual contact, the teachers said, facilitated lip-reading, which enhanced LHIs' comprehension. This demonstrated a proactive effort to bridge communication gaps that LHIs might encounter.

The teachers also recognized the significance of proper pronunciation and articulation of letters and words to facilitate lip-reading. They noted that accurate pronunciation of words enabled LHIs to decipher spoken content more easily. This approach not only promoted effective communication but also supported LHIs' engagement during the learning process.

T6OI23 stated:

*"Facing LHIs directly while speaking allows them to read our lips, which contributes to their understanding. We have those who can hear when the voice is raised to some level of loudness. Then, there are also those who cannot hear at all but are able to read lips as one talks. Also, while facing them, they are able to punctuate the sentences from the teacher's facial expressions, for instance, when asking questions, when exclaiming, when expressing doubt, confusion or*

*interesting scenarios or stories. It is challenging sometimes, yes, but we try. On my part, I really try to face learners."*

T14OI23 added:

*"It is very important to talk while facing the learners. When you face away, even if you are talking, some LHIs assume that you are not addressing them, so they disengage. The communication is broken. I sometimes experience this and so I have to reconnect with them. Not facing them may also make them lose interest in the lesson and even in the you, the teacher, sometimes."*

T5OI23 shared his experience:

*"When I came to this school, I was not oriented to teaching in ICs. Sometimes I could find myself talking as I, may be, draw or write something on the board. On turning around, I could definitely see some learners lost or confused about what was going on. I learnt during my first days that is important to face them as you talk because the classes have LHIs too."*

#### **4.4 Instructional Strategies for the Inclusion of Learners with Hearing Impairments**

The second objective sought to establish the instructional methods that enable the inclusion of LHIs into ICs. The HT provided insights into the various instructional strategies employed by the teachers to engage all learners effectively. He said:

*"We do lesson preparation using the curriculum. We follow the schemes of work. Teachers employ various strategies during lessons to ensure that the content is understood by the learners. This includes: group discussions, project-based learning, practical demonstrations and any other that a teacher chooses to use."*

The diverse approaches, such as project-based learning and peer teaching, emphasized the commitment of the school to accommodating different learning preferences and styles that ensure active participation and engagement of all the learners in a classroom. Classroom observation found that class discussions, group discussions, pair work and peer teaching were frequently utilized. These methods encouraged active participation and peer interactions, contributing to IL. Teachers at the Inclusive Primary School used a

wide range of instructional methodologies to guarantee the inclusion of LHIs, according to the results of the FGD. Teachers emphasized the advantages of collaborative teaching, which became a popular approach. This strategy supported the more general objectives of encouraging social integration and all-encompassing education.

T1OI23 explained:

*“Collaborative teaching is advantageous for LHIs. It fosters interaction with peers, enabling them to learn through discussions and teamwork. It not only promotes learning but also learner-to-learner engagement.”*

Body language and gestures were emphasized as powerful communication tools.

Teachers realized that gestures can immediately communicate meaning and transcend language barriers.

T3OI23 elaborated:

*“Gestures play a key role in the teaching of a learner, including LHIs. LHIs can understand concepts through visual cues, even without relying solely on verbal communication. Combining this with other aspects of communication gives a lot of meaning to the communicated content when LHIs are included.”*

The aforementioned study demonstrated teachers' dedication to using a variety of communication channels. This finding was consistent with those of Gutierrez-Sigut, *et al.* (2022) who noted that when the faces of teachers do not express any visual cues as they communicate instruction, learning uptake by the LHIs is highly and negatively impacted.

Visual aids, for the LHIs, were an essential component of teaching. The LHIs stated that visual aids played a crucial role in helping them comprehend the material. These tools supported a multimodal learning environment and supplemented spoken instructions. One LHI emphasized the value of visual aids and their importance in ICs.

L2OI23 said:

*“Teachers use many examples to teach subjects. They come with pictures, drawings; sometimes we see video of things like in Science. When I see something, I remember. I remember long time. When teacher use nothing, I remember little and forget fast.”*

Teachers acknowledged the value of visual representations in enhancing LHIs' understanding of abstract concepts.

T10OI23 remarked:

*“Visual aids, such as charts and diagrams, are invaluable. LHIs relate to images, which makes the lesson content more accessible and memorable to them. I try my best to make sure that I have such during my lessons but sometimes I fail to get the best ones to use.”*

This strategy reflected a thoughtful effort to accommodate diverse learning styles. The incorporation of varied teaching methods was also evident during the FGD with the teachers. Kibuuka (2017) advised that visual aids should be made available to all learners to remove any barriers to learning so that they all can access learning during the instruction of lessons and ensure that all learner needs are addressed.

T12OI23 said:

*“We also use approaches such as project-based learning, excursions, role play and the use of songs. These methods are beneficial to all learners, not only the LHIs because they make learning more practical, fun and concretize the abstractness of some concepts, for instance, in Mathematics. So, depending on the content to be taught, one plans accordingly including the strategies of content delivery.”*

By accommodating the many learning styles of LHIs, these techniques promoted involvement and active engagement. During the semi-structured interviews, the LHIs further confirmed these findings. In order to guarantee that LHIs had a worthwhile and

high-quality education, the educational strategies and tactics employed were essential. The most common teaching method employed by the ICs was group talks. Upon further probing on why this was the case, T14OI23 explained:

*“First, for me, and I think it may apply to my colleagues too... this method ensures that all the learners are following the lesson because one has to do what corresponds to the content just taught. This way, no learner remains to idle or disturb the class during the lesson. In addition to this, this method allows all learners to engage in dialogue, share ideas and learn collaboratively. LHIs benefit from this interactive approach, as it encourages communication and knowledge exchange among peers.”*

When questioned about the teaching style that their professors used most frequently, one LHI brought up "group discussions," emphasizing how their teachers used this tactic. The use of music as a teaching tool represented a multimodal method of instruction.

T10I23 said:

*“By leveraging on both auditory and visual senses, songs enhance LHIs’ engagement and understanding of the subject matter. Through rhythm and melody, complex concepts can be simplified, aiding comprehension. Songs also add fun to learning and learners always enjoy when songs are used.”*

During their semi-structured interview, the LHIs concurred that songs made classes enjoyable and helped to clarify some of the more complex learning material. L4OI23 noted:

*“Lessons with songs are really enjoyable. Songs make it easy to master what teacher has teach. It is hard to forget lesson if you know song well.”*

In Mathematics and Science subjects, teaching formulae is a crucial instructional strategy. Both learners with and without HIs need a clear grasp of formulae to excel in these subjects. The inclusion of this strategy demonstrated that the school was committed to ensuring the provision of equitable opportunities to learning to every learner. L8OI23

indicated: *"Teachers give us many formulas in Mathematics and Science that help us to solve questions with much ease."* This signified the adoption of this approach to teaching.

Peer teaching, where learners teach and learn from each other, was also acknowledged by the respondents as one of the effective methods employed by the teachers. This approach fosters a sense of community and support among the learners. It encourages active participation and interaction with peers, contributing to holistic educational experience by the LHIs. L1OI23 shared, *"Sometime we are taught by our fellow peers who have better understood the concept,"* emphasizing the collaborative nature of ICs. L2OI23 added:

*"Sometimes teacher tell pupil who understand better to explain to all of us. When pupil explain, I understand because he use easy gramma and make me feel I can try too because I am pupil too. Also, pupil repeats many time."*

These insights affirmed the fulfillment of the second research objective, showcasing the various instructional strategies employed by the teachers to facilitate the effective inclusion of LHIs within the ICs. Teaching and learning resources available for use by the teachers essentially enabled the creation of an IL environment that catered to the different teaching and learning methods that were inclusive of LHIs. Classroom observation, teachers FGD and LHIs interview schedule found the availability and access to resources such as textbooks, ICT tools, charts, maps, number cards, word cards and improvised materials and realia being used as instructional aids that indicated the efforts made by the school to provide a rich array of materials that support diverse teaching and learning styles of diverse learners. These resources catered to the different learning styles and facilitated content comprehension by the LHIs. The HT said that the government was

their main source of funding that afforded them the various teaching and learning resources. The HT said:

*“The government supports us a lot with funding to purchase the required teaching and learning resources for the various learning areas. We cannot manage without the funding because this is an inclusive school whose needs are way beyond the ordinary schools.”*

L12OI23, during their semi structured interview mentioned that the school administration gave them textbooks.

*“We are given subject textbooks here at school. In all subjects. It makes learning easy. Even referring after the lesson and further practice.”*

#### **4.5 Classroom Modifications and Accommodations for Inclusion**

Accessible classroom environment and physical arrangement were highlighted as key factors that enabled inclusion of LHIs. Physical provisions such as well-lit and adequately ventilated rooms, appropriate design of doors and windows to prevent or minimize distractions, tiled floors, cemented walls and overall conducive surroundings positively impacted the ability of LHIs to engage in the learning process. The HT described classroom modifications and accommodations in place to enable the inclusion of LHIs, citing the provision of preferential seating, proper lighting and minimized distractions, as was indicated by his response below:

*“Classrooms are arranged to allow for preferential seating of LHIs, they are well-lit and adequately ventilated. Windows are raised above the heads of learners and doors have glass above the heads when learners are seated. These are to prevent distractions and disruptions during lessons. The walls and floors are well done.”*

This demonstrated the efforts put by the school to create a conducive learning environment that supports the needs of LHIs. The design of doors and windows to

minimize distractions aligned with principles of universal designs for learning, fostering an environment that was conducive to all learners. These modifications were also noted by the teachers and the LHIs during their FGD and semi structured interviews respectively. The same modifications were noted during the classroom observations conducted in Grades 5 and 7 and 8. The classroom observations conducted also provided insights into the classroom modifications and arrangements in place to facilitate the inclusion of LHIs. In each class observed, distinct modifications were noted to create an environment conducive to learners. The seating arrangement in each class was varied, accommodating the preferences of both teachers and learners. Age-appropriate desks that were arranged in threes or in groups and this supported interactive discussions and peer teaching, thus, promoting collaborative learning. This flexible arrangement allowed the LHIs to engage effectively with their peers promoting better academic experiences.

The FGD highlighted the role of classroom modifications and accommodations in facilitating the inclusion of LHIs.

T9OI23 said:

*“The desks are arranged to allow for preferential seating. LHIs sit in front of the class to allow them follow instruction and lip-read as the teacher teaches. The classes are also well ventilated and well-lit to enable proper visibility in the whole class.”*

The implementation of IEPs was discussed as a fundamental approach that ensured that no learner was left behind. Teachers recognized the importance of IEPs in tailoring instruction to the unique needs of each LHIs.

T11OI23 elaborated:

*“IEPs guide us in addressing the specific requirements of LHIs. We adjust our teaching methods to ensure their learning needs are met. The IEPs also help us to tailor support to the individual needs of the learners.”*

The teachers also stressed the value of engaging visual senses of the LHIs through modifications. The use of visual aids was cited as a practical way to enhance their comprehension.

T5OI23 explained:

*“Visual aids engage LHIs visually. This helps them to grasp complex concepts more effectively. LHIs being visual learners, they benefit a lot when visual aids are used.”*

This approach underscored the commitment put by the teachers to adapting the learning environment to suit needs of the LHIs. The research established during the semi-structured interview with the LHIs that the implementation of IEPs stood out as a critical intervention to support the education of LHIs. IEPs tailored educational strategies to the specific needs of LHIs. This individualized approach ensured that each learner had his or her strengths, needs and challenges addressed.

L11OI23 said:

*“Teachers support us when we have challenge. Like me, I have problem with English. Teacher help me improve my grammar. Also, I sit in front class, because if I am back, I don’t hear teacher. Some learners also block my face, so I cannot see front well.”*

Preferential seating as a classroom modification benefited LHIs by reducing distractions and enhancing their engagement by placing them in front of the classroom. This strategy was mentioned by both the teachers and the LHIs during their interviews. Strategic

placing of LHIs in optimal positions within the classroom ensured that they had better focus on the teacher and the instructional materials. This classroom modification also allowed LHIs who were hard of hearing to perceive sound as their post-lingually deaf counterparts lip-read and followed instructions. L1OI23 said:

*“I like to sit in front. I can hear the teacher very well but when I sit at the back, I cannot hear anything. I just see the mouth moving.”*

These insights provided a comprehensive view of the classroom modifications and arrangements that were deliberately made to ensure that the LHIs were included, aligning with the research objective and highlighting commitment to IL.

#### **4.6 Challenges that Hinder the Implementation of Inclusive Learning by Teachers**

This objective sort to identify the challenges faced by the teachers that hindered the implementation of IL. The HT highlighted some of the challenges they faced while promoting IL. The HT said:

*“We have challenges that hinder proper inclusion of LHIs. For instance, there is inadequacy of trained staff to support all learners effectively, lack of assistive devices, no sign language interpreters, no teacher trained in Sign Language. The classes are very big, which hinders teachers’ quality attention to each learner.”*

These pointed to the areas that required focus for IL to be implemented successfully. The realization of an inclusive and fair learning environment would be hampered if these issues were not resolved. In particular, the lack of qualified interpreters and assistive technology restricts LHIs' ability to participate in and access educational materials. The difficulties teachers faced in promoting IL for LHIs were further explored in the FGD.

One significant issue that surfaced was time management. It was specifically determined that the typical lesson length was insufficient to meet the learning requirements of LHIs.

T3OI23 expressed:

*“The limited lesson time of 35 minutes poses great challenges when teaching an inclusive class. LHIs require additional time for processing information and also to allow me as the teacher to attend to his or her learning needs. This make me sometimes to just move on with those are following because at the end of the day, I must also finish the syllabus in time.”*

T6OI23 added:

*“The classes are big and diverse. The time is not enough. This is a day school, so, we are here for the day only. However much one tries, there still is some lag in content coverage. These realities force us to sometimes ignore more demanding cases of learners.”*

Teachers pointed out that one major issue was that LHIs were not given enough attention in the ICs. Teachers understood the necessity for specialized instruction that addressed the particular requirements of LHIs.

T10OI23 shared during the FGD:

*“We often lack effective teaching strategies for LHIs. As a result, they may not receive the attention they require during lessons. Most of us are not trained in SNE or IE. We get support from the few who are trained amongst us but during lessons, we are alone.”*

This demonstrated a deficiency in IL instructional resources and teacher preparation. The educators also recognized that LHIs may experience problems with their self-esteem as a result of their impairment. The teaching process became more complex and challenging as a result of this emotional component of inclusion.

T12OI23 emphasized:

*“LHIs may experience low self-esteem. This is because of their condition. Creating a supportive environment is crucial to boosting their confidence and participation. Without doing that, most of them lack the morale to study or even work hard like their peers.”*

This result emphasized the necessity of addressing LHIs' overall well-being in addition to their academic difficulties. There was also discussion of the difficulties caused by big class sizes. Teachers recognized that overseeing a big class size could make it more difficult for them to give LHIs individualized attention.

T8OI23 said:

*“Our classes are so big. This limits quality contact time between me and the LHIs who require more time. I try to support them after classes with IEP – like most of us do – but still, this is not enough. You will still find gaps between them and the regular learners.”*

This problem was made worse by inadequate teaching aids, which reduced the efficacy teaching practices for the LHI.

T2OI23 said:

*“The school tries to provide the teaching aids. They are however not enough to support LHIs. We do not have speakers in classes (which are very big), we lack projectors to help us use audio-visuals as teachings. Most of the time, we create or make a-do with what is available but this does not take care of the learning needs of LHIs appropriately.”*

The classroom observations found that the classes were very big and the teachers struggled to reach every learner within the stipulated lesson time of 35 minutes. Also, LHIs could miss out on what the teachers were saying or commenting on when the teachers were not at the front of the class. One-to-one attention to the LHIs was not observed during the classroom observations.

Training and preparation are essential for professional leaders and therefore, competent school leaders ensure their schools are inclusive, safe, and healthy and promote the growth of both learners and teachers (UNESCO, 2024). Inclusive schools require the leadership of an inclusive leader (UNESCO, 2025). The school administrator, who held the core responsibility of translating policies, steering and enabling their implementation by especially supporting the teachers lacked the requisite knowledge in running an inclusive school. Even though he was still new at the school, he was not new in practice as a teacher and as a leader but he had not the training, neither did he have the on-job experience to effectively support the implementation of IE and the inclusion of LHIs. Lack of adequate support from the school administration came out during the FGD with the IC teachers, who pointed that they did receive the necessary support required for the effective inclusion of the LHIs. The interview schedule did not however confirm this point from the FGD on supporting IE. It was however noted that the Head Teacher had come from a background of teaching in regular schools and this school was his first of an inclusive kind of school.

The study established the challenges to include inadequate number of trained staff. This was the biggest challenge since the school requires to have teachers who are trained to effectively handle and address the needs of LHIs in ICs – the teachers lacked specialized teaching methods to support the LHIs in the ICs. The study however revealed that only a countable number of the teachers had training in SNE. This majorly affected how they instructed in the ICs, and also the reason why some of them felt overburdened by the work since they did not have the requisite skills and knowledge to handle it. This has direct effect on learning uptake by the LHI, especially, because they have specific unique

learning needs that require specific training in order to effectively support them. The absence of any sign language interpreters coupled by the inability of the teachers to use sign language during instruction explained the poor academic experiences and performance and even disinterest in learning by a few of them who were deaf.

LHIs are visual learners and thus, the lack of assistive devices and EdTechs not only affected their performance in class but also directly negatively affected their daily learning, where, a majority of the teachers preferred to apply the use of verbal instruction with non-engaging aids like simple charts and the use of text books. This therefore meant that insufficient attention to the needs of LHIs was given during the lessons – and was evident during the lesson observations. LHIs who were completely deaf were evidently ignored or notified to check with their desk-mates by the teachers. There were no speakers in the classrooms either that could project the teachers' voices as they instructed. The LHIs who did not sit preferentially in the classes were observed to completely zone-out or copy from their peer neighbour desk-mates. There was too much time wasted during the lessons, especially when trying to engage the LHIs. This affected quality contact time between the teacher and the LHIs during the lessons and was blamed on their inability to perceive sound, yet, the teachers on the hand did not know how to communicate the content in sign language that would be understood by the LHIs. Also, the very big class sizes affected the quality of teacher: learner engagement during the lessons since there were no teacher aids available at the school to support the teachers in the classrooms. As a result of these communication challenges between the teachers and the LHIs and even their classmates, some of the LHIs had self-esteem issues, which was concerning to the teachers but they did not know how help the LHIs.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter consists of the summary of key findings, conclusions, recommendations and recommendations for further research.

#### **5.2 Summary of Key Findings**

Data analysis revealed the following key findings:

##### **5.2.1 Inclusive Education Policies and Implementation:**

The inclusive primary school studied had established IE policies, reflecting a commitment to create a learning environment that was inclusive. All classes at the school were inclusive of LHIs, promoting equal access to education. However, there were challenges that hindered the fluid implementation of IL that included not all teachers being trained in IE, potentially affecting the quality of instructional access by LHIs in the ICs.

##### **5.2.2 Instructional Strategies for Inclusion:**

Teachers employed various strategies like speaking loudly and clearly, maintaining visual contact and emphasizing proper pronunciation to facilitate effective communication and learning for LHIs. Collaborative learning, discussion groups, project-based learning, practical demonstrations, use of visual aids and realia and use of songs were some of the varied instructional methods that were used to engage all learners, promoting social integration and diverse learning styles.

### **5.2.3 Classroom Modifications and Accommodations for Inclusion:**

Classroom modifications such as preferential seating, proper lighting, minimized distractions from raised windows above the heads and painted doors, and accessible physical arrangements created a conducive learning environment for the LHIs. IEPs were used to tailor instruction to the needs of LHIs, with a focus on visual aids and differentiated instructional methods.

### **5.2.4 Challenges and Support for Inclusive Learning**

Challenges included inadequate number of trained staff, lack of assistive devices, no sign language interpreters and insufficient attention to the needs of LHIs during lessons. Poor time management during lessons, lack of specialized teaching methods and addressing self-esteem issues of LHIs were areas of concern.

### **5.2.5 Inclusion and Interaction**

Interaction with peers without HIs motivated LHIs to learn and enhanced their academic experiences. External professionals collaborated with teachers to provide additional support for the LHIs. The large class sizes and limited teaching aids posed great challenges for IL since one-to-one contact time between the teachers and learners was by far reduced.

## **5.3 Conclusions**

This research resulted into three main conclusions. The interview schedule with the HT revealed the commitment of the school to IE policies and efforts to accommodate LHIs in all the classes were commendable steps towards fostering an IL environment. However,

the challenges of inadequate staff training and resource limitations required attention so that IL could be successfully implemented. Providing IEPs, diverse instructional methods and external professional collaborations demonstrated the dedication of the school to supporting LHIs in their academic journey and promoting their holistic development. The LHIs during their semi-structured interview confirmed that they were very positive and appreciative of IL since it helped to get them challenged by their peers to do better and they also drew immense support from their peers without HIs. The LHIs also strongly acknowledged the extra mile of support that they got their teachers.

The FGD with the IC teachers generated valuable insights for enhancing IL practices at the Inclusive Primary School. The dedication of teachers in employing diverse instructional strategies, implementing classroom modifications and addressing challenges reflected their commitment to creating an IL environment. The LHIs said that they were preferentially placed in class for proximity to the teachers and the teachers audibly spoke with clarity while facing them. These strategies were key to the inclusion of LHIs and promoted IL. To enhance the quality of IL, addressing challenges and building on existing support mechanisms would be pivotal.

The FGD also pointed the need for targeted teacher training in IE that would inform better IL practices in ICs and the allocation of adequate resources to support the inclusion of LHIs effectively. These would help to address the challenges faced by the teachers as they discharge their duty of instruction and learner support. The FGD findings also highlighted both the progress and the areas that required further attention in the realm of IL for LHIs. Teachers voiced crucial perspectives for shaping future initiatives that

prioritize the academic, social and emotional growth of LHIs within the primary school context.

#### **5.4 Recommendations**

- i. The Teachers' service Commission should recruit adequate number of professionally trained teachers and institute the prompt training of current general education teachers in inclusive schools.
- ii. More funding should be provided by the government, through the Ministry of Education, to inclusive primary schools so that they can acquire sufficient teaching and learning materials to facilitate the successful integration of LHIs.
- iii. The government, through the MoE and working with the Homabay County government, should ensure that classes are decongested in order to attain the standard teacher: learner ration so that LHIs can draw quality services from the ICs.
- iv. To reduce noise during classes, the school administration should make sure that all of the seats are rubberized and there should be long window curtains put in the classrooms.

#### **5.5 Recommendations for Further Research**

- i. The researcher therefore recommends that research should be conducted to investigate the role played by parents to support the inclusion of their children with HIs into inclusive schools.
- ii. Research should be conducted to ascertain the role of education officers in the promotion of and implementation of IL.

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**APPENDICES**  
**APPENDIX I: RESEARCH INSTRUMENTS**

**Interview Guide for the Head Teacher**

1. What is your Professional Qualification: \_\_\_\_\_?

2. School enrolment: \_\_\_\_\_

Boys: \_\_\_\_\_

Girls: \_\_\_\_\_

3. Teaching staff: Male \_\_\_\_\_

Female: \_\_\_\_\_

4. Teacher Assistants/Aids: Male: \_\_\_\_\_

Female: \_\_\_\_\_

5. Are you trained in the area of IE? \_\_\_\_\_

6. Do you have any IE policies in this school? \_\_\_\_\_

7. When did the school begin implementing IE? \_\_\_\_\_

8. Are all the classes inclusive of LHIs? \_\_\_\_\_

9. Are the teachers trained in IE? If not all, how many are trained in IE/SNE?  
\_\_\_\_\_

10. When LHIs are admitted to school, do they know sign language?

Yes  No

11. What teaching and learning resources do you have that enable inclusive teaching and learning?  
\_\_\_\_\_  
\_\_\_\_\_

12. How many learners have HIs in the school? \_\_\_\_\_

13. Which categories of LHIs do you have in this school? (check box)

Deaf       Hard of Hearing       Both

14. Are LHIs included in all classes? \_\_\_\_\_

15. How long does a lesson last? \_\_\_\_\_

16. At what time do lessons start and at what time do lessons end?

Starting time: \_\_\_\_\_      Ending time: \_\_\_\_\_

17. What are the methods of instruction used by the teachers in ICs?

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18. What classroom modifications and accommodations are in place to enable the inclusion of LHIs?

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19. What are some of the challenges of IL that teachers and pupils may have reported that they encounter? \_\_\_\_\_

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20. Do the teachers develop IEP for the LHIs? \_\_\_\_\_

21. How are the LHIs supported to enhance their academic experiences and performance?

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22. Do you administer same exams to all learners?

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23. Do you grade the learners when they take exams? \_\_\_\_\_

24. What is your opinion on the inclusion of LHIs?

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25. Do any external professionals come to collaborate with the teachers to support the LHIs?

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THANK YOU FOR YOUR PARTICIPATION.

## **Focus Group Discussion Guide for Teachers**

1. What is your professional qualification?
2. Are you trained in IE/SNE?
3. What is your work experience in an inclusive school?
4. How many classes include LHIs?
5. How do you support the LHIs to ensure that they get quality IL?
6. What are some of the accommodations and modifications that have been put in place to enable the inclusion of LHIs into ICs?
7. What methods of instruction do you use when teaching in ICs?
8. What are some of the challenges that you face when teaching in ICs with LHIs?
9. Are the teaching and learning resources adequate?
10. Do you administer the same exam to all learners?
11. i) Do you make IEPs for LHIs?  
ii) If yes, do you make it alone or in a team of experts?
12. Do you receive any support from the school administration in the implementation of IE?

THANK YOU FOR PARTICIPATING.

## **Semi-structured Interview Guide for Learners with Hearing Impairments**

1. Do you learn in ICs?
2. What are the methods of instruction used by the teachers when they teach?
3. Do you have sign language interpreters in your classrooms?
4. Please describe your own academic experiences with IL?
5. How do your teachers, peers and parents support you to enable your learning?
6. In your opinion, do you think the school administration has enabled your adequate accommodation into the classes? Explain.
7. In your opinion, would you rate IL in the ICs as of high quality? Explain.
8. Do you take the same exams as your classmates who have no HIs?
9. Are you added some more time when taking your exams?
10. Are you graded when you do exams?

THANK YOU FOR PARTICIPATING.

## Classroom Observation Checklist

Class: \_\_\_\_\_ Subject \_\_\_\_\_ Date: \_\_\_\_\_

1. What is the seating arrangement?

Observer's comments

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2. What are the observable classroom modifications and arrangements put in place to enable the inclusion of LHIs?

Observer's comments

---

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3. What are the notable methods of instruction used by the teacher?

Observer's comments

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4. What are the resources being used by the teacher?

Observer's comments

---

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5. What are the notable challenges experienced by the teacher as s/he instructs IC?

Observer's comments

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## **APPENDIX II: CONSENT FORM**

### **Introduction**

Hi. My name is Odhiambo Lucy Atieno, a Masters student at Kenyatta University. I am here to conduct research titled: **“PERSPECTIVES OF LEARNERS WITH HEARING IMPAIRMENTS TOWARDS INCLUSIVE LEARNING AT AN INCLUSIVE PRIMARY SCHOOL HOMA-BAY COUNTY KENYA.”** The study is in partial fulfilment of my academic requirements. By participating in the study, you will provide vital information that may help to provide important information to the Ministry of Education policy makers on the necessary support systems to institute and appropriate funding in order to make inclusion of learners with Hearing Impairments a success. The study may also inform the Homa-Bay County Ministry of Education and Education Board on the necessary steps to take to make inclusion of Learners with Hearing Impairments a reality. Other institutions of learning may benefit from the study findings by applying the recommendations at their levels.

### **Purpose**

To investigate the perspectives of learners with hearing impairments towards inclusive learning in inclusive classrooms at an Inclusive Primary School in Homa-bay County, Kenya.

### **Procedure to be followed**

If in agreement, you will respond to some questions through either a self-administered questionnaire, interview schedule or focus group discussion guide. The study participation will last approximately 30 minutes.

**Benefits**

There is no direct benefit to you anticipated from participating in this study. However, it is hoped that the information gained from the study will help to identify strategies and opportunities for improving the inclusion of learners with hearing impairments.

**Risks and Discomforts**

Some of the questions may make you uncomfortable or upset, but you are free to decline to answer them if you do not wish to or to leave the group at any time.

**Confidentiality**

The information obtained will be kept confidential. Your name will not be collected or linked to the data that you will give and due to the nature of the data, it may be possible to deduce your identity. However, there will be no attempt to do so and your data will be reported in a way that will not identify you.

**Rights**

Your participation is voluntary. You have the right to decline to participate or to withdraw at any point in this study without any penalty or loss of benefits to which you are otherwise entitled.

**Contact Information**

In case of any questions or concerns about this study, you may contact Dr. Isanda Becky on Mobile phone number: 0722984061 or Dr. Hudson Ouko Ong'ang'a on Mobile phone number: 0720348577 or Kenyatta University Ethical and Review Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke or atienoodhiambo@gmail.com.

**Participant Statement (Consent)**

The above information regarding my participation in the study is clear to me. I have been given a chance to ask questions and my questions have been answered to my satisfaction. My participation in this study is entirely voluntary. I understand that my record(s) will be kept private and that I can leave the study at any time.


Participant's Signature or Thumb print: \_\_\_\_\_ Date: \_\_\_\_\_

**Investigator's Statement**

I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the risks and benefits involved.

Investigator' Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**APPENDIX III: GRADUATE SCHOOL RESEARCH APPROVAL LETTER**

  
**KENYATTA UNIVERSITY  
GRADUATE SCHOOL**

E-mail: [dean-graduate@ku.ac.ke](mailto:dean-graduate@ku.ac.ke) P.O. Box 43844, 00100  
Website: [www.ku.ac.ke](http://www.ku.ac.ke) NAIROBI, KENYA  
Tel. 020-8704150

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**Internal Memo**

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**FROM:** Dean, Graduate School **DATE:** 15<sup>th</sup> July, 2022

**TO:** Ms. Odhiambo Lucy Afieno **REF:** E55/38474/2017  
C/o Department of Early Childhood  
& Special Needs Education

**SUBJECT: APPROVAL OF RESEARCH PROPOSAL**

=====

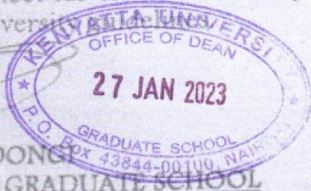
This is to inform you that Graduate School Board, at its meeting on 20<sup>th</sup> June, 2022, approved your Research Proposal for the M.Ed. Degree entitled, "Academic Experiences of Learners with Hearing Impairments in Inclusive Settings at Oriang', Homa-Bay County, Kenya."

You may now proceed with your Data collection, subject to clearance with the Director General, National Commission for Science, Technology & Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and Progress Report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your thesis before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University.

Thank you

  
**27 JAN 2023**

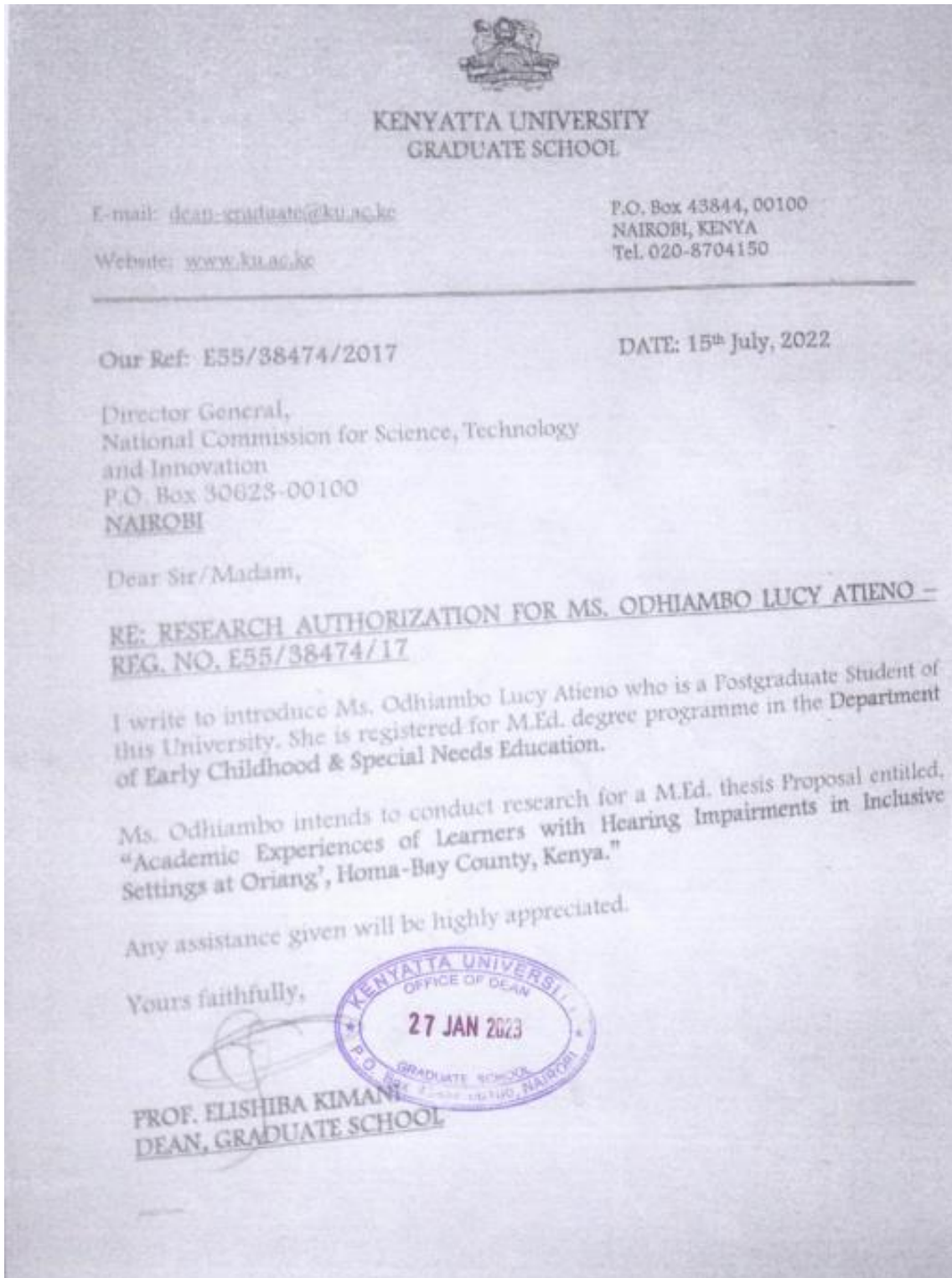
**JOHN M. ODONGI**  
**FOR: DEAN, GRADUATE SCHOOL**

CC. Chairman, Early Childhood & Special Needs Education Department

Supervisors:

1. Dr. Isanda Becky  
C/o Early Childhood & Special Needs Education Department  
**Kenyatta University**
2. Dr. Hudson Ouko Ong'ang'a  
C/o Early Childhood & Special Needs Education Department

**APPENDIX IV: GRADUATE SCHOOL RESEARCH AUTHORIZATION  
LETTER**



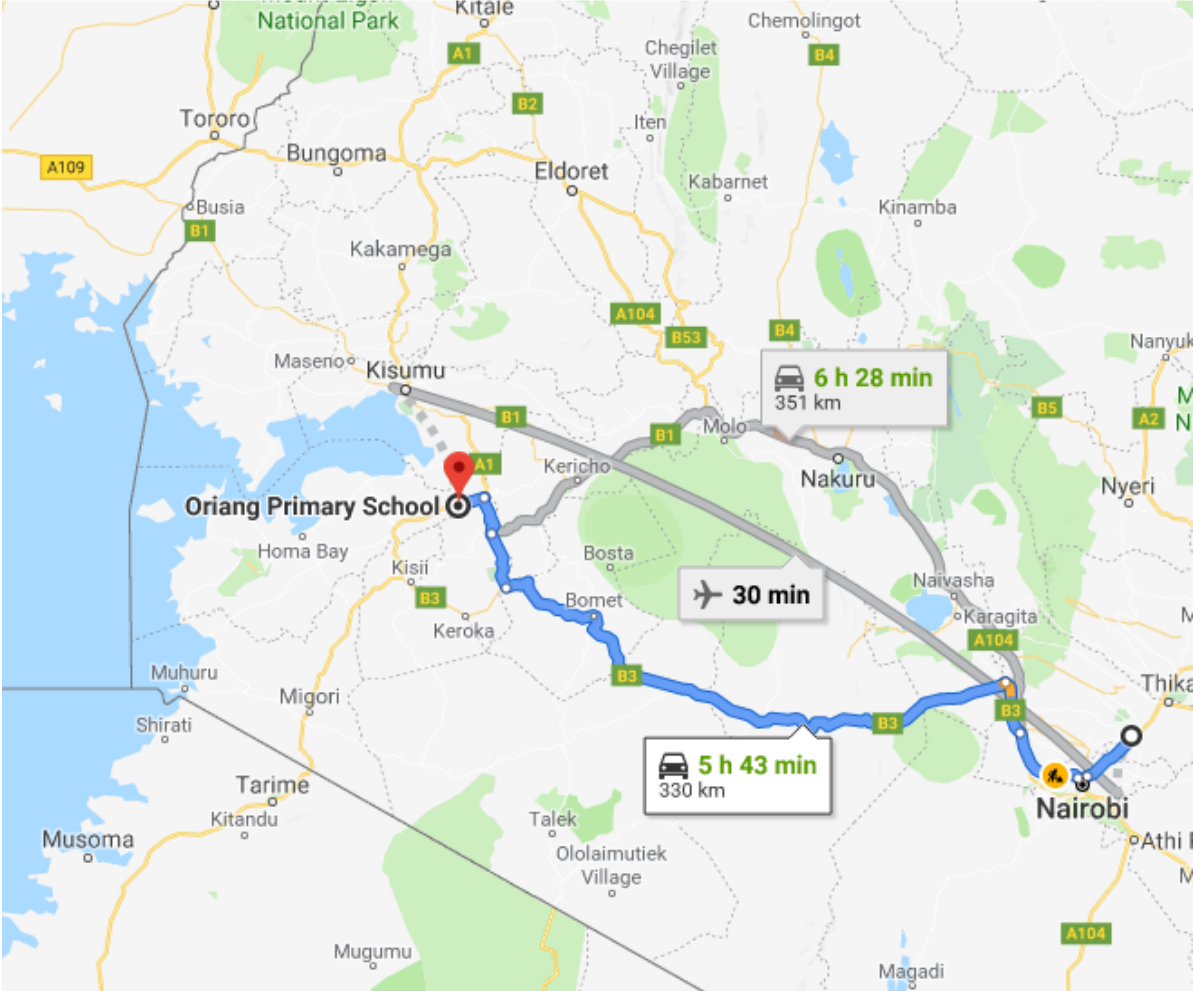
**APPENDIX V: STUDY AREA MAP**

6.9713152 to oriang primary school, Homabay

Drive 330 km, 5 h 43 min

Cancel

otes here.




# APPENDIX VI: RESEARCH PERMIT FROM NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 266175

**RESEARCH LICENSE**




This is to Certify that Ms. Lucy Odhiambo of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Homabay on the topic: **PERSPECTIVES OF LEARNERS WITH HEARING IMPAIRMENTS TOWARDS INCLUSIVE LEARNING: A CASE OF ORIANG' PRIMARY SCHOOL HOMA-BAY COUNTY KENYA** for the period ending : 17/July/2024.

License No: NACOSTI/P/23/27427

Applicant Identification Number: 266175

Director General  
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

**THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)**  
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

**The National Commission for Science, Technology and Innovation**, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

**CONDITIONS OF THE RESEARCH LICENSE**

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way:
  - i. Endanger national security
  - ii. Adversely affect the lives of Kenyans
  - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
  - iv. Result in exploitation of intellectual property rights of communities in Kenya
  - v. Adversely affect the environment
  - vi. Adversely affect the rights of communities
  - vii. Endanger public safety and national cohesion
  - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and  
Innovation(NACOSTI),  
Off Waiyaki Way, Upper Kabete,  
P. O. Box 30623 - 00100 Nairobi, KENYA  
Telephone: 020 4007000, 0713788787, 0735404245  
E-mail: dg@nacosti.go.ke  
Website: www.nacosti.go.ke

**APPENDIX VII: COUNTY RESEARCH AUTHORIZATION**



REPUBLIC OF KENYA  
MINISTRY OF EDUCATION  
State Department for Basic Education

Telegrams: "SCHOOLING" Homa Bay  
Telephone  
When replying please quote  
[cdehomabay@gmail.com](mailto:cdehomabay@gmail.com)

COUNTY DIRECTOR OF EDUCATION  
HOMA BAY COUNTY  
P.O BOX 710  
HOMA BAY

REF: MOE/CDE/HBC/ADM/40/VOL.V/82

DATE: 4<sup>TH</sup> AUGUST, 2023

**Ms. Lucy Odhiambo**  
**Kenyatta University**  
**NACOSTI/P/23/27427**

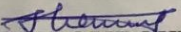
**RE: RESEARCH AUTHORIZATION.**

Following your application for authority to carry out research on "**Perspectives of learners with hearing impairment towards inclusive learning: A case of Oriang' Primary School Homa -Bay County Kenya**" I am pleased to inform you that you have been authorized to undertake research in Homa Bay County for the period ending **17<sup>th</sup> July, 2024.**

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 County Director of Education Office after completion both the soft copy and hard copy.

Thank you in advance.

FOR COUNTY DIRECTOR OF EDUCATION  
HOMA BAY COUNTY  
P.O.BOX 719 - 40300 , HOMA BAY.  
Email: [cdehomabay@gmail.com](mailto:cdehomabay@gmail.com)

  
**MR. SHEM OMBONYO**  
**FOR: COUNTY DIRECTOR OF EDUCATION**  
Cc.

✓ **COUNTY COMMISSIONER**  
**HOMA BAY COUNTY.**

