

**LEARNING NEEDS AND COMPLIANCE TO ACADEMIC TASKS OF LEARNERS
WITH HEARING IMPAIRMENT IN SELECTED INCLUSIVE
PRIMARY SCHOOLS IN NAIROBI
COUNTY - KENYA**

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In Partial Fulfillment of the Requirement for the Degree
Master in Special Needs Education

By
Keragia Phyllis Bosibori
MSE/18346/111/DF

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DECLARATION A

`This thesis is my original work and has not been presented for a degree or any other academic award of any university or institution of learning.'

KERAGIA PHYLLIS BOSIBORI

Signature

Date

DECLARATION B

`I/WE confirm that the work reported in this thesis was carried out by the candidate under my/our supervision.'

Name and Signature of Supervisor

Name and Signature of Supervisor

Date

Date

DEDICATION

I dedicate this thesis firstly to the Almighty God, my dear husband J. Ombati, children Sheilah, Yvonne, Faith, Dorcas and Emmanuel for moral and financial support they have given me. My dad Mr. Keragia James and mum Askah Moraa, sister in-law Leah for typing and editing the work.

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ACRONYMS AND ABBREVIATIONS

KIE- Kenya Institute of Education

KISE- Kenya Institute of Special Education

KNAD- Kenya National Association for the Deaf

KSDC- Kenya Society for the Deaf Children

EFA- Education For All

SE- Signed English

SEE- Signed Exact English

KNEC- Kenya National Examination Council

KCPE- Kenya Certificate of Primary Education

ASC- Academic Self Concept

ABSTRACT

Hearing impaired learners have a range of learning needs which have a great and positive significance in their level of compliance to academic tasks. This study determined the correlation between degree of learning needs and level of compliance to academic tasks of the hearing impaired. The study adopted the following research objectives to; Determine the demographic characteristics of the respondents in terms of gender, age, educational qualifications, number of years teaching experience and position held in school. Determine the degree of learning needs and the level of compliance to academic tasks of learners with hearing impairments and to establish if there is a significant relationship between the variables . The study was based on the eco-system theory (Bronfenbrenner 1979) on the bio-ecological perspective on human development, which views hearing impairment as a barrier to learning and participation. The beneficiaries of the findings of this study were the teachers, parents, the community, education policy makers, implementers and curriculum developers, the government, ministry of education, administrators and collaborators, learners, other interested parties and the future researchers. The study employed a descriptive survey, which adopts descriptive correlation design in correlating variables. The target population included a total of 100 respondents from the eight selected inclusive primary schools in Nairobi County. Using purposive sampling, all individuals in the eight inclusive primary schools involved in teaching of hearing impaired learners were involved in this study and self-administered questionnaires were used as the main data collection instruments. The frequency tables and percentage distribution was used to determine the demographic characteristics of the respondents. The mean was used to determine the degree of learning needs and level of compliance to academic tasks. Regression analysis was used to determine the correlation coefficient. The research findings indicated that there was a positive and significant relationship between the variables. On this basis the researcher therefore was able to conclude that the degree of learning need has a positive impact on the level of compliance to academic tasks of the learners with impairments. The researcher made recommendations on meeting learners needs to change level of compliance tasks of learners with hearing impairments.

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CHAPTER ONE

THE PROBLEM AND ITS SCOPE

Background of the Study

Most of the originators of special education were European physicians. They were primarily young, ambitious people who challenged the wisdom of the established authorities, including their own friends and mentors (Kanner, 1964, Winzer 1998). Jean-Marc-Gaspard Itard (1775-1838), a French physician who was an authority on disease of the ear and on the education of students who were deaf, is the person to whom most historians trace the beginning of special education as we know it today. Thomas Hopkins Gallaudet (1787-1851), a minister, was a student at Andover Theological Seminary; he tried to teach a girl who was deaf. He visited Europe to learn about educating the deaf and in 1817 established the first American residential school, in Hartford, Connecticut, for students who were deaf (now known as the American school of the deaf). Gallaudet University in Washington, D.C, the only liberal- arts college for students who are deaf, was named in his honor as stated by Daniel P. Hallahan and James M. Kauffman (2002).

In the 19th century individuals and parents who saw the potential in children with special needs started teaching the children with special needs at their family level. For instance St. John of Beverly who was a bishop taught a person with hearing impairment how to articulate and talk. In 685 A.D Didymus was reported to have been the first person to develop touch reading material for the visually impaired in Alexandria. In Germany Juan Pablo Bonet between 1579-1620 developed a one hand manual alphabet. This form is widely used in USA, Europe and Kenya. The two handed manual alphabet which involves two hands in forming the letters of the alphabet was invented in Britain in the 19th century. The use of sign language as a mode of communication for the deaf brought a lot of controversy in the 18th and 19th century as some educators believed that the deaf should be taught using spoken language or Total Communication Approach to facilitate their full integration into the society being

led by German, Samuel, and Heineken. The declaration of using speech and speech reading recorded the development of sign language for many years. In Kenya speech and speech reading was used for thirty years from 1958 to 1985. Between 1958 and early 60's the first schools and units for the deaf were established and the learners used Kenya sign language among themselves both in class and outside although the official policy advocated for the use of speech and speech reading.

In 1985, a deaf Kenyan Dr. Michael Ndurumo, who had graduated from America with a PhD returned to Kenya and strongly advocated for the use of sign language, Signed English (SE) and Signed Exact English (SEE) in the education of the deaf. In 1988, the Government introduced the use of Kenya Sign Language, Signed English and Signed Exact English in all schools and units for the deaf under philosophy of Total Communication through the influence of Kenya National Association for the Deaf (KNAD), Kenya Society for the Deaf Children (KSDC), Kenya Institute of Education (KIE) and Kenya Institute of Special Education (KISE).

In Kenya the provision of inclusive education has undergone various trends for implementation. These include the Universal Declaration of Human Rights (1948), the Jomtien Declaration on Education For All (1990), The World Conference on Special Need Education (1994), The Dakar Framework for Action (2000), The Kenya Education Commission (1964) Ominde Report, the National Committee on Education Objectives and Policies (1976) Gachathi Report, The Presidential Working Party on Education and Manpower Training for the next Decades and Beyond (1988) Kamunge Report, Totally Integrated Quality Education and Training (1999) Koech Report. Education For All (EFA) (2001), Children's Bill (2001), Disability Bill (2002) all played great roles as far as the provision and implementation of education to the disabled persons was concerned. The government of Kenya lays emphasis in educating all learners geared towards the achievement of moral development, achievements of national goals of unity, economic growth, democracy, security, cultural and social

development, intellectual ideologies and general transformation of society (Education White Paper 1992) involves the education sector at different levels.

The Government of Kenya has laid emphasis in educating learners with special needs of all categories, the hearing impaired inclusive. Education for the hearing impaired learners has been implemented in inclusive primary schools in Nairobi County because there are special units for the same within regular schools with trained teachers in special education.

Statement of the Problem

The hearing-impaired learners in inclusive primary schools in Nairobi County face the following challenges: Shortage of resources both physical, human and financial, Psychological and social problems, Speech and communication problems, Low intellectual abilities and Low academic achievements.

Hearing-impaired learners are dumb and deaf therefore cannot communicate through spoken language effectively. These learners experience problems in social and personality development, reading ability, conceptual ability, language and speech development. The researcher intends to find ways in which these problems can be eliminated or reduced. These learners require specialists to train them on communication approaches used in their education. Adequate provision of support services and devices for the hearing impaired are necessary for promoting their education and performance of academic tasks.

The hearing impaired learners can be taught using modes of communication such as Total Communication Philosophy which was founded by Roy Holcomb a deaf teacher of the hearing impaired and also a parent of two deaf children impaired in the late 1960s. It advocates that a hearing impaired child should be taught to hear and speak as normally as possible without using signs or finger spelling.

Manual communication approaches can also be used to educate a hearing impaired child using fingers, arms, upper torso and visual is advocated for. Depriving them all

these leads to poor academic performance, resulting from poor reading and conceptual ability, social and personality development problems and language and speech development problems.

Purpose of the study

The following were the reasons why the study was proposed:

1. To test the hypothesis of no significant relationship between the degree of learning needs and level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya.
2. To validate the eco-system theory (Bronfenbrenner, 1979) on the bio-ecological perspective on human development
3. To bridge the gaps identified in the literature
4. To generate the new data and add to the existing body of knowledge

Objectives of the study

The following were the study objectives;

General objective

To determine the degree of learning needs and the level of compliance to academic tasks of learners with hearing impairment in selected inclusive primary schools Nairobi East District Kenya.

Specific Objectives

1. To determine the demographic characteristics of the respondents as to age, gender, highest educational level, number of years teaching experience and position in the school.

2. To determine the degree of learning needs of learners with hearing impairments in selected inclusive primary schools in Nairobi East District Kenya
3. To determine the level of compliance to academic tasks of learners with hearing impairment in selected inclusive primary schools.
4. To establish if there was a significant relationship between the degree of learning needs and the level of compliance to academic tasks of the hearing impaired learners.

Research Questions

The following were the research question;

1. What are the demographic characteristics of the respondents as to age, gender, highest educational level, number of years teaching experience and position in the school?
2. What are the learning needs of learners with hearing impairments in selected inclusive primary schools in Nairobi East District Kenya?
3. What is the level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools?
4. Is there a significant relationship between learning needs and level of compliance to academic tasks of the hearing impaired learners?

Null Hypothesis

There is no significant relationship between the degree of learning needs and the level of compliance to academic tasks of learners with hearing impairment.

Scope

Geographical scope

The study was carried out in selected inclusive primary schools Nairobi County Kenya. Nairobi County has a total of nine schools with special units for the hearing impaired registered under the Kenya Certificate of Primary Examination (KCPE) by the Kenya National Examination Council (KNEC).

Content scope

The study intended to establish the learning needs and how they influence compliance to academic tasks of learners with hearing impairments.

Theoretical scope

The eco-systemic theory (Bronfenbrenner, 1979) on the Bio-ecological perspective on human development was to be proven or disapproved in this study.

Time scope

The study was conducted from September 2011 to August 2012

Significance of the study

The following disciplines will benefit from the findings of the study.

The teachers will benefit from the findings of the study as they will help solve problems they encounter when handling the hearing-impaired learners. **Parents** will know how to handle and reinforce learners to accomplish their academic tasks at home. **The community** will help in creating awareness on hearing impairment geared towards acceptance.

The **education policy makers, implementers and curriculum developers** in designing the same which suits the hearing impaired learners.

The **government** in planning and budgeting for the learning needs such as instructional materials, special needs teachers, devices and other professionals necessary for the hearing impaired.

Findings of this study will help in broadening frames of references governing the work of special education teachers, parents, community, and **Ministry of Education also administrators and collaborators** in containing and inclusion process of these learners with hearing impairment.

The findings of this will help **future researchers** to utilize and embark on a related study.

Also the findings of this study will help to solve the problems encountered by **learners, teachers, families and other interested parties** of and for the hearing impaired.

The suggestions and recommendations will be given on interventions, support services and education for the hearing impaired learners in inclusive schools. These will be used as references in the concerned with the hearing impaired.

Operational Definitions of Key Terms

For the purpose of this study, the following terms were operationally defined:

Demographic characteristics of the respondents are attributes looked for in this study in terms of gender, age, academic qualification teaching experience and number of subjects taught in one year.

Hearing impaired. This refers to a person who is suffering from hearing loss; this person can or cannot perceive sound totally or partially through the ears.

Inclusive primary schools. These are organized educational settings whereby all learners regardless of their disability are integrated for acquisition of knowledge and skills by ensuring total elimination of environmental barriers, provision of support service and devices.

Learning needs. This term refers to the special services and devices needed by an impaired learner to perform a given task effectively.

Compliance. A state in which someone is in accordance with established guidelines, specifications, or legislation.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Concepts, Opinions, Ideas from Author/Experts

Learning Needs

According to Webster's New World Dictionary, learning refers to the necessity of gaining knowledge or skills.

Learning needs refers to barriers/obstacles within all of the learners, the school, education system and/ or the broader family, social, economic, or political context that may hinder the learner from accessing and participating in educational provisions.

It also refers to factors which lead to the inability of the system to accommodate diversity, which lead to learning breakdown or which prevent learners from accessing education provisions (Department of Education, 1997: 11-12).

Individuals with hearing impairments have unique life-long support needs that must be addressed in order for them to function in a world driven by sight and sound. Consistent with this, they have unique needs within the educational system.

From the beginning, the school system often finds its resources in hearing impaired to be inadequate. Assessing the skills of these children can be difficult since assessment instruments are generally not normed for this population. It is often impossible to adapt these materials to test children with hearing impairment without negating the test's validity. Another problem in assessing skills and providing instruction to children with hearing impairments is the difficulty in engaging them and drawing them outside of themselves. The need to feel safe in a world that alternately "comes at you" or "disappears in thin air" often sends these children inside themselves. They may be unresponsive during testing unless they are working with someone with whom they have bonded. Students with hearing losses in general education classroom can be

expected to follow the standard curriculum if they have the pre requisite skills (Ross, bracket and Maxon 1991).

However they may require modification of the physical, instructional and social environments to benefit fully from education in an inclusive class. Modification of the physical environment may involve simple changes in seating such as moving students away from sources of noise that might be amplified by the student's hearing aid (Lambert 1994).

Permitting free movement around the classroom to reduce the distance seats as activities changes hence promotes understanding and participation in class activities (Ross 1982). Good lighting is also critical in speech reading (Lambert 1994) in case of a video or over head projector.

Hearing loss can have profound consequences for some aspects of a person's behavior and little effect on other characteristics. The deaf person is at a much greater disadvantage in a language-oriented society.

The hearing impaired is deficient in the language used by most people of the "hearing" society in which they live. The old term "deaf-mute" reflected the attitude that deafness automatically meant an inability to speak. Without extensive training, the hearing impaired child will not develop normal language comprehension and production (Carhart 1970), and therefore a totally deaf child will grow up mute. Inadequate auditory feedback and verbal reinforcement leads a deaf infant to abandon babbling causing poor speech production as they cannot hear their own babbling and verbal responses of adults. Hearing impaired are deprived a model to imitate sounds of speech, associating sensations when moving jaws, mouth and tongue movements to produce sounds.

Conceptual ability is deficient in the hearing impaired because thought depends on language (Vygotsky,1962).According to Furth, (1964, 1971), only language related concepts are difficult for the hearing impaired. Any difficulty on conceptual tasks is due not to poor language ability itself, but rather to inadequate communication with those around them (Liben,1978).

The hearing impaired have in sign language a true language and therefore any difficulty they have on conceptual tasks is therefore due to not to poor language ability itself ,but rather to inadequate communication with those around them (Liben 1978)

Hearing impaired children are frequently handicapped in varying degrees with regard to educational achievements. Reading ability which relies heavily on language skills and probably the most important aspect of academic achievement is the most affected. Using a special 1973 edition of the Stanford Achievement Test (SAT-HI) test was standardized on 6,871 hearing impaired children, Trybus and Karcher(1977), found severe underachievement in reading. By age 20, only about half of the students were able to read at mid-fourth-grade level that is barely at newspaper literacy level. Research has shown that mainstreaming the hearing impaired is related to better academic achievement and future career adjustment (Saur, Coggiola,Long, and Simonson, 1986).

Social and personality development in general population depends heavily on communication. Social interaction is the communication of ideas between two or more people. In the hearing population language is the most common way messages move between people and this is deficient in hearing impaired. As a result they display different personality and social characteristics. Development of behavioral problems depends on how well those in the environment accept the disability (Hoemann and Briga, 1981; Moores,1982).

Occupational status of the hearing impaired is not up to par with that of hearing population.(Boatner, Stuckless, and Moores, 1964; Moores, 1969; Schein and Delk,

1974). Although hearing impaired can make good employees, many are unemployed and a large number are overqualified for the jobs they hold. They are overrepresented in the manual trades and underrepresented in the professional and managerial positions.

The deaf have more "problems of living" _higher arrest rates, and more marital, social and vocational problems (Meadow 1975). They have additional handicaps hence exhibit social maladjustment.

Compliance to Academic Tasks for the Hearing Impaired

According to Webster's New World Dictionary, **compliance** is defined as to do what is asked or demanded. To act in agreement with a request or rule.

Speech reading/lip reading involves teaching hearing impaired learners to use visual information to understand what is being said to them. This kind of teaching takes the analytic approach or synthetic approach.

Analytic method emphasizes on teaching the person to perceive small segment of speech like syllabus and then recognize them when put together in words and sentences.

Synthetic approach promotes the idea of concentration on the meaning of speech rather than on individual sounds. (sanders1982) visual stimuli should be considered (sanders 1982) environmental stimuli which shows the ability to pay attention and obtain meaning from the environment. This helps in enhancing awareness of visual surrounding. Non-verbal stimuli directly related to the speaker, Such as facial expressions. Speech stimuli such as visual cues from the lips, tongue, and jaw related to degree of jaw opening, lip shaping.

Sign language is a language of the deaf which involves use of gestures and body language to deliver message.

Finger spelling is a spelling out of the English alphabet by various finger positions on one hand.

Auditory training is the procedure of teaching a hearing impaired learner to make use of what hearing one possesses. Auditory training involves discrimination of sounds, perception and memory.

Audio visual aids which includes televisions, overhead projectors, computers and video tapes. Hearing impaired learners can follow movies and comprehend meaningfully. Using the sign language, they can retell the stories to their peers and this will enhance their creative skills in composition writing.

The hearing-impaired had problems using telephones because of acoustic feedback, noise from the closeness of the receiver to the hearing aids, and the fact that speech reading cues cannot be used. The development of the teletypewriter (TTY), which connects with a telephone allows the hearing-impaired person to communicate through type with anyone who also has a teletypewriter.

Hearing aids differ in size, cost, and efficiency. They range from wearable to group. They come in a number of models such as, built into glass, placed behind the ear, inserted within the external auditory canal or worn on the clothing.

The following special education settings are used for the hearing impaired:

The resource room: This is a well equipped room with all assistive devices and support services within a regular school where special needs learners taken to receive compensation on what was learnt in the regular class.

The special class within a regular school: In this type of setting, learners with special needs learn separately in a different class within a regular school but interact with the regular peers during play time.

The special day school: This type of educational setting accommodates learners with special needs in education only. Learners operate daily from home to school which reduces separation from family and community as is the case of residential set-up.

The residential facility: In this set-up learners are separated from their families and community as they stay away for longer periods during school term. These are also known as boarding schools. They result to isolation which leaves special needs learners to live in a world of their own.

Theoretical perspectives

The study was based on the eco-systemic theory on human development (Bronfenbrenner, 1979) which views Hearing Impairment as a barrier to learning and participation. The ecosystem theory is a synthesis of the ecological (Bronfenbrenner, 1979) and systems theories; hence its name. The ecological theory concerns the interdependence and relationships of organisms (persons- such as learners, educators and parents) and their physical environment (such as the family, home and school building). It considers the important role that context plays in understanding phenomena. According to systems theory, different levels and groupings of social context are viewed as systems, like educational, political, economic, individual and social system. A system consists of different parts or subsystems, for example a school as a system has parts or subsystems such as learners, the educators, the curriculum and the classroom. The functioning of the whole system is dependent on the interaction among all the subsystems. To understand the whole, the relationships among the subsystems need to be examined (Donald, Lazarus\$ Lolwana, 1997: 36; Hoskins, 1995: 151). To understand the social context, one needs to look at the dynamic, reciprocal relationships among the various systems, and their various subsystems. Bronfenbrenner (1979: 3-4, 7-8, 22, 25, 26; 1986: 723-724; Swart Pettipher, 2005: 9-15) categorized the different levels of systems, particularly those involved in the process of child development. The Microsystems refers to systems in which learners are closely involved, for example the family, school and peer groups.

Individuals, significant others and events closest in a learner's life, continuous face-to-face contact and reciprocal influences are found in the micro-system. The micro-system is primarily responsible for forming and influencing the Academic Self Concept (ASC) of learners.

The eco-systemic theory is relevant to this study as it involves the process of child development in relation to language and communication, social development, learning process, barriers to learning and the environment.

Related studies

According to vygotsky (1962) speech influences cognitive development in that the early speech of children becomes interiorized as inner speech and inner speech is the equivalent of cognitive thought.

Learning needs are inputs in terms of human, financial, physical and time which are processed through the educational processes to produce outputs. Quality education is no doubt a function of the elimination of barriers to learning and participation. (Nwankwo, 1982)

According to Abdulkareem (2003), teachers in required quantity and quality, enough materials for teachers and learners, effective utilization ensures academic success.

Infrastructure and poverty affects performance of teachers and learners(Bookcooks,1982; Adeyoju & Araromi , 1997).Also according to Nwankwo, if facilities such as classrooms, special rooms and others are not enough, high academic achievements will never be achieved.

Teaching strategies employed by a teacher, interpersonal skills greatly influences learners' behavior (Ndebola 2008).Teacher's general preparation, punctuality, presentation, strategy used, position and function in the school is likely to produce strong effects on pupils' behavior (Rutter et al, 1979).

The economic factor for speech defects is costly such as corrections programs involving speech therapists in 'aphasia'.

According to some recommendations of major conferences on deaf education, a teacher to be truly adequate should have a full liberal arts undergraduate program before entering the specialized field of education of the deaf. Many young people are emerging from undergraduate programs as trained teachers of the deaf, teaching for two-three years, then proceeding to masters' degrees and not going back to class.

Michael L. Hardemn (1984) suggests that according to research on Intellectual characteristics of hearing impaired learners, the distribution of intelligence Quotient (I.Q) score of this individual is similar to that of hearing peers. Therefore any disabilities in performance appear to be closely associated with speaking, reading and writing but are not related to level of intelligence. Woodyly, (1991) suggested that children using i=sign language have to divide their attention between signs and the instructional materials. The child may seem slow in learning, instructional materials. The child may seem slow in learning, the reality may be that the child is carrying an additional cognitive load and simply needs more time to process the information.

According to (Grustason, 1990, Paul and Shmmes 2000) hearing impaired learners exhibit characteristics of low academic achievements averaged 3-4 years to academic tasks.

The relationship between student's attitude and academic performance of learners with hearing impairment based on the attachment "theory of love" indicates that the special emotions and commitments we feel for another person begins from the moment we are born and continue throughout our lifetime. According to Arnold Gesell (1920's), children are what they are the minute they are born, and it does not matter what parents do to change or shape them. According to Watson (1920's), children are completely a product of their environment and too much "spoiling" by parents usually the mother can be dangerous. Therefore teachers are like mothers who can either mould or spoil the learners depending on their attachment to them and influencing others toward the same.

Summary of gaps identified in the literature review

The studies on hearing impairments as a barrier to learning and participation by Bronfenbrenner (1979) ,was carried out in a different country other than Kenya and by extension Nairobi County which is geographically, culturally, economically and technologically different.

The issue of time gap exists as seen from the study. Based on Bronfenbrenner (1979). When the study on hearing impairment as a barrier to learning and participation was conducted until (2011 – 2012) when the researcher carried out the study, the range is wide and may be changes, might have occurred in terms of technology and even population.

The research instrument used by the researcher was a self administered questionnaire distributed to teachers as respondents while other researchers might have used a different tool to gather data on their study.

Despite the fact that various researchers have been conducted to hearing impairment, the problem still exists.

CHAPTER THREE

METHODOLOGY

Research Design

The researcher used a descriptive survey which adopts descriptive correlation design. Learning needs of learners with hearing impairments was correlated with their compliance to academic tasks.

Research Population

The target population was from 8 selected inclusive primary schools in Nairobi county comprising of 100 teachers who were used in this study.

All the selected inclusive primary schools were involved and also all teachers and administrators in the county who qualified as respondents.

Sample size

The researcher used universal sampling where all the teachers in Nairobi County involved in teaching of hearing impaired learners were involved in this study.

Table 1: Respondents of the study

District / County	Name of school	Population	Sample size
Nairobi	Wangu	15	15
	Race course	15	15
	Daniel Comboni	10	10
	Thawabu	10	10
	Joseph Kang'ethe	15	15
	Njathaini	10	10
	Agakhan	15	15
	Little rock	10	10
	Total Population	100	100

Source: primary data

Sampling procedure

The researcher used universal sampling criteria from the list of qualified respondents with consideration to the computed minimum sample size. The universal sampling refers to a technique that selects a sample without bias from the target/accessible population. The researcher ensured that each member of the target population had an equal and independence chance of being included in the sample.

Research Instruments

The research tools that were utilized in this study included the following:

1. The researcher used a *face sheet* to gather data on the respondents' demographic characteristics (gender, age, qualifications, number of years teaching experience in the primary school, and the position held in school).
2. The researcher used *a self administered questionnaires* which was self administered to teachers. To determine the learning needs and level of compliance to academic tasks of learners with hearing impairment. The response modes of these were indicated as: strongly agree **(4)**; agree **(3)**; disagree **(2)**; Strongly disagree **(1)**. The use of questionnaires is a very popular method of data collection in education because of the relative ease and cost effectiveness with which they are constructed and administered to large sample.

Validity

A sum of 13 indicators were for the learning needs and 14 for compliance to academic tasks total of 27. The questionnaires were subjected to three experts for validity. It was proved to be valid at 0.923.

Reliability

Using the test –retest technique, the questionnaires were administered twice to the same respondents who were not included in the final study, the results were consistent and essentially almost the same in both times at a reliability coefficient of 0.85, which shows that it was reliable.

Data Gathering Procedures

Before the administration of the questionnaires

1. The researcher obtained an introduction letter from the College of Higher Degrees and Research to solicit approval to conduct the study from respective heads of inclusive primary schools.
2. When approved, the researcher secured a list of the qualified respondents from the school authorities in charge and selected through simple random sampling from this list to arrive at the minimum sample size.
3. The respondents were explained about the study and were requested to sign the Informed Consent Form (Appendix 3).
4. More questionnaires were reproduced for distribution.
5. Research assistants who assisted in the data collection were selected briefed and oriented in order to be consistent in administering the questionnaires.

During the administration of the questionnaires

1. The respondents were requested to answer completely and not to leave any part of the questionnaires unanswered.
2. The researcher and assistants emphasized retrieval of the questionnaires within five days from the date of distribution.
3. On retrieval, all returned questionnaires were checked to ensure all were answered.

After the administration of the questionnaires

The data gathered was collated, encoded into the computer and statistically treated using the Scientific Package of Social Sciences (SPSS) in tables to show mean, frequency and percentage.

Data analysis

The frequency and percentage distribution were used to determine the demographic characteristics of the respondents.

The means and ranks were applied to test for the learning needs and compliance to academic tasks. The mean range was calculated by getting the difference between the highest rating and the lowest then divided by four which was found to be 0.75. For the relationship between the independent and dependent variable, the researcher used the Pearson's Linear Correlation Co efficiency to get the difference of the two means to rule on the null. For the regression between the independent and dependent variables, the data gathered was collated, encoded into the computer and statistically treated using SPSS.

Kindly use the rating guide below:

Mean range	Response mode	Description	Legend	Rating
1.00 - 1.75	Strongly Agree	Agree with no doubt	SA	4
1.76 - 2.50	Agree	Agree with some doubt	A	3
2.51 - 3.25	Disagree	Disagree with some doubt	D	2
3.26 - 4.00	Strongly Disagree	Disagree with no doubt at all	SD	1

The response mode Strongly agree was rated 4 points, Agree was rated 3 points, Disagree 2 points while Strongly disagree was rated 1 point.

For the relationship between the independent and dependent variable, the researcher used the Pearson's Linear Correlation Co efficiency to get the difference of the two means to rule on the null.

To determine if there is a significant relationship between needs and compliance to academic tasks of learners with learning impairments, Pearson's Linear Correlation Coefficient (PLCC) was used.

Ethical Considerations

To ensure confidentiality of the information provided by the respondents and to ascertain the practice of ethics in this study, the following activities were implemented by the researcher:

1. Sought permission to adopt the standardized questionnaire on learning needs for the hearing impaired.
2. The respondents and schools were coded instead of reflecting the names.
3. The respondents were requested to sign the Informed Consent Form (Appendix 3).
4. Authors quoted in the study were recognized through acknowledgement, citation and referencing.
5. Presentation of findings was generalized.

Limitations of the Study

The researcher claimed an acceptable (0.05 level of significance) 5% margin of error in view of the following anticipated threats to validity with relevance to this study:

1. Testing: Differences in conditions and time when different persons obtained the data from respondents on different days at different hours. This was minimized by orienting and briefing the research assistants on the sampling techniques and data gathering procedures.
2. Extraneous variables, which were beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.

CHAPTER 4

DATA INTERPRETATION & ANALYSIS

TABLE 2: Demographic Characteristics of respondents

CATEGORY	SUB-CATEGORY	FREQUENCY	PERCENTAGE
Gender	Male	10	10
	Female	90	90
	Total	100	100
Age	21-30 years	20	20
	31-40 years	40	40
	41-50 years	30	30
	Above 50 years	10	10
	Total	100	100
Educational qualifications	Certificate	10	10
	diploma	43	43
	Bachelors	27	27
	Masters	20	20
	Others	—	—
	Total	100	100
Teaching experience	Below 1 year	—	—
	1-5 years	15	15
	6-10 years	15	15
	11-15 years	15	15
	16- 20 years	15	15
	Above 20 years	40	40
	Total	100	100
Position held in school	Head teacher	—	—
	D/ Head teacher	—	—
	Senior teacher	—	—
	Special Needs Education teacher	70	70
	Assistant teacher	30	30
	Total	100	100

Source: primary data

The table above represents the bio data of the respondents in terms of age, gender, highest educational qualifications, number of years teaching experience in primary school and position held in the school.

Regarding ages, it was realized that 40.000% were in age ranging between 31-40 years this was followed by respondents aged between 41-50 years with 30.000% while age 21-30 years had 20.000% . The minority group was of respondents aged above 50 years with 10.000%.

In terms of gender, the female category had majority of the respondents at 90.000% greatly differing with the male respondents with 10.000%.

Regarding educational qualifications, the diploma holders were majority with 43.000%. Respondents with bachelors degree followed at 27.000%. These were followed by respondents with masters degree 20.000% and the least category were certificate holders with 10.000%.

Information regarding teaching experience in primary school showed that majority of the respondents were those above 20 years (40.000%). The other categories of between 1-5 years, 6-10 years, 11-15 years and 16-20 years were at par each at 15.000% while none of the respondents was below 1 year.

As for the position held in the school, majority of the respondents were trained teachers in special Needs Education, 70.000% while the other category of the respondents were assistant teachers are 30.000%. None of the respondents was found to be a head teacher, deputy head teacher not a senior teacher.

TABLE 3: Learning Needs of Learners with Hearing Impairments in selected inclusive primary schools in Nairobi County

<p>Learning needs</p> <p>Abroad range of learning needs exist among learners everywhere, also in your school. Often the learning needs become barriers to the effective learning and participation of learners. The following learning needs are found in learners with hearing impairments. Select appropriately as in your school.</p>			
INDICATOR	MEAN	INTERPRETATION	RANK
Inappropriate communication	3.500	Very high	1
Social economic barriers	3.500	Very high	1
Inadequate policies and legislation	3.400	Very high	3
Learners are socially isolated	3.400	Very high	3
Inappropriate and Inadequate support services	3.30	Very high	5
Inappropriate language of learning and teaching	3.200	High	6
Learners have language problems	3.200	High	6
Inflexible curriculum	3.100	High	8
Low intellectual ability	3.000	High	10
Severe behavioral problems	2.800	High	11
Negative attitudes to difference and stereotyping of difference	2.600	High	12
High academic achievements	2.400	Low	13
Inadequately and inappropriately trained special Needs Education Teachers	1.700	Very low	14
AVERAGE MEAN	3.007	High	9

Source: primary data

KEY:

1.00 - 1.75 Very Low

1.76 - 2.50 Low

2.51 - 3.25 High

3.26 - 4.00 Very high

Average mean = $\frac{\text{Total mean}}{\text{No. of Indicators}}$

The second objective was set to determine the learning needs of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya. For this study, the level of learning needs was measured using thirteen indicators of qualitative questions in which the respondents were required to indicate the extent to which they agree or disagree with each of the given statements. They indicated their responses by writing the number that best describes their choice. All the indicators on learning needs were Likert Scale using four points ranging between 1-4 whereby 1= strongly disagree, 2= Disagree, 3=Agree and 4= Strongly Agree.

All the responses were analysed and described using means. Table 3 on learning needs indicated that inappropriate communication and social economic barriers were very high at a mean of 3.500 an equivalent to strongly agree on the Likert Scale. These were followed by another tie of inadequate policies and legislation together with learners being socially isolated at a mean of 3.400 each which is also very high and an equivalent of strongly agree too. Inappropriate and inadequate support services followed at a mean of 3.300 which is very high as the first four indicators. In the sixth rank were the indicators on inappropriate language of learning and teaching with learners having language problems with a mean of 3.200 each interpreted to be high and an equivalent of agree. Inflexible curriculum followed as the eighth with a mean of 3.100 also high and equivalent to agree too.

In the tenth rank was the indicator of low intellectual ability at a mean of 3.000 high and equivalent to agree. Severe behavioral problems ranked eleventh with a mean of

2.800 as high equivalent to agree also. This was followed by negative attitude to difference and stereotyping different at 2.700 high also same as agree. This was followed by high academic achievements with a mean of 2.400 which is low equivalent to disagree in the Likert scale.

The least on this category was inadequately and inappropriately trained special Needs Education teachers with a mean of 1.700 ranked Fourteenth. Generally the learning needs of learners with hearing impairment in selected inclusive primary schools in Nairobi county Kenya is high an average mean of 3.015 equivalent to agree on the Likert scale.

TABLE 4: Compliance to Academic Tasks

2. Questionnaire to determine the level of compliance to academic tasks Teachers use various strategies in teaching learners with hearing impairments to enable them comply to their academic tasks. Rate yourself accordingly.			
INDICATOR	MEAN	INTERPRETATION	RANK
Total communication e.g. lip reading	3.600	Very high	1
Signed English	3.400	Very high	2
Signed Exact English	3.00	High	3
Peer tutoring	2.800	High	4
Use of hearing aids	2.800	High	4
Use of sign language	2.700	High	5
Note takers	2.600	High	7
Use of audio visual aids	2.600	High	7
Use of graphics	2.500	Low	10
Use of interpreters	2.400	Low	11
Auditory training is offered	1.900	Low	12
Acoustic treated rooms	2.300	Low	12
Modern technology	1.700	Very low	14
Telephone adaptation are available	1.600	Very low	15
AVERAGE MEAN	2.564	High	9

Source: primary data

Table 4 represents the third objective, which was set to determine the level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya. Under this study the level of compliance to academic tasks of learners with hearing impairment in selected inclusive primary schools in Nairobi

county was measured using thirteen indicators of qualitative questions where the respondents were to use the same rating of strongly Agree, Agree, Disagree and strongly Disagree.

Responses were analyzed and described using a tallying table showing mean, interpretation and rank. From the analysis the indicator on Total communication such as lip -reading was very high with a mean of 3.600 an equivalent of strongly agree on the Likert scale. In the second rank was the indicator on the use of signed English having a mean of 3.400, which is very high, an equivalent of strongly agree. The use of signed Exact English (SEE) was third with a mean of 3.000 which is high and an equivalent of agree on the Likert scale. This was followed by a tie of two indicators on peer tutoring and the use of hearing aids each having a mean of 2.800 which is also high and an equivalent of agree too.

The indicator on the use of sign language was in sixth position with a mean of 2.700 which is high too and an equivalent of agree. Another tie of two indicators were in position seven showing the use of note takers and audio visual aids with a mean of 2.600 each which is high also and an equivalent of agree. The use of graphics was in tenth position with a mean of 2.500 which is low and an equivalent of disagree on the Likert scale. Another indicator showing low with a mean of 2.400 was on the use of interpreters also equivalent to disagree. A tie of two indicators closely followed this on acoustic treated rooms and also auditory training is offered having both a mean of 1.900 which is low and equivalent to disagree. Indicator on modern technology followed with a mean of 1.700, which is interpreted as very low, and an equivalent of strongly disagree on the Likert scale. The last ranked indicator was on the availability

of telephone adaptations with a mean of 1.600 which is also very low and equivalent to strongly disagree.

As a summary, the level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya is high with an average mean of 2.564 an equivalent of agree on the Likert scale.

Relationship between Learning Needs and Level of Compliance To Academic Tasks Of Learners With Hearing Impairments in Selected Inclusive Primary Schools in Nairobi County Kenya

In correlating learning needs and level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools Nairobi county Kenya, the researcher used the Pearson's Linear Correlation Coefficiency to get the difference of the two means to rule on the Hypothesis

Table 5

Learning needs	3.015	r. value	Sign value	Interpretation	Decision on HO
Vs		0.451	0.000	Positive and significant	Rejected
Level of compliance	2.564				

Source: primary data

Results in table 5 indicates that there was a positive & significant relationship between learning needs and level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya and therefore at 0.05 level no significance, the null hypothesis which states that there is no significant relationship between learning needs and level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools Nairobi county Kenya was rejected following the analysis which indicated that the two variables were significantly correlated at ($r=0.451$, significant = 0.000).

Table 6

Regression Analysis between Independent and Dependent Variables

Variables regressed	Adjusted R square	F value	Sig.	Interpretation	Decision on Ho
Compliance to Academic tasks vs Learning needs	-0.409	.435	.523	Significant effect	Accepted

Source: SPSS Output 1

Table 6 of Regression Analysis using ANOVA gives out (F- value at .435 and sig .523), indicates that most of the independent variable factors on learning needs of hearing impaired learners does not influence the level of compliance to Academic Tasks of learners with hearing impairments in selected inclusive primary schools. This implies that the null hypothesis that; there is no significant relationship between the degree of learning needs and level of compliance to Academic Tasks is accepted.

CHAPTER FIVE

FINDINGS, CONCLUSION, RECOMMENDATIONS

FINDINGS:

Demographic characteristics

Regarding the demographic characteristics of the respondents it was found that in terms of gender, majority were female greatly different from male. Majority of these also lied in the middle adulthood aged 31-40 years and being diploma holders in special needs education with a teaching experience of over 20 years and holding a position of special needs education teachers in their institutions.

Degree of learning needs

As for the learning needs, the findings showed that inappropriate communication and social economic barriers were leading with a tie followed by another tie on inadequate policies and legislation together with learners being socially isolated. Inappropriate language of learning and teaching tied with learners having language problems in the sixth rank inflexible curriculum was ranked eight then the low intellectual ability followed. In the eleventh rank was severe behavioral problems closely followed by negative attitudes to difference and stereotyping difference. The least indicator followed high academic achievement on inadequately and inappropriately trained special needs education teachers.

Generally, the learning needs of learners with hearing impairments in selected inclusive primary schools in Nairobi Kenya had a high average of 3.015, which is equivalent to agree on the Likert Scale.

Level of compliance to academic tasks

On the level of compliance to academic tasks of learners with hearing impairment, it was found that total communication such as lip-reading was leading followed by the use of signed English (SE) and in third rank being signed Exact English (SEE)

A tie on peer tutoring and the use of hearing aids followed and then the use of sign language in the sixth rank. Another tie on the use of note takers and use of audio visual aids closely by a tie on graphics. A tie followed the use of interpreters on acoustic treated rooms and also auditory training is offered. Following this was the indicator on modern technology while the least on the availability of telephone adaptations.

In summary, the level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi county Kenya was high with an average of 2.564.

Relationship between degree of learning needs and level of compliance to academic tasks

Looking at the relationship between learning needs and compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi Kenya showed that there was a positive and significant relationship between the independent and dependent variable rejecting the null hypothesis.

Conclusion

Based on the purpose of this study, the null hypothesis of no significant relationship between the degree of learning needs and the level of compliance to academic tasks of learners with hearing impairments in selected inclusive primary schools in Nairobi County Kenya was rejected after correlating the two variables. The eco-systematic theory (Bronfenbrenner 1979) on the Bio-ecological perspective on human development was proven on the view that hearing impairment as a barrier to learning and participation as evidence by the indicator on low intellectual ability which was high and high academic achievements as low.

Recommendations

Recommendations made by the researcher are based majority on the findings of the study.

- Labeling of learners with special Needs Education should be abolished and discouraged as much as possible by parents, teachers and the peers.
- Guiding and counseling to both the parents, siblings and the individuals themselves to enable them accept their condition as much as possible.
- Provision of support services, learning and teaching materials by the government for these learners with hearing impairments
- Sensitizing and creating awareness to parents, teachers, pupils and the community at large on special Needs Education. Also on the existence of such impairments, causes and prevention of such.
- Curriculum modification to suit the needs of those learners with hearing impairments. For example allowing them to write a composition in Signed English (SE) and not restricting them to Signed Exact English (SEE) which is a bit complicated to them.
- Career guidance to learners with hearing impairments will help them choose their future career and set personal targets towards achieving the same.
- The government to sponsor training on Special Needs Education to all public primary teachers to acquaint them with knowledge on how to handle learners with special needs.
- Elimination of barriers in all public primary schools such as employment of sign language interpreters for the hearing impaired to facilitate communication hence enhances socialization.

Suggestions for further study

The gaps indentified in the literature review can be bridged following the recommendations in this study.

To generate new data and add to the existing body of knowledge the researcher recommends on future researchers to research on total communication method on learning ability of deaf-blind learners. The effectiveness of total communication method on teaching of mathematics of deaf-blind learners.

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APPENDIX IA
TRANSMITTAL LETTER



**KAMPALA
INTERNATIONAL
UNIVERSITY**

Ggaba Road - Kansanga
P.O. Box 20000, Kampala, Uganda
Tel: +256- 41- 266813 / +256- 41-267634
Fax: +256- 41- 501974
E- mail: admin@kiu.ac.ug,
Website: www.kiu.ac.ug

**OFFICE OF THE COORDINATOR OF EDUCATION
SCHOOL OF POSTGRADUATE STUDIES AND RESEARCH (SPGSR)**

August 23, 2011

Dear Sir/Madam,

**RE: REQUEST FOR KERAGIA PHYLLIS BOSIBORI MSE/18346/111/DF
TO CONDUCT RESEARCH IN YOUR ORGANIZATION**

The above mentioned is a bonafide student of Kampala International University pursuing a Masters of Education in Special Needs Education.

She is currently conducting a field research of which the title is "**Learning Needs and Compliance to Academic Tasks of Learners with Hearing Impairment in Selected Inclusive Primary Schools in Nairobi East District Kenya.**"

Your organization has been identified as a valuable source of information pertaining to her research project. The purpose of this letter is to request you to avail her with the pertinent information she may need.

Any information shared with her from your organization shall be treated with utmost confidentiality.

Any assistance rendered to her will be highly appreciated.

Yours truly,

Ms. Kyolaba Sarah
Coordinator Education, (SPGSR)

APPENDIX IB
Transmittal Letter for the Respondents

Dear respondent,

Greetings!

I am a Masters candidate in Special Needs Education Candidate of Kampala International University. Part of the requirements for the award is a dissertation. My study is entitled, **Learning Needs and Compliance to Academic Tasks for Learners with Hearing Impairments in Selected Inclusive Primary Schools in Nairobi County Kenya.**

Within this context, may I request you to participate in this study by answering the questionnaires. Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within five days (5)?

Thank you very much in advance.

Yours faithfully,

Ms. Keragia Phyllis Bosibori

APPENDIX II

CLEARANCE FROM ETHICS COMMITTEE

Date _____

Candidate's Data

Name _____

Reg.# _____

Course _____

Title of study _____

Ethical Review Checklist

The study reviewed considered the following:

- _____ Physical Safety of Human Subjects
- _____ Psychological Safety
- _____ Emotional Security
- _____ Privacy
- _____ Written Request for Author of Standardized Instrument
- _____ Coding of Questionnaires/Anonymity/Confidentiality
- _____ Permission to Conduct the Study
- _____ Informed Consent
- _____ Citations/Authors Recognized

Results of Ethical Review

- _____ Approved
- _____ Conditional (to provide the Ethics Committee with corrections)
- _____ Disapproved/ Resubmit Proposal

Ethics Committee (Name and Signature)

Chairperson _____

Members _____

APPENDIX III
INFORMED CONSENT

I am giving my consent to be part of the research study Ms. Keragia Phyllis Bosibori that will focus on **Learning Needs and Compliance to Academic Tasks of Learners with Hearing Impairments in Selected Inclusive Primary Schools in Nairobi County Kenya.**

I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials: _____

Date: _____

APPENDIX IVA
RESEARCH INSTRUMENT

FACE SHEET: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Gender (Please Tick):

☐ (1) Male

☐ (2) Female

Age

☐ 21-30 years

☐ 31-40 years

☐ 41-50 years

☐ Above 50 years

Highest educational level

☐ (1) Certificate

☐ (2) Diploma

☐ (3) Bachelors

☐ (4) Masters

Other qualifications other than education discipline _____

Number of years teaching experience in the primary school (Please Tick):

☐ Below 1 year

☐ 1-5 years

☐ 6 – 10years

☐ 11 – 15years

☐ 16 – 20years

☐ Above 20 years

Position in the school:

☐ Headteacher

☐ Deputy Headteacher

☐ Senior teacher

☐ special needs education teacher

☐ Assistant teacher

APPENDIX VI B

QUESTIONNAIRE TO DETERMINE LEARNING NEEDS FOR THE HEARING IMPAIRED (For Teachers)

Direction 1: Please write your rating on the space before each option which corresponds to your best choice in terms of learning needs and level of compliance to academic tasks for learners with Hearing Impairment in inclusive primary schools.

Kindly use the rating guide below:

Response Mode	Description	Rating
Strongly Agree	You agree with no doubt	4
Agree	You agree with some doubt	3
Disagree	You disagree with some doubt	2
Strongly Disagree	You disagree with no doubt at all	1

1. LEARNING NEEDS

A broad range of Learning Needs exists among learners everywhere, also in your school. Often the learning needs become barriers to the effective learning and participation of the learners.

The following Learning Needs are found in learners with hearing impairments. Select appropriately as in your school.

- ☐ 1. Inappropriate and inadequate support services
- ☐ 2. Inappropriate communication
- ☐ 3. Inflexible curriculum
- ☐ 4. Inadequate policies and legislation
- ☐ 5. Inadequately and inappropriately trained Special Needs Education teachers
- ☐ 6. Negative attitudes to difference and stereotyping of difference
- ☐ 7. Severe behavioral problems
- ☐ 8. Social economic barriers
- ☐ 9. Inappropriate language of learning and teaching
- ☐ 10. Learners are socially isolated
- ☐ 11. Learners have language problems
- ☐ 12. Low intellectual ability
- ☐ 13. High academic achievement

2. Questionnaire to determine the Level of Compliance to Academic Tasks.

Teachers use various strategies in teaching learners with hearing impairments to enable them comply to their academic tasks. Rate yourself accordingly.

- ☐ 1. Use of sign language
- ☐ 2. Total communication such as lip-reading
- ☐ 3. Modern technology
- ☐ 4. Peer tutoring
- ☐ 5. Use of Graphics
- ☐ 6. Note takers
- ☐ 7. Signed English (SE)
- ☐ 8. Signed Exact English (SEE)
- ☐ 9. Telephone adaptations are available
- ☐ 10. Use of hearing aids
- ☐ 11. Use of audio-visual aids
- ☐ 12. Acoustic treated rooms
- ☐ 13. Use of interpreters
- ☐ 14. Auditory training is offered

Appendix V

Validity

$$V = \frac{CVI_{1=25} + CVI_{2=24} + CVI_{3=25}}{81}$$

$$V = \frac{RQ}{TQ} = \frac{74}{81} = 0.913$$

REFEREES

Charles S. Mboi,
Kisumu Polytechnic,
P.O. Box 143 Kisumu.
Tel: 0722536968

Kennedy Onywoki
Technician
Tel: 0720 830185