Dissertation By

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Integration Education and Other Factors Associated with Career Choice among Learners with Visual Impairments in Kenyan Public Universities

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INTEGRATION EDUCATION AND OTHER FACTORS ASSOCIATED WITH CAREER CHOICE AMONG LEARNERS WITH VISUAL IMPAIRMENTS IN KENYAN PUBLIC UNIVERSITIES

BY

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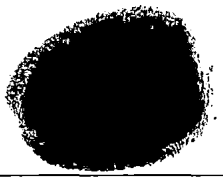
DECLARATION

This thesis is my original work and has not been submitted for a degree in any other University.



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DEDICATION

To God for His help and my parents: John and Modesta Osoro for their love, patience and support.

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ABBREVIATIONS AND ACRONYMS

ADE	-	Assistant Director of Education
B.ED	-	Bachelor of Education
B.Sc	-	Bachelor of Science
DF	-	Degrees of Freedom
EARS	-	Education Assessment and Resource Services
FGD	-	Focused Group Discussions
JAB	-	Joint Admission Board
KIE	-	Kenya Institute of Education
KISE	-	Kenya Institute of Special Education
KSB	-	Kenya Society for the Blind
KSSP	-	Kenya Education Sector Support Programme
LLB	-	Bachelor of Law
Mngt	-	Management
MoE	-	Ministry of Education
P Value	-	Probability Value
SADE	-	Senior Assistant Director of Education
SNE	-	Special Needs Education
UNESCO	-	United Nations Education, Scientific and Cultural Organization
x^2	-	Chi Square

ABSTRACT

Learners with visual impairments need to choose careers that will later determine their productivity in society. The purpose of this study was to therefore find out how career choice of learners with visual impairment in selected Kenyan Public Universities were affected by the practice of integration education among other factors. Its objectives were; to find out how career choices of visually impaired learners were affected by the current practice of integration education and training in Kenya, to find out career choices that were being undertaken by them and to identify other factors that determined their career choice. The study was carried out in two public universities in Kenya, namely Kenyatta University and Moi University. The target population of the study consisted of visually impaired learners in public universities in Kenya. A total of forty one learners with visual impairments were selected as respondents for the study. The researcher used purposive sampling procedure. Two types of research instruments were used in this study i.e. interview schedules and focused group discussions (FGDs). Both qualitative and quantitative techniques were used to analyze data that was generated for the study. Data collected was presented in frequency distributions and percentages. To identify relationships between different variables, the chi-square analysis was employed. Qualitative data was presented in form of themes. It was found that integration education did not influence the career choices of learners with visual impairments despite having several benefits. It was also found that most learners with visual impairments were pursuing teaching as a career. However, most of them were not pursuing their preferred careers. It was found that gender, environment in which one was brought up, parental education, parental occupation and the type of education system attended did not affect the choices of careers of these learners. However, the level of education of siblings and the mode of admission that is either self sponsored or government sponsored seemed to have had a significant influence on their career choices. The study further revealed that the major factors that contributed to the choice of careers included interest, salary, parental motivation and social influence which positively affected the learners' career choices. Other factors such as visual limitation, lack of appropriate technology, academic performance and lack of career awareness negatively affected the career choices. It was recommended that the Government develops a policy that fully embraces integration education. The Joint Admissions Board (JAB) should consider lowering the cut-off points which will in turn allow more visually impaired learners to access higher education. It was recommended that career education be introduced in all schools. This will give the learners with visual impairment a wide range of experiences on various careers and enable them make wiser career choices.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Career 'choice' is a complex phenomenon which can be better appreciated through a study of its key components, i.e. career and choice. According to Hughes (1937) and Goffman (1968), career has been the focus of many studies. However, the contemporary formulations of the concept by critical realists embody a layered conception that embraces subjective experiences and objective structures of work in interplay (Layder, 1993). The dictionary definition of choice is 'the voluntary act of selecting or separating from two or more things that which is preferred; and the determination of the mind in preferring one thing to another' (Webster's Dictionary 1998). The definition incorporates two components: First is the availability of alternatives, which presents an objective reality, and the second one, the act of preference, which involves a subjective process. If a reference to 'career choice' is made, availability of career choices and the dynamics of choosing a career should be examined. Hence, for career choice to take place, there should be alternative career routes available and there should be an individual preference between these career options, (Mustafa, Fatma & Nihat, 2004).

Career choice as a subject, has attracted academic, professional as well as public attention, due to its multifaceted nature. Since career is a result of the interplay between individuals within organizational and social structures, it

would be beneficial to analyse from diverse perspectives ranging from occupational psychology to organizational sociology. Research on career choice is not uncommon on occupational groups such as accountants and health-care professionals (Morrison 2004, Hallissey, Hannigan, & Ray, 2000, Kyriacou & Colthart 2000). The aim of such research is often to predict career choice behaviours based on personality as well as demographic distributive factors.

According to Alberts, Mbalo, and Ackermann (2003), choice of career is one of the major areas of concern for young people nearing the end of their schooling. The influences are complex, Ginzberg, Ginsburg, Axelrad, & Herma (1951) argue that, the choice of career is also influenced by the young person's conceptualisation of his or her abilities and preferences, and the pursuit of a match between these and job requirements. This, in turn, is influenced by the young person's gender and place in the family. This study was designed to explore integration education and other factors associated with career choice among learners with visual impairment in Kenyan public universities.

According to Kiarie (2004), until the twentieth century, people with disabilities did not receive formal educational services in Kenya. Literature review indicates that individuals with disabilities were viewed as helpless and hopeless. The earliest reactions to those with disabilities in various world communities have included complete intolerance and efforts to do away with infants with disabilities (Scheerenberger, 1982 & Devlieger, 1989). Among the

Greeks, for example, defective infants were killed by dropping them from a cliff.

It is this attitude towards people with disabilities including those who are blind that leads to the concern from some humanitarians about their ability to earn a living. For example in 1794, shocked at seeing people who were blind performing as jesters or begging on the streets of Paris, Victor Hauy resolved to teach them more dignified ways of earning a living (Heward, 2004). Hauy started the first school for children who were blind where he used embossed print to teach the children reading, writing, music, and vocational skills. Heward notes that the competence of these students led to the establishment of other residential schools in Russia in the 19th century (1800) and other parts of Europe. Since Hauy's school, positive attitudes and services for people with visual impairments have expanded throughout the world.

With the advent of formal educational services, most children who have disabilities attend either schools solely for students with disabilities (special schools) or regular education schools but in separate classrooms for these students, or alongside other students without disabilities (integrated schools). The integration education system was started so as to allow learners with disabilities to learn together with learners without disabilities.

Integration is generally defined as a process in which all children are educated to the maximum extent possible in the least restrictive environment (Hayes,

1989). School boards and other service providers may, though, define integration somewhat differently depending on the philosophy they have adopted to guide their programming.

Hayes (1989) states that integration is part of the philosophical belief that exceptional children and adults should live, work and learn in an environment that is as normal as possible. The provision of special educational services to exceptional children has been historically a topic of debate. At this time the debate centres on integration of special and regular education programs as part of the general issue of integration into society.

Current social developments regarding the provision of educational services to exceptional children include parent and advocate demands for integration, increasing responsibility by school boards for services to exceptional children, and enactment of laws on the rights of children with disabilities. School boards must deal with these recent social developments as they make decisions and establish policies regarding the provision of educational services to children.

Although the historical roots of special education can be traced to the late 1700s, the integration movement as we know it today emerged in the 1970s and escalated in popularity in the 1980s. Prior to these very recent times children and adults with special needs were rarely academically or socially integrated with their mainstream peers. The concept of integration education was introduced in early 1960s in Kenya. As public awareness campaign

increased, many more visually impaired learners were being integrated at both secondary education and tertiary institution level.

From 1980s and early 1990s, with the coming of various non-governmental organizations such as Christoffel Blinden Mission (CBM) and Sight Savers International, integration was introduced at primary education level. Therefore, the introduction and expansion of integration programmes for the visually impaired has had an impact within both urban and rural environments. This has called for a higher involvement of all the available professionals and families. However, the level of involvement has been restricted to those areas where communication in terms of roads and telephone services are adequate.

Integration of children with special needs in regular schools have gained prominence as it gives such children a chance to be incorporated in the communities in which they will always be after completing school. There are nineteen integrated programmes for the visually impaired children in Kenya. These programmes were started in 1989, after the success of the Nairobi Integrated Educational Programme (NIEP) in Nairobi province. This programme expanded to other areas in the country and later came to be known as the Kenya Integration Education Programme (KIEP).

According to Kenya Society for the Blind (2008), Kenya Integrated Education Programme (KIEP) was started in 1989 with an overall objective of building the capacity of the government education system to provide education to blind and low vision children in regular schools. This is the model that is geared

towards ensuring social inclusion of these children as they continue living within their communities and learn alongside their sighted peers. The programme is implemented through a partnership between Ministry of Education, Sight Savers International and Kenya Society for the Blind. According to the Kenya Society for the Blind (2008), the case load of visually impaired learners stands at 274 totally blind and 1,137 low visioned.

In 1995, the Ministry of Education established guidelines for teachers of students with visual problems especially students who are integrated in regular education classrooms, whether through unit programmes or full integrated services. Teachers of these students are encouraged to (a) expose them to many activities to stimulate and maximize their potential, (b) not to move about when teaching so as to enable the students to focus and hear instructions, (c) have a classroom seating arrangement that enables visually impaired students to avoid glare, too much or too little lighting directed at them, and to sit at an appropriate distance to view materials on the board, (d) use contrasting colours to help low vision students identify features, and (e) to use large clear, and grammatically correct print on the board. Teachers are also encouraged to give large and easy to manipulate learning aids for students with visual impairments and to use extensively students' auditory and tactile senses.

In the integrated programmes in Kenya, students who are blind are required to take the same examinations as the general population of students with regard to

the cognitive skill areas. They are provided with some accommodations and adaptations regarding the time. These students have an additional 30 minutes within which to complete national examinations.

Certain factors present problems in the efficient servicing of students with visual impairments, integrated programmes, most significant of which is lack of funds (Waihenya, 2000). Lack of funds makes it impossible to provide required grade level textbooks and leisure reading materials and to maintain braille machines in the integrated settings. It also makes it impossible to buy basic specialized equipment along with learning and teaching materials for curriculum areas that are adapted to meet the needs of students with visual impairments.

Kenya also lacks professionals in the area of special education in general (Karugu, 1994). Lack of an adequate number of trained personnel for students with visual impairments in the integrated programmes presents obstacles to the efficient servicing of the population.

Obstacles also exist in the area of adaptation of materials for students with visual impairments. Although some subjects such as biological sciences, home science, geography, and mathematics, studied in the secondary schools have syllabi adapted for students with visual impairments in which complex psychomotor activities are replaced by more manageable ones (Waihenya, 2000), most syllabi used in regular education classes do not have

accommodation in terms of adapted activities for students with visual impairments. This makes it extremely hard for students with visual impairments to access the general education curriculum. These concerns made it necessary for this study to evaluate integration education amongst other factors of career choice of learners with visual impairment. With the challenges already stated within the integration education it made it difficult to see how learners with visual impairment could fairly compete with their sighted piers and later get to qualify to pursue their preferred careers.

In Kenya, many parents take their children to school with the hope that they will be able to manipulate their environment so as to fend for themselves and probably be rewarded with good jobs. Education is thus seen as an escape route from poverty and a means of the personal development of the literate person.

It is important to remember that education goals for students with visual impairments are essentially the same as those for all students. The goals are: effective communication, social competence, employability, and personal independence. To accomplish these goals, however, students with visual impairments require specific interventions and modification of their educational programmes. An appropriate assessment of these unique educational needs in all areas related to the disability and instruction adapted to meet these needs is essential to ensure appropriate educational programme. It is at this point that a reflection of integration education and other factors associated with career choice among learners with visual impairment in

Kenyan Public Universities needed attention.

1.2. Statement of the Problem

Choosing a career is one of the most difficult tasks a student has to do when he or she finishes school. Whether students like it or not, a tentative choice has to be made while they are still in school. The tentative occupational choice a student makes will affect the type of subjects or courses he or she will register for in (KCSE) while in secondary school. Subsequently, it will affect the type of courses he or she will register for while at tertiary institutions which will eventually determine his or her occupation.

This does not leave out learners with visual impairment who also need to choose careers that will later determine their productivity in society. The need for sound career choice and development among learners with visual impairment in Kenya however, continues to raise concern among scholars and related stakeholders. One such response given to this concern is the practice of integration education whose assumption is that integrating learners with disability in mainstream schools gives them equal chances in career choice and development as their normal counterparts. However, according to Mburu (2006), there is insufficient information with regards to evaluation of the integration education in Kenya. This scenario implies that there continues to be lack of feedback with regards to the performance of integration education in Kenya. As a result, there is a problem when it comes to deciding whether to

uphold or reject this practice of education. Indeed, the practice of integration education may have been founded on unrealistic assumptions.

One goal of education in Kenya is that it should meet the economic and social needs of individuals; equipping the youth of the country to play an effective and productive role in the life of the nation (GOK, 1999). Haralamboss (1999) points out that human beings, especially learners get career aspirations hence their choice from different areas, which he rightly calls socio-economic influences. Among them, he lists factors such as: academic achievement of the parents, personal interests, aptitudes, and availability of jobs in the job market, culture and gender. In this study, the researcher's interest was in finding out how integration education among other factors affected the choice of careers of learners with visual impairment.

1.3 Purpose of the Study

The purpose of the study was to find out how career choices of learners with visual impairment in Kenyan Public Universities were affected by the practice of integration education. Other factors associated with career choice such as gender, environmental background, siblings' level of education, parents' level of education and parents' occupation were also examined.

1.4 Objectives of the study

The following were the objectives of the study:

(i) To find out how career choices of visually impaired learners were affected by the practice of integration education in Kenya.

(ii) To find out career choices that were being undertaken by learners with visual impairments in Kenyan Public Universities.

(iii) To identify other factors that determined career choice among learners with visual impairments in public universities in Kenya.

1.5 Research questions

The following research questions guided the study:

(i) To what extent did integration education and training influence the career choice of visually impaired persons?

(ii) What were the career choices being undertaken by learners with visual impairments in Kenyan Public Universities?

(iii) What other factors determined the career choices of learners with visual impairments in the Kenyan Public Universities?

1.6 Hypotheses

The following hypotheses were assumed to occur as a result of this study

(i) There was no significant relationship between the gender of the respondents and the type of careers chosen.

(ii) There was no significant relationship between the careers chosen by the respondents and the place they were brought up.

(iii) There was no significant relationship between the level of education of the siblings and the type of careers taken by the respondents.

(iv) There was no significant relationship between the careers chosen by the respondents and the level of education of the father and/or mother.

(v) There was no significant relationship between the occupation of the household head/parent and the type of careers taken by the respondents.

(vi) There was no significant relationship between the mode of admission (parallel/self sponsored or regular/government sponsored) and the course pursued by the respondents.

(vii) There was no significant relationship between the type of education system attended and the type of degree course pursued by the respondents.

1.7 Significance of the Study

The findings of this study were expected to give information on the impact of integration education on career choices of persons with visual impairments. This may further assist education policy makers including curriculum developers identify gaps that need to be addressed in order to make integration education more relevant and meaningful to learners with visual impairments.

1.8 Delimitation and Limitation of the Study

This study focused on one specific category of learners with disabilities-visual

impairment. This way, the applicability of its findings to other forms of disability may be limited. Also, the study covered only university students; hence the findings may not apply to other literacy institutions like middle level colleges, vocational training centres or institutes.

1.9 Assumptions of the Study

(i) Career choice of the learners is determined by the type of education system one goes through.

(ii) When responding to the study instruments, students would give honest answers.

1.10 Theoretical Framework

Career development theories seek to explain why people choose the jobs they do. In each culture, a person's career choice is influenced in part by environmental factors, including gender roles, the economy, their genetic make up, social status of parents, role models, and social norms. Theories of vocational choice attempt to explain what influences people's choice of a career. There are two main perspectives in this regard, those theories that emphasize environment and those that emphasize developmental changes within the individual. The theoretical framework of this study focused on three theories: Social Cognitive Theory of Albert Bandura (1986), Ginzberg, Ginsburg, Axelrad and Herma Theory of occupational choice of 1951, and Holland's Theory of vocational Choice and Career Development of 1985.

1.10.1 **Social Cognitive Theory of Albert Bandura (1986)**

This theory emphasizes complementary interactions between inborn talents and the environmental conditions, which affect the person's experiences. The theory examines environmental variables that influence career decisions e.g. parents occupations, models in the environment, trends affecting availability of jobs, or social policies regulating equal employment opportunities. Other factors are the unique learning histories of each person and the skills that individuals use to approach their work.

This theory was useful to this study because it helped the researcher to investigate how various social declarations and practices on education have affected the career choice of learners. For example, how the declaration of education as a human right, equal opportunity in access to education, integrated practice of education has influenced the career aspirations and choice of learners with visual impairment. Furthermore, the theory accounted for how the mixing with sighted peers in the integration education setting has affected the career choice of visually impaired learners as they form their social interactive environment. Other factors such as parental occupation, parents' level of education, Siblings level of Education, gender and environmental background were also accounted for in this theory.

1.10.2 Ginzberg, Ginsburg, Axelrad and Herma Theory of Occupational Choice of 1951

According to Ginzberg, Ginsburg, Axelrad and Herma (1951), vocational choice is a process and not a single decision. This process goes through stages. The final choice is usually a compromise between personal needs and societal demands. A person has to consider their interests, values and aptitude in relation to societal norms and limitations. This theory has three periods of occupational choice, namely: fantasy period, tentative and realistic.

(i) **Fantasy Period**: This period starts from 0-11 years. The younger person thinks of a job in terms of what he would like to be as an adult. He or she cannot honestly assess other factors involved. Therefore, the individual does not assess his/her capabilities and limitations of reality. At this point, the young people imagine they can be everything they want to be. Fantasy at this point does not refer to the occupation but rather to the process involved in choosing an occupation. This fantasy results from the fact that a child is unable to make the relationship between means and ends (IBID).

According to this theory, four-year-old children will readily tell someone what they would like to be. At this time, children will give functional pleasure as the main reason behind these choices.

When children begin to go to school, they acquire the ability to accomplish some tasks. So they begin enjoying tasks because of the results. At this point, the results of the prospective activity become the main reason for choosing an occupation.

(ii) **The Period of Tentative Choices**: According to Ginzberg (1951), pre-adolescents and adolescents are unable to make a final decision about an occupation. At this time however, they do have to make decisions that ultimately will impact on their career choice. Such decisions include choice of subject, choice of college among others. It is at this stage that the adolescent would gain insight into factors that are essential in occupational choice.

This period can be divided into four sub stages: Interest stage, capacity stage, value stage and transition stage.

a) **Interest Stage**: Children who are eleven years old mainly experience this stage. Most of them will indicate that they would like to do the same work as their parents. They will also indicate that they would like to do work that they like and interests them. At this time, many are vague about their decisions and do not consider any other alternative just in case their first choice does not work.

b) **Capacity Stage**: This covers approximately the ages of 13 and

14 years. It is closely linked to the interest stage. This is because interest continues to play an important role. Children at this stage stop referring to their father's occupation. There is a broadening of the alternative a child considers. Children at this stage will typically say they would like to do something exciting like advertising, public relations or journalism. There is also recognition of the need for testing capacity. One makes choices guided by reality. There is also an awareness of the passing time that the choice will have to be made sooner rather than later.

c) **Value Stage**: This stage covers individuals between ages 15 and 16 years. At this point, the individual starts recognizing the many issues that need to be taken into account when choosing an occupation. When making choices at this point, they recognize that most of these choices are tentative. They also start considering the values and goals. They will start placing their occupational choice within the general framework of their life plan. It is also at this time that monetary consideration comes into the picture. At age 15 and 16, individuals who are now in the adolescent stage will think of monetary rewards they are likely to receive, status, security and independence.

d) **Transitional Stage**: This covers ages 17 and 18 years. This is the final stage of the tentative period. The focus shifts from subjective factors such as interest and capacity to reality, which

plays the most central part in the career choice. At this time, the preoccupation is college preparation.

(iii) **Period of Realistic Choice**: This period covers individuals between ages 19 to 24. This period occurs in three sub-stages, namely, exploration, crystallization and specification stages.

a) **Exploration Stage**: During this stage, a person wants to discover as much as possible about him/herself. They also want to know as much as possible about the world of work. A major milestone at this point is the realization that the decision can no longer be postponed indefinitely. This makes them cautious for they realize the decision they are about to make is a permanent commitment. Another milestone here is that most of them are sure of the fields they definitely do not want to be in. This means that although they may not have made a decision on which field they want to work in, they will have made a decision on which field they do not want to work in. The decision at this point may result from several sources capabilities and awareness of the limited knowledge they possess. However, most people at this point look forward to accomplishment; they are eager for variety and hope to avoid routine work.

b) **Crystallization Stage**: Crystallization is the process where the individual is finally able to synthesize the many forces, internal

and external that has relevance for the decision made. An individual decides to end his/her exploration at this point and starts to make plans towards the future. One criteria of crystallization at this stage is the firmness of decision. However, the decisions of this stage are not final as a person may change such a choice later. If people at this stage decide to explore widely and test themselves in different fronts, they are more likely to make permanent choices.

c) **Stage of Specification**: This is the time when one makes the final commitment. The idea is that one must be willing to specialize and to resist from being deflected from one's chosen actions.

This theory was useful to this study because it helped the researcher to know at what level in career choice the respondents were. The respondents in this study were in the period of realistic choice which is the final stage in this theory. This is because they were already at the University pursuing their various careers. This was also an indication that they were all in the specification stage where they had made their final career choice. It further helped in evaluating whether the respondents who were learners with visual impairment as they advanced through the various stages were influenced by the factors within integration education such as the interaction with the sighted peers, exposure to various careers, or

even the challenges they may have faced like lack of specialised teachers, lack of brailed textbooks among other factors that may have contributed to their final career choice. Overall, the theory was useful in understanding the entire process of career choice and realization by considering a number of factors.

1.10.3 Holland's Theory of Vocational Choice and Career Development (1985)

Holland's theory emphasizes six personality types that match one's career. He proposes that different work environments either complement or oppose the qualities that make up any type of personality: Realistic types prefer orderly structured work, e.g. doctors and accountants. Investigative types prefer work that involves analytic skills, e.g. researchers and lawyers. Artistic types are good in unstructured situations that let them express their creativity, e.g. musicians and designers. Social types are good at interpersonal skills e.g social workers, teachers and counsellors. Enterprising types enjoy work that brings them into contact with others in ways in which they can express their assertiveness, e.g. salesmen and women, businessmen/businesswomen and finally, the conventional types who work under the direction of others e.g. messengers, labourers, typists, telephone operators and shoe makers.

This theory helped the researcher to understand the different personality types of the respondents depending upon the careers that they were undertaking at the time of the study. It also helped in investigating whether integration

education as one of the main factors had any influence in the careers chosen by the respondents in comparison with their personality types.

1.11 Operational Definition of Terms

a) **Accommodation:** refers to approaches whereby the learning environment of the learners with visual impairment, either some of the elements of the total environment, is modified to promote learning. The focus is on changing the learning environment or the academic requirements so that the students may learn in spite of a fundamental weakness or deficiency.

b) **Adapted Accommodation:** adjustment of the facilities, curriculum, and instruction relating to the education of learners with visual impairment.

c) **Career:** This is the ongoing pursuit of professional growth, in a related area of employment that involves continuous learning and development.

d) **Disabled Person**: Refers to any person unable to secure and ensure by himself or herself wholly or partly the necessities of a normal individual or social life as a result of certain difficulties in his or her physical, mental or sensory capabilities.

e) **Inclusive Education:** This refers to schools and centres of learning and educational systems that are open to all children including those with special needs and disabilities. This requires sourcing, planning and organizing learning environments to eliminate all barriers to learning

and participation of learners with special needs and disabilities.

f) **Integration Education**: This is the system of education used mainly to facilitate learners with visual impairment to attend ordinary schools that provide minimal modifications to accommodate the learners with visual impairment and other disabilities.

g) **Itinerant Teachers:** These are qualified school teachers who have had some formal training in the education of children with visual impairment, either through a residential course or a distance education programme (e.g. a three-year diploma in Special Educational Needs). These teachers travel around local mainstream schools and communities to offer advice, resources, and support to visually impaired children, their teachers, and their parents.

h) **Least Restrictive Environment:** Refers to an educational placement in which, to the maximum extent appropriate, learners with visual impairment are placed in educational programs where they will benefit the most at the least distance away from regular education placement

i) **Mainstreaming:** Refers to the practice of educating students with visual impairment in regular classes during specific time periods based on their skills. This means that regular education classes are combined with special education classes.

j) **Normalisation:** Is the philosophical belief that all exceptional individuals, no matter what their levels and types of disability, should be provided with an education and living environment as close to

normal as possible.

k) **Segregation:** This refers to the separation of learners with visual impairment in schools specially designed for them in order to meet their educational needs. This includes both specialised manpower and specialised infrastructure.

l) **Special Education**: Refers to specially designed instruction which meets the unique needs of an exceptional child

m) **Progressive Integration:** Refers to the steady change of trend in the education of learners with visual impairment from segregated education in special schools to integration education in regular schools.

n) **Visually Impaired**: This is a term that includes individuals with light perception or no vision at all, or those with low vision (limitation in distance vision). These are individuals whose visual impairment interferes with their optimal learning and achievement, unless adaptations are made in the methods of presenting learning experiences, the nature of materials used, and/or in the learning environment.

o) **Vocation Rehabilitation**: This is the preparation of disabled persons for work and employment in accordance with their individual capability.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section examines several aspects that are assumed to affect or influence career choice. These include: practice of integration education, occupational perspectives of visually impaired persons, careers of visually impaired persons, role of career guidance, gender, environment where one was brought up, the role of siblings in career choice, parental education and parental occupation, type of education system, mode of admission (self-sponsored and government sponsored), academic performance and special education in Kenya.

2.2 Integration Education

According to UNESCO (2005), integration of pupils with disabilities and/or learning difficulties in mainstream schools means the mandatory pedagogic integration or school-based integration. This type of integration, relates directly to 'teaching and learning' in regular schools. Integration in this sense involves dealing with the individual needs of each child, subject to the capacity of a mainstream school to meet those needs. The issue is whether all children (with and without exceptional needs) should in principle be educated in an "ordinary" school, thereby integrating the learning experience of exceptional

children into a mainstream framework.

It follows that exceptional educational provision is blended into an ordinary school's range of provisions. Where integration applies, there remains still the practical question as to the extent to which ordinary schools are able to provide facilities i.e. adapted accommodation, specialist teachers, equipment, and multi-disciplinary professional support which are suitable for each child's special needs. The survey by UNESCO (2005), states that the principle of school-based integration "mandatory pedagogic integration" acknowledges that some children have such disabilities and/or learning difficulties that education in a special school is necessary.

Majority of countries expressed this provision in school-based integration in two distinct ways: first is the right of a child with special needs to be educated in an ordinary school subject and second an ordinary school having the capacity to meet those needs.

A review of special education in the State of Victoria, Australia (1984) had offered a useful focus of specific principles underlying integration and the UNESCO (2005), report lists them as follows:

(i) The right of every child to be educated in a regular school;

(ii) Provision to be organized according to student's needs rather than disability;

(iii) Resources and school services should be school-based;

(iv) Decision-making should be collaborative;

(v) All children can learn and be taught and;

(vi) Integration is a curriculum issue.

In a number of other countries, integration is accomplished by a phased method of approach, according to the student's needs and disability. Andres (2006) observes that Chile achieves integration of children with mental, sensory or motor deficiencies either in special education courses in parallel to regular classes or by integration workshops, in each case with the assistance of special educators. Children with mild or moderate disabilities follow common courses at every level. In Chile, in their constitution, Law No. 19.284 established the conditions for the social integration of people with disabilities; Article 27 mentions the right of people with special needs to have access to education in regular schools. In 1987, the Philippine Government proclaimed that the ultimate goal of special education shall be the integration or mainstreaming of learners with special needs into the regular school system and eventually in the community.

Ming (2007) reports that in China, regular primary and secondary schools must admit disabled students who are able to participate in the regular classes and parents may appeal to the school authorities if their child is not admitted. UNESCO Report of 2005 shows that France adopted a very similar approach to Chile in 1983 and then eight years later in 1991, France established 'classes of

school integration' with the intention of allowing disabled students to transfer to mainstream classes. A variation of that approach was also found in the Philippines where the concept of a 'school within a school' has been developed. This involves, a special education centre being part of a mainstream school preparing disabled children, especially the physically and psychologically disabled, to shift into the regular class on either part-time or full-time basis.

In the Canadian Province of New Brunswick, the survey says Bill 85 prohibited local school boards from refusing to admit certain children to the school system. Bill 85 calls for special education to be based on a student's individual needs, rather than a categorization of handicap. School boards are instructed to place exceptional pupils in the same classrooms as non-exceptional pupils as long as it is not detrimental to the needs of the child. A case must be made to remove an exceptional child from a regular class.

Denmark is reported as linking integration 'to the principles of normalization and decentralization' and that it believes integration cannot be promoted directly through legislation (UNESCO 2005). Normalization and decentralization are embodied in Danish laws which pave the way for integration. Former pieces of legislation that related to 'the handicapped' have been repealed as part of this process and a number of ministries that previously catered for disabled people have been transferred to general ministries. Following the principle of progressive integration, the report says there are now various degrees of integration in Denmark, ranging from total integration

in the mainstream class to segregation in a special school. The only political decision which mentions integration is a Danish Parliamentary Resolution of 1969 which says:

> *The primary and lower secondary schools should be expanded so as to provide for the teaching of handicapped pupils, to the greatest possible extent, in an ordinary school environment.*

Over the last decades, significant moves have been made in Germany to include more and more disabled children in the mainstream. The UNESCO Report, (2005), shows that the following factors are viewed in Germany as a priority in order to achieve inclusive education: a high standard of competence for teaching and training staff, comprehensive knowledge of all rehabilitation measures, and co-ordinated collaboration between vocational training, regular schools, social welfare and medical services.

According to Engels (2003), a number of Resource Centres have been set up in Germany to help bring about a more effective inclusive provision for all pupils with special educational needs. They function in close co-operation with other services and their tasks include:

(i) Providing expertise and remedial programmes;

(ii) Preparing and arranging meetings of remedial committees;

(iii) Taking care of the necessary assistance for teachers with competence in special education;

(iv) Giving advice to parents of disabled children; and

(v) Bringing together, in a multidisciplinary way, all the provision the disabled child depends on in the classroom and school.

Italian law states that disabled pupils and students may be enrolled in a regular school with assistance and the class they go into 'shall not be composed of more than 20 pupils'. The same law states there will be a support teacher in each class and that they can 'teach a child with special needs individually for six hours a week'. Such classes shall also have support from specialized personnel.

In Kenya, according to Kenya Society for the Blind (2009), Kenya Integrated Education Programme (KIEP) is an on going project that began in 1989 in partnership with Kenya Society for the Blind, SightSavers International (SSI) and the Ministry of Education (MoE) under the special needs education programme. KIEP is currently operating in 82 districts covering 19 programmes targeting children with visual impairment in mainstream schools. The main focus of the programme is to promote the education of children with visual impairment (CWVI) in mainstream schools where they learn alongside sighted children. The aim of KIEP is to integrate blind and low vision children into mainstream education and to raise awareness amongst parents and teachers on the rights of children with visual impairment and specifically the right to education and protection.

At district level, activities are implemented through the District Education Offices managed by coordinating itinerant teachers. Itinerant teachers are identified and through trainings equipped with relevant Braille and low vision skills to train contact teachers who are expected to support children with visual impairment (CWVI) in the classroom setup.

It is the policy of the government that children with visual disabilities are not excluded from mainstream education. From 2003, government declaration of free primary education and her continued commitment to Universal Primary Education created additional demand from children with special needs. Despite all these good intentions, it is estimated that visually impaired children have the lowest access and participation rate in Kenya. Enrolment, attendance and completion of the formal education system is low. This has been attributed to stigmatization, retrogressive cultural beliefs, poor attitudes and ignorance on potential of Visually Impaired Children (VIC) by parents. Consequently, most parents do not enrol their visually impaired children in school and a significant number of the affected children live a neglected life and are often kept away from general public.

2.3 Benefits of Integration Education

A large number of educators and workers of the visually impaired have pointed out the following benefits of integrated education.

(i) **Low Cost**: Expenditure on integrated education is comparatively lower

as there is no investment in building; no maintenance of hostels; no duplicating of land areas, playground and equipment.

(ii) **Social Acceptance:** The integrated education enhances the social acceptance of a child due to the following factors:

a) The child has the advantage of being in an environment which he shares with his sighted peers.

b) Congenial company instead of isolation - a natural social environment.

c) Participation in the general community life and stays with his family thus ensuring family bonding.

(iii) **Family Involvement**: The visually impaired children under integrated education also have their full share of family life along with their family members. It forces the family to feel and assume its responsibility towards the child. It also enables the child to feel that he or she is an integral part of the family.

(iv) **Better Understanding of the Sighted**: Under integrated education, a sighted child obtains a better understanding of a visually impaired student, his needs, his aspirations and the true picture of a disability, it helps to reinforce that a disability need not bar a student from attaining academic excellence. It enables sighted students to appreciate the problems and feelings of the visually impaired and to learn proper ways of interacting with them.

(v) **Better Acceptance**: According to Fazelbhoy (1989), many

misconceptions are destroyed when there is a close contact between visually impaired and the sighted children and foundations are laid for the acceptance of the former into the world after graduation.

(vi) **Demonstration**: Having disabled children in common schools is a positive factor. The courage and confidence shown by them in overcoming their difficulties is an objective lesson to normal students in the cultivation of good character and it has had a unifying influence among the schoolmates.

(vii) **Familiar Environment**: According to Horton (1988), transferring of knowledge is less of a problem in an integrated programme because the child is being trained in his home area. He also adds that as the parents watch the child being trained by the teacher, they would be able to form a more realistic picture of what the child is able to do on his own.

(viii) **Community Participation**: Pickering and Haskell (1986), advocate that central to the argument for integrating disabled children in regular schools is the belief that they are members of the community and have the right to grow and develop inside that community.

(ix) **Right of a Child**: Thus integrated education is not being viewed merely as an option but as a right of every disabled child.

On the basis of these observations, one may conclude beyond doubt that integrated education is the only viable available alternative for promoting universal education of the visually impaired in the developing countries. It scores better on the following accounts: social integration, cost effectiveness,

personality development, and understanding of the sighted, among others. According to Bourgeault (1975), integrated education is logical, practical, viable, and educationally sound and can be accomplished at a minimum cost.

Integration of disabled learners in normal schools is however, viewed with misgivings since such schools do not have the facilities necessary for accommodation of particular disabilities. Most of these schools have no specialised teachers to handle specific disabilities. Construction of building and other physical facilities does not take into consideration the needs of learners who have disabilities and many institutions do not have the special learning equipment needed by learners. In Kenya for example, according to Kenya Society for the Blind (2008), it has been established that a significant number of visually impaired children face barriers in accessing quality education. A recent resource distribution analysis undertaken by the Kenya Integrated Education Programme (KIEP) indicated a gross under supply of the requisite resources for the education of visually impaired children. For instance, due to frequent change of curriculum, teaching and learning materials, especially production of the brail books, has become expensive leading to inadequacy. It is approximated that pupil to Braille book ratio for the children with visual impaired is still at 5:1 against the recommended 1:1.

According to Head teachers interviewed, it has been further established that only about 50% of the children enrolled in the integrated schools are handled by teachers with requisite special skills. In, Kenya it is estimated that pupil to

specialized teacher is 1:20. The recommended PTR is 1: 5.

Up to 85% of school environment is unfriendly to the visually impaired and an impediment to quality education. School environments are without building ramps, pavement, rails, appropriate colours and improved lights. The impact is that rehabilitation services such as activity of daily living, orientation and mobility, all contributing to quality education, are inhibited.

As Skirtic (1995) ponders, one may ask questions about whether a particular school system protects and realizes the rights of its learners. According to Bradley (1997), as schools become more integrated, it becomes clear that they change from segregated school settings towards inclusion. This affects not only certain subsystems in the school, but also the whole school system. To accomplish systematic change, a way of addressing both the practical and personal component of change should be developed. The values, opinions, attitudes and concerns of educators, learners, administrators and parents alike which are deeply embedded in the systematic structure of schools should be considered and evaluated.

Engelbretch and Booysen (1999) have argued that an integration school is a democracy where all members have rights and responsibilities. Membership of the school community should be open, positive and a reflection of the diversity in the community. Accessibility to all should be reflected in terms of buildings, curricula and support systems, and in terms of a practice of acceptance and

celebration of diversity. An integrated school should therefore, produce learners who fit within the same careers as their "normal" counterparts. The issue of interest was whether this is being realized, hence the carrying out of a study to find out the real influence of the practice of integration education to its target group. This was the essence of the study.

With the realization that educating learners with special needs in totally segregated settings was ineffective and inefficient, the government of Kenya began to recognize integration as a better option (Odero, 2004). Some scholars have carried out studies that have focused on primary and secondary schools mainstreaming. Akatsa (1986) in his study of pupils with mental retardation recognizes the fact that integration is an important aspect for a successful education for learners with disabilities. His conclusion was that pupils with mental retardation can benefit from all- rounded education given an ordinary setting. This study however, fell short of showing how such educational practice benefited learners with other disabilities. For example, it failed to point out whether such practice of education increased motivation upwards towards career choice and whether it led to increased access to vocational opportunities to people with disabilities. It also did not outline some of the constraints of this type of educational practice in light of the career choice of learners with disabilities. This study focused on tackling some of these issues that were left out in Akatsa's study

With regards to post secondary training, Odero (2004) investigated curriculum barriers to successful inclusion of students with visual impairments in Kenya Polytechnic. Whereas this study showed that negative and stereotypic attitudes towards impaired persons undermined the access to training opportunities, it fell short of showing how this was impacting on the career choice of such learners. Overall, Odero (2004) identified many barriers but did not show how they influenced the career choice of visually impaired learners. The study endeavoured to fill this gap.

One goal of education in Kenya is the creation of manpower necessary for national development through economic growth. Since learners with disability go through the system and now attend classes alongside their peers, it became imperative to find out how this practice has affected the participation of visually impaired learners, who only but constitute one category of learners with special needs. This has enabled a judgment over the practice of integration education, that is, whether it is achieving its goals or just a matter of paperwork. The findings equally pointed to the weaknesses and strengths of integration education hence the need for its further improvements. Focus was put on what ends this practice has achieved in terms of occupational training and career choice.

2.4 Occupational Perspectives of Visually Impaired Persons

The question of occupational training for visually impaired persons became an issue in the 1960s when the International Society for Rehabilitation of People

with Disabilities questioned the role of vocational training for people with disabilities. It is at that time Malikin (1969) argued that, the ultimate goal of all rehabilitation is to enable handicapped individuals to work. A job is essential not only to enable the individual to be economically self-supporting, but also to assure the individual's rightful place in the home and community.

According to Malikin (1969), vocational rehabilitation centres continually failed to put visually impaired persons and other persons with special needs in their rightful place in the community. Their isolation from peers and teachers in the regular institutions ensures that persons with disabilities encounter difficulties in social interaction. What is desired in this regard is to integrate visually impaired persons with their sighted peers in training institutions. Indeed, we see today many learners with visual impairments in the training institutions such as universities and polytechnics receiving instruction alongside their sighted colleagues. The essence of such a practice should be to enable people with visual impairment to work.

Psychologist, Sigmund Freud (1856-1939) once argued that work is a most important focus on human motivation. For humanity's good, one's nature demands activity in a harnessed direction that permits one to unfold one's being and realizes one's best potentials for oneself, family and society. The dignity of the individual has no real meaning unless the person with potentiality for work is given an opportunity to engage in a career and/or

vocation.

The dignity of persons with disability and opportunity to engage them in work can only be achieved by including them in mainstream institutions. This is already being practised in the universities, however, it is necessary to find out in which areas persons with disability are being given opportunity to work, hence find out the influence of integration education and other factors to career choice.

The Government Commission on Education (Koech Report, 1999) did emphasize that training opportunities for persons with special needs should be diversified in order to enhance their chances for employment. In this direction, it was imperative to find out what influence integration of learners with visual impairments with their sighted peers has had on their career choice.

2.5 Careers of Persons with Visual Impairments

American foundation for the Blind (2009) indicates that people who are blind or visually impaired can perform almost any job: lawyer, artist, accountant, secretary, customer service representative, food service worker, factory worker, financial analyst, teacher, medical transcriptionist, day care worker, counsellor, computer programmer, cook, salesperson, clerk, and more. Some visually impaired individuals achieved independence,

becoming well known poets, singers and musicians, especially in the middle ages (Allen, 2001). Among these were such illustrious persons as the mathematician Nicholas Saunderson, who became a Lucasian Professor of Mathematics at Cambridge; John Metcalf, an English road engineer and bridge builder; and Thomas Blacklock, a Scottish poet and minister (Lowenfeld, 1974). With the necessary training and support, it is possible for any person with a visual impairment to emancipate him/herself and become a valuable member of society, as modern society generally places less restriction on people.

In the past, it was generally assumed that visually impaired individuals could perform only certain types of work, for which they were prepared in schools and workshops for the blind. This led to occupational segregation and job restrictions. This outdated occupational segregation has been replaced by the present-day approach, which endeavours to determine where the individual's potential, talents and interests lie, in order to provide training and placement in the kind of work for which he/she is best suited (McNamara and Moreton, 1993). This approach has brought about an influx of visually impaired individuals into industry, private enterprise and different professions, resulting in increased occupational integration. Blind people have found their niche as radio and TV presenters, switchboard operators, and many more professions.

Available assistive technology makes it easier for people who are visually

impaired to perform many jobs that they never could have before. Proper training, appropriate tools, the ability to sell oneself, and a willing attitude on the part of employers constitute a winning formula.

Jones, (1983) suggests with very few exceptions that there are few differences in core personality characteristics between persons who do and do not have visual disability. Assistive technology has provided tools which compensate in many work settings for visual loss. The student with visual impairment, however, has additional need for knowledge and use of adaptive equipment, such as closed circuit televisions, talking computers, clocks, calculators, dictionaries, Braille, slate and stylus, specialized tape recorders, electronic readers and dictaphones. A sighted person seeking career counselling has a variety of available resources including psychological tests designed to help guide the occupational exploration or selection process. Lowman (1991) suggests that career counselling may be the most important function in the practice of psychology. For the person with visual disability, the choices are limited. In fact, Price, Mount, and Coles (1987) assert that psychologists involved with test development have essentially turned their backs on the needs of persons with visual impairment. More is involved than just modifying the administration format to include Braille or oral administration of the tests. (Jones, in press) suggests that the most widely used test of vocational interests appears to systematically under-represent the extent of interest in some occupational fields when used with adults who have visual disability.

The career interests which seem most often underestimated are those involving technical areas, mathematics, and science. Preliminary data from a study conducted by Price, Mount, & Coles, (1987) suggest that this same phenomenon is also evident when testing secondary school students who have visual impairment. Mathematics and science are of particular concern because these are areas in which assistive technology could be most helpful in creating equitable work opportunities and are areas in which job opportunities continue to expand.

Edie (2008) indicates that due to the advancement of technology in many countries, careers such as pharmacy can be undertaken by persons with visual impairment. Prescriptions, especially in a hospital setting, are done on computer networks rather than in doctors' chicken scratching. So a blind person would have access to accurate information about the medications and dosages needed through the use of a screen reader or screen enlargement program, just as the sighted have access to information needed to perform other jobs.

This doesn't mean that any young blind person can succeed in any career just because he/she has the desire to do so. The question that should be asked is, if this student were fully sighted, would he/she have what it takes to successfully pursue this career? If so, then no one would want to capitulate to blindness as the limiting factor in a career choice. If the person has the intelligence, interest, drive, creativity, and whatever other qualities are

possessed by non-disabled members of the profession, then that person will find a way to reach her/his goal and follow her/his passion.

The intention of this study was to identify the various careers being undertaken by learners with visual impairment in public universities in Kenya and explore whether these were the careers they had intended to undertake.

2.6 Role of Career Guidance

According to Makinde (1984), educational guidance and counselling is important in assisting learners to make most of their educational opportunities. Educational guidance helps to propel the learners towards becoming cultivated individuals and at the same time preparing them to participate in life activities, which will be socially useful and personally satisfying, including future careers. Educational counselling can be regarded as pre-vocational guidance when making choices in academic subjects that can lead to choice of certain careers in the future in higher institutions of learning. The role of a guidance counsellor in this case is to offer services at various levels of the learning career from secondary up to university, not only to students or learners who may be performing poorly, mal-adjusted or potential drop outs but also to gifted and visually impaired learners who might be having difficulties in knowing exactly what to do with their abilities or disabilities such as visual impairments. From this overview, it is clear that career choice can greatly be enhanced through the services of academic guidance and counselling.

Makinde (1984) further goes on to outline the importance or rationale behind providing educational guidance to learners as it guides one's move towards some objectives, where one would be choosing the right and satisfying career. Educational guidance does provide a sympathetic, friendly and understanding environment to the learner and this can be very appropriate for those who are visually challenged. The person guided progressively consents to receive guidance, reserves the right to use the guidance and make his/her own decision. The resulting effect is that the learner becomes better able to guide himself or herself in future in terms of career pursuits among choices in life.

2.7 Gender and Career Choice

Extensive reviews of the research data on career development have documented gender differences in both process and outcomes (Betz & Fitzgerald, 1987). Betz and Fitzgerald (1987) identified four categories of variables that are particularly important in studying the career development of women: individual (e.g., self-esteem), background (e.g., female role models), educational (e.g., continuation in mathematics studies), and adult lifestyle (e.g., number of children).

In their effort to explain why women were underrepresented in science and maths fields, Betz and Hackett (1981) argue that women avoid male-dominated occupations due to a lack of self-confidence in such occupations, and that this lack of confidence is rooted in a lack of encouragement, role models, or similar

experiences in the field and the resources for self-efficacy proposed by Bandura (1977). Several studies have found that career self-efficacy beliefs are critical in the choices made by and the persistence of females entering into mathematical, scientific, and technological careers (Church, Teresa, Rosebrook, & Szendre, 1992; Smith-Weber, 1999; Zeldin & Pajares, 2000).

Thus, career self-efficacy is a significant factor for female students' career aspirations, particularly for non-female traditional occupations (Mau, 2003; Post-Kammer & Smith, 1985; Rainey & Borders, 1997). Bonett (1994), found that females had lower self-efficacy than males for male-dominated occupations, such as engineering while males had lower self-efficacy for traditionally female occupations such as nursing, secretarial among others.

Today, although specific gender requirements have been removed, females continue to have low participation rates in science based programmes. This limits their choice of career preparation programs to the few that do not have science and technology requirements. The learners with visual impairment would be able to cope if only the necessary technology is availed to them.

According to the World Factbook (Central Intelligence Agency, 2001), Kenyan women form 50% of the population, but constitute only 20% of the employed labour force. Most women are engaged in the informal sector (i.e., handicraft and food market commodity labour, unpaid labour, under-the-table waged labour), where they are active in agricultural and domestic labour. Chlebowska

(1990), argues that in Kenya, almost all the food consumed by rural families is produced by women on small farms. Other women in informal sectors are small traders, selling handicrafts and agricultural produce. The few women in the formal sector (i.e., taxable waged labour) are secretaries, nurses, and teachers, and about 20% are unskilled casual workers. In contrast, in the formal labour sector, upper income fields such as communication and manufacturing are male-dominated (Godia, 1987; International Labour Organisation (ILO), 1981, 1991; Jobs and Skills Program for Africa, 1981; Johnson, 1997; Middleton, Sideman & Adams, 1993; Republic of Kenya, Ministry of Labour; 1990; 1992; 1997).

Several reasons have been advanced as to why women are under-represented in the formal labour force (Eshiwani, 1984; 1991; 1993a; 1993b). One of the main reasons has been that women believe that they are responsible for children, family, and healthcare, thus taking up the responsibility of tending the young and the needy. Women in Kenya often see competitive, professional fields as the domain of men. A problem is that the variety of formal jobs for women is limited and these jobs are under-valued to the point that those who occupy them remain economically disadvantaged. While women are accomplished in domestic, health, and secretarial fields, they generally are discouraged from nourishing strong career ambitions in these or other fields.

The aim of the researcher was to examine gender as one of the variable that is assumed to affect career choice. The study was to examine whether gender

played any role in influencing the career choices of learners with visual impairment.

2.8 The Environment in which One is Brought Up

Haller, Monk and Tien (1993), hypothesized that students from large urban schools with varied curricula would be more proficient in higher-order thinking skills than students from rural schools with fewer course offerings. It has been assumed that students from rural areas have lower educational aspirations than their non-rural counterparts. Haller and Virkler (1993), found very little difference and that it may be attributed to socio-economic status of the two types of families. Rural students who do attend college often have difficulties attaining high academic achievement, even though intellectually they are no different than their urban peers (Gibbs, 1995). Rural high school students often lack information about careers and college opportunities (Hodes, 1995).

Everyone has been brought up in different environmental setups, that is rural, partly rural partly urban and urban and this also includes learners with visual impairment. Each environmental setup has its advantages and disadvantages. For this reason the study aimed at finding out whether the different environmental backgrounds that the respondents were brought up in had anything to do with the career choices that they were pursuing.

2.9 The Role of Siblings in Career Choice

A child's place in the family birth-order may play a role in the type of occupations that will interest him or her as an adult, new research suggests. These results fit into theories that say our place in family birth order will influence our personality (Leong, 2001). One of the strongest findings was the fact that only children and first-born children tended to have more cognitive and analytical interests, while later-borns were more artistic and oriented to the outdoors.

Being born first, last, or somewhere in the middle on itself is not of significance. What matters is how that birth order affects how a child is treated by parents and other siblings and how that child feels about it. Other factors also influence the child's socialization and the parents' expectations. Birth order research focuses on five ordinal birth positions: firstborn, second born, middle, last, and only children. Firstborn children in general have been found to be responsible, assertive, task-oriented, perfectionist, and supporters of authority, because they often look after their younger siblings, they get experience leading and mentoring others, often rising to leadership positions as adults. Studies have also linked firstborn children with higher academic achievement and possibly higher intelligence scores when compared to later-born children. This may be due to more exposure to adult language and greater interactions with parents. Firstborns often choose professions that require precision, such as careers in science, medicine, law, engineering, computer science, or accounting (Richardson 2004).

On the other hand however, siblings have been found to influence each other's development in very important ways. They are a significant part of family life during childhood. But surprisingly, researchers have paid very little attention to sibling relationships. Most of the sibling researches that concern siblings with disabilities visual impairment included have focused on the effects of a child with disability or chronic illness on non-disabled siblings. Also important is the influence of the non-disabled sibling on the child with a disability or chronic illness. National Dissemination Center for Children with Disabilities (NICHCY) (1994) reports that the non-disabled sibling's impact upon the child with a disability may vary across the family's life. While very little work has been done in this area, researchers do stress the reciprocity of sibling relationships.

Siblings' level of education has not been pointed out by many studies as being one of the factors that affect career choices of young people. This study therefore, aimed at assessing siblings' level of education as one of the factors that may affect career choices of learners with visual impairment. This was also found necessary because there is very limited literature or research conducted on siblings involvement in the career choice of learners with visual impairment.

2.10 Parents' Level of Education

Past research studies concerning the influence of parental education provide

conflicting information. For example, DeRidder (1990), suggests that low levels of parental education were most closely related to low parental income and a decreased likelihood of the children attending college. The study reports that parents with lower levels of education usually are employed in lower level jobs. In an earlier study Mortimer, Dennehy, and Lee, (1992) found that parental education is a significant influencer on the career decisions of students. The researchers conclude that parents with higher levels of education influenced student career aspirations more than parents with lower levels of education.

Recent research however, provided conflicting evidence concerning the influence of parental education levels on career choices of students. In 2004, Kniveton surveyed 384 students between the ages of 14 and 18 years. The researcher examined the education levels of parents by comparing students whose parents graduated from high school and students whose parents had obtained a degree from a university. Kniveton found that no differences existed between higher levels of parental education and lower levels in relation to influencing student career choice.

None of these studies examined the influence of parental education on the career choice of learners with visual impairment in the university. This study therefore, found it necessary to examine the level of education of parents of learners with visual impairment in Kenyan public universities and see whether it had any influence on their career choices.

2.11 Parental Occupation

According to Betz and Fitzgerald (1987) family members provide a tremendous amount of influence on student career choice. The researchers specifically suggested that parental employment is a major influence on student career choice, specifically female career choice. Betz and Fitzgerald found that females whose mothers work will be more likely to develop careers outside the home than females whose mothers do not work. In addition, daughters of working females are more likely to develop careers outside of the realm of the occupations traditionally considered to be female careers.

Arsenovic, Timothy, and Zoleko (2005) in their research found that the occupation of mothers had more influence on the career aspirations of daughters. They suggested that this finding probably resulted because female students are able to identify with their mothers more than with their fathers.

Other research studies also suggested that parents are the most influential factor in determining student career choice (Bender, 1994; DeRidder, 1990; Hairston, 2000; Small & McClean, 2002) and that such influence begins in children as early as age four (Clark & Horan, 2001). According to Small and McClean (2002), parents provide encouragement and support in career decisions. They also report that teachers play a major role in identifying abilities and aptitudes of students; however, it is the parent that influences

career choice by acting as a role model. The researchers continue to state that parents encourage their children to choose careers similar to their own. In other words, they claim that parents influence their children to pursue careers in the same area as their own career simply by acting as role models.

According to Conroy (1997), the father influences career choice more often than the mother. In his survey, he concluded that the occupation of the father influences student career choice. In addition, he suggested that the occupations of fathers correlate even stronger to female career choice than the career choice of males. Previous research by DeRidder (1990), also suggested that the father's occupation is the greatest influence on career choice of both male and female students.

In a qualitative study conducted by Norby (2004), one participant stated that the single most important influence on his interest in science was his father. The participant continued to explain that his father influenced him the most because he was a nurse and was a good role model for individuals employed in a career that is not typical of gender.

Hairston (2000) suggests that students have a strong desire to imitate their parents and if their parents went to college, students will more likely attend college and choose the same profession or occupation as their parents.

This is however, different for learners with visual impairment. There is a tendency for parents of blind children to expect less which may lead to lesser

accomplishments and slower development of the child (Warren 1984). Overprotection, over assistance, denial, and negative parental attitude may inhibit a visually impaired child's development of initiative, independence, and realization of individual abilities (Warnke, 1993; Tuttle, 1984; McBroom, Tedder, & Kang-Ji, 1992). Parental aspirations and expectations are reported to profoundly affect career choice behaviour in both disabled and non-disabled young people (Anderson, Mawby, Miller, & Olson, 1965; Chubon, 1985; McBroom et al., 1992).

For this reason, this study aimed at finding out whether the occupations of parents of learners with visual impairment in Kenyan universities influenced their careers that they had chosen to pursue.

2.12 Mode of Admission

Kiamba (2002) states that over the past decade or so, public universities in Kenya have continued to receive less financial allocations from the government than the estimated expenditure, a trend which is expected to persist. Consequently, the cost of staff, learning and research materials, catering and accommodation services, coupled with inflationary pressures made it difficult to sustain the operations of these universities. The implications of such a scenario were the increasing debt burden that threatened to compromise the very essence of the objectives and functions of the universities. The government indeed made it quite clear that it would no longer be able to fully

finance public universities. A notable observation in the Kenyan 1994- 98 Development Plan was that:

> *the central thrust of the new policies is to rely on market forces to mobilize resources for growth and development with the role of the Government increasingly confined to providing an effective regulatory framework and essential public infrastructure and social services. The Government will limit direct participation in many sectors and instead promote private sector activity.*

Notwithstanding the expansion in the past several years, the capacity of the higher education sector in Kenya is still limited. Between 1990 and 2000, it was reported that 180,000 of the students who attained the minimum entry qualification failed to gain admission to public universities (Kigotho, 2000). The Ministry of Education indicates that an average of 150,000 students take the Kenya Certificate of Secondary Education each year. Among these students, 20,000 are absorbed into public universities under the regular and parallel programmes while over 6,000 students enrol in private universities. About 60,000 students also enrol in post secondary mid-level colleges, which offer certificate, diploma and higher diploma courses. Access to university institutions is highly competitive and also influenced by the availability of finances. In 2006 alone, a total of 58,000 students failed to get admission in the public universities out of the 68,000 that qualified. One qualification is pegged on attaining the minimum cut-off point (COP) of C+ with a relevant subject cluster achievement (meaning that for a student to enrol in Law, for instance, that student must pass a given group of subjects), though this requirement has been questioned as a relevant criterion for selection and placement of students in programmes of study.

While very modest tuition fees were introduced in public universities in Kenya in 1991, the generated resources were insufficient given the severely limited number of students. Therefore, a dual track tuition policy was introduced in 1998 via the self-sponsored, or Module II programmes.

According to Kiamba (2004), in Kenya, the assumed average cost of each degree programme is KS 120,000 (US$1,534) per year of which the government covers KES 70,000 (US$895) for the sponsored students (module I) leaving the remaining KES 50,000 (US$639) to the student to raise from the Kenyan Higher Education Loans Board (HELB) or private sources. Students under the module I programme are entitled to a means-tested HELB loan, while students in the module II programmes have to source for funds from their families, savings, employment and commercial banks. It is also important to note that although the syllabus for both the module I and module II programmes is the same, the costs for the latter are extremely high.

Students who attain the prescribed cut-off point (COP) are admitted into the regular state supported programmes by the Joints Admissions Board (JAB), a non-statutory body made up of the Vice Chancellors, Deputy Vice Chancellors, Principals and Deans of the six public universities and representatives from the Ministry of Education. In principle, Kenya Certificate of Secondary Education (KCSE) holders with C+ and above qualify for public university admission; however, this cut-off point depends on the total public university student

capacity of about 10,000 students.

JAB sets the entry cut off for government-sponsored students from year to year. If a greater proportion of the students have high passes in a particular year, the cut off will be higher and vice versa. For example, the cut-off for admission in 2005 admission was 64 points higher than in 2004 (Ngolovoi, 2006).

Learners with visual impairment are many times disadvantaged because most of them don't manage to achieve the required cut off points set by JAB and therefore, this study aimed at examining whether the mode of admission can influence the career choice of learners with visual impairment in Kenyan public universities.

2.13 Type of Educational System

In Kenya, there are two educational systems or programs attended by learners with visual impairment. There is the special school or residential school system and the integration education program. These systems have two different learning environments.

According to Frampton & Kerney (1953), residential school for the visually impaired may be defined as: "A boarding school offering education and care to blind children from ages three to twenty-one, or from pre-school through the high school. Educationally speaking, these schools attempt to provide complete

education and care for the blind children. These services include medical, academic, musical, recreational, social, vocational courses, placement, and follow-up.

Tutle (1986), also confirms that the oldest, the most comprehensive and the most expensive delivery model is the residential school. It provides basic array of services: Instructional services including classroom, educational materials and equipment, offices and storage, teachers, aides and other specialists; food services including fully equipped kitchen, dining room, cooks, and other personnel; Residential services including furnished rooms, linen, laundry, house-parents, and other personnel; extracurricular and recreational services, both in the school and the community; health-care services including clinic and medical staff; maintenance and administrative services.

The entire campus of the residential school is designed, equipped and staffed specifically to meet the needs of the visually impaired children. In addition to the classroom teachers, there may be other specialists in physical education, orientation & mobility, activities of daily living, music, craft teaching, occupational therapy, career counselling, vocational counselling, social work and psychology. The educational materials, educational and mobility devices and specialized equipment are accessible to all the students throughout the school. Integrated Education on the other hand refers to the measures taken to provide educational resources, within the ordinary educational system, for those children who need them. The aim of integration is to avoid or reduce

restrictions on any aspects of a child's development which might result from segregated education.

Furthermore, according to Namgayel (1985), integrated education refers to meaningful involvement of such youngsters into ongoing regular educational programme to whatever extent it is feasible and beneficial, in a given instance, with the ultimate goal being optimal academic and social as well as personal learning of each child.

According to Mani (1989) integrated education means providing equal educational opportunities and experiences to children with disabilities with the assistance of a trained specialist teacher in the least restrictive environment such as a regular school.

Statistics reveal that not even 10% of blind children in most of the developing countries are receiving any kind of education, and therefore, integrated education is considered to be the only practical approach. It is the economically viable, psychologically superior, and socially acceptable model to bring all those unreached blind children into the mainstream of education (Mani, 1998). Integrated education is not simply placing a child in a regular classroom. The child needs assistance. Blind children can easily assimilate more than 80% of teaching and experience in the regular classroom if they are provided with the correct materials in the appropriate form at the right time. Therefore, development of the right educational environment will make integration of

blind children a reality.

Given the unresolved barriers of mainstream schooling, for some disabled students, special schools are still a better option. Special schools and colleges have infrastructure that are fully accessible because they have been designed to meet the needs of this group of pupils (Shah, 2005). Moreover, academic staff members are usually very experienced at adapting their teaching to meet the individual needs of each pupil. As Watson, Shakespeare, Cunningham-Burley, Barnes, Corker, Davis and Priestley (1999) argue, special schools provide young disabled people with supportive environments, both physically and socially, in which they can explore and develop a sense of self without mainstream barriers. Special schools have their own shortcomings and restrict disabled students' post-school options in other ways. Disabled young people who attend the same school from their early infancy to early adulthood are being denied the experiences considered essential for the transition from childhood to adulthood, and are thus shielded from the realities of society (Barnes 1991). Mulderij, (1996) agrees that the experiences of mainstream situations are essential during school years if disabled children are to develop the skills to function productively in post-school community environments.

Due to the differences in the learning environment of the 2 educational systems of learners with visual impairment that is the special school and the integration education system, the study endeavoured to find out whether the education system or type of school attended by the respondents influenced their career

choices in any way. This was necessary because it was indicated that the special schools are fully equipped and specially designed to accommodate learners with visual impairment whereas in integrated schools the learners with visual impairment study in the same environment with their sighted peers with no necessary modifications made to suit their individual learning needs.

2.14 Academic Performance in Secondary School Level

It is essential for all students to be ready for college and career when they graduate from high school. Post-secondary educators expect high school graduates to be prepared academically for success in post-secondary education (ACT, 2005), which in turn influences success in the work world. Employers continue to call for workers to have the tools needed to perform well on the job and stay in the job (The Conference Board, Inc., 2006). Strong academic achievement and more-certain career plans in high school improve chances of meeting college and career goals.

Academic performance of learners with visual impairment in Kenya is faced with a myriad of challenges especially through the national examinations. Education offered in the school curricular aims at providing the regular and special needs learners with skills which can enable them become useful members of the society. Curriculum evaluators play a significant role in the achievement of this goal.

One of the measures to show the extent to which these skills have been attained is through the administration of national examinations, using assessment instruments which have been vetted for validity and relevance. In the recent rationalization and review of the KCSE curriculum, the minimum examinable subjects were reduced to seven (7) which makes it easier for the learners with special needs to meet the universities admission requirements as the subject cluster benchmark has been made easier to meet.

The Kenya National Examination Council (KNEC,2007) in their research observed that blind candidates have difficulties when handling the bulky question papers, answer sheets, Braille machines and the abacus in mathematics. In both English and Kiswahili language test papers, students were found to spend a significant amount of time attempting to identify the appropriate paragraphs referred to in the questions. Long passages and format in the language papers were found to be the main cause of poor performance.

In Biological Science and Home Science papers, time was wasted in trying to locate the position of specimens and making movement manoeuvres. The blind find it difficult to follow long statements in Mathematics. Questions should be short and to the point to avoid time being consumed in reading and rereading questions so as to get the concept being tested. The albino candidates are affected by the white colour of some of the examination papers. Use of white coloured paper should therefore be avoided (Kaburia, 2008).

To reduce errors in question papers, Braille specialists should participate in moderating and proofreading papers for the visually impaired. Words or phrases that need emphasis should be italicized and not bolded or underlined. Grids on graph papers should be in bold (Kaburia, 2008).

During marking of candidates' scripts, debrailling candidates' responses is carried out using experts in Braille transcription and writers. This practice has been criticized by some stakeholders who argue that: There is likelihood of introducing errors during debrailing. The reader may correct students' errors during transcribing or even introduce punctuations that were not in the original script, change of information may occur due to differences in the form of Braille grades, the reader and writer may be from different linguistic backgrounds and this may affect the way each perceives pronunciation of words (Kenya National Examination Council, 2007).

2.15 Special Education in Kenya

According to the GoK (2005), the practice of special education is understood as the provision of education which provides appropriate modification in curriculum, teaching methods, educational resource, and medium of communication or the learning environment in order to cater for individual differences in learning. Its mission is to facilitate and co-ordinate the provision of quality education and training to learners with special needs at pre-primary, primary, secondary, technical/vocational and teacher training levels by

enhancing access, retention, completion, transition and creation of awareness. Similarly, its vision is to provide conducive-learning environment for all learners with special needs.

Up to 2004 December, the special needs issues were handled by a section namely; Special Education Section headed by an officer in the rank of Assistant Director of Education. After reorganization of the ministry, the section was upgraded to a full division and renamed Special Needs Education (SNE) Division headed by a Deputy Director of Education assisted by other officers designated as: Senior Assistant Director of Education (SADE), Assistant Director of Education (ADE), two Senior Education Officers (SEOs) and two Education Officers.

Services offered by SNE division include: Coordination and administration of special schools, units, integrated programmes and other institutions for the disabled children; educational assessment and resource services (EARS); appointment of board of governors for special schools and institutes, allocation and disbursement of funds to special institutions; coordination of recruitment of residential students for the diploma course in Special Education at Kenya Institute of Special Education (KISE), creation of awareness and sensitization on issues pertaining to children with special needs and facilitation of clearance of imported specialized equipment and goods destined to special institutions.

Programmes offered are for the following disabilities: visual impairments, deaf and hard of hearing, physically handicapped, the mentally handicapped, cerebral palsy and autism. Special vocational/technical institutes offer training in skills that lead to employment and/or self-employment.

According to Kiarie, (2004), children with visual impairments can be identified in four different categories according to their special education needs. The categories were developed by the Low Vision Project in 1994 and are based on the working definition from World Health Organization developed in 1992. There was also a need to create a fifth category for children attending special schools and programmes who were not visually impaired (since they were mono-eyed or wearing high power glasses).

The categories are as follows:

(i) Category 1: Totally blind children with no perception of light, who need training in orientation and mobility and should be educated in braille.

(ii) Category 2: Children with low vision which is not enough to read print, who need visual stimulation, functional vision training and/or training in visual orientation, and who should be educated in braille.

(iii) Category 3: Children with low vision who can be trained to use their sight for reading and writing print with the aid of optical low vision devices, meaning that these children require magnification to

cope with regular print.

(iv) Category 4: Children with low vision who can be educated in print using special techniques and methods without (low vision devices) LVD to read and write regular print efficiently and fluently.

(v) Category 5: Children who are not low vision because their sight is above 6/18 and they do not have a severe visual field defect. These children can almost function like normal sighted students and they do not really need special education as long as their sight is constant.

The Low Vision Project working hand in hand with the Ministry of Education, (MoE) has played a major role in improving the overall standard of education of children with visual impairments in Kenya. Services provided to students with visual impairments depend on the category of visual impairment for each student. Students who are totally blind and those who have so little usable vision that they cannot rely entirely on their visual sense to acquire visual information are trained in orientation and mobility skills and learn academic skills through the use of braille. These services are in keeping with the guidelines of the Ministry of Education (1995) which recommends that orientation and mobility skills are necessary to familiarize students with visual impairments with their environment and enable them to interact and move about in that environment. The guidelines also recommend instruction in skills for activities of daily living to enhance independence and self-reliance. Students in category three are trained to use their sight to read and write print

using optical low vision devices such as magnifiers, special eye glasses, and telescopes. These devices are locally produced and provided to students.

The Christoffel Blinden Mission (CBM) provides such materials as special print exercise books (to children who have contrast problems and accompanying difficulty seeing the print lines in regular exercise or notebooks), special desks, reading stands, felt pens, tape recorders and electric lights. The CBM also ensures that teachers train the students in the use of any devices provided. While students in category four are those whose educational services can be met using print but with the help of special techniques and methods, students in category five are those who are determined to not really need special services but rather function like the normally sighted students as long as their vision stays constant.

The increase in the number of students with visual impairments receiving services in schools is worthy of notice. This increased enrolment results from the efforts of many organizations such as Kenya Society for the Blind (KSB) which has organized a programme to oversee the enrolment of children with disabilities in special and public schools (Karama, 2003). The Kenya Society for individuals with Intellectual Handicaps (KMSH) has popularized the theme Hide me no More to encourage parents to not hide but enrol their children with disabilities in schools. Other efforts include workshops and seminars at the Kenya Institute of Special Education to sensitize the public to the needs of students with disabilities.

2.16 Summary of Reviewed Literature

This section examined integration education as one of the major factors that was assumed to influence career choices of learners with visual impairments. It also explored careers that could be undertaken by persons with visual impairments including those that had previously been pursued by some of them. Together with this, other aspects sutch as occupational perspectives of visually impaired persons and role of career guidance were discussed. Other factors that were also assumed to affect career choice were examined. These include: gender, environment where one was brought up, the role of siblings in career choice, parental education and parental occupation, type of education system, mode of admission (self-sponsored and government sponsored), and academic performance. Finally the section explored the state of special education in Kenya. In this section various categories of visual impairments were also highlighted and discussed in depth.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter deals with the procedures and strategies that were used in the study. It presents research design, research variables, study location, target population, sample and sampling procedure, research instruments and procedures for data collection, data analysis and ethical considerations.

3.1 Research Design

Kerlinger (1973) defines research design as a plan, structure and strategy of investigation which seeks to obtain answers to various research questions. Basically, a design is a logical strategy for planning research procedures and providing evidence for the development of knowledge. This study employed a descriptive survey design. Lawson (1970) argues that before much progress can be made in investigating research problems, description of phenomena must be obtained by means of descriptive research. According to Mugenda and Mugenda (1999), a survey approach allows and facilitates collection of a large amount of data from a sizeable population in a highly economical way. Orodho (2005) re-affirms that descriptive survey designs are used in preliminary and exploratory studies to enable researchers to gather information, summarize and interpret it for the purpose of clarification.

Descriptive survey was deemed appropriate for the study because it would enable the researcher to collect information regarding integration education and other factors in the career choice of visually impaired learners in public universities in Kenya.

3.2 Research Variables

This study considered the practice of integration education together with other factors associated with career choice as independent variables because they were assumed to determine the career choice of visually impaired learners. Since career choice is determined by certain factors operating within integration education and other external factors, it becomes the dependent variable of the study.

3.3 Location of the Study

The study was carried out in two public universities in Kenya, namely; Kenyatta University and Moi University. Kenyatta University is situated about 20 kilometers on the Nairobi-Thika highway; the main campus of Kenyatta University occupies an expansive 1,100 acres of land. Kenyatta University is continually expanding and has opened additional campuses apart from its main campus. The campuses include: City Campus which is Located at the heart of Nairobi City, Haile Sellasie Avenue, to cater for the growing number of students in the city center. Other campuses are: Parklands Campus, Ruiru

Campus, Mombasa Campus, Kitui Campus and Kericho Campus.

Kenyatta University is a government-funded, public university in Kenya committed to excellence in its three primary functions, teaching, research and community service. The University has embarked on a planned diversification and expansion programme resulting in a significant rise in the number of schools, programmes and students. The university has various modes of learning ranging from Open-Learning, e-learning, School-Based, Part-time, Evening and full-time teaching; this has transformed the institution into the second largest in Kenya.

Moi University is located in Eldoret, 310 kilometres northwest of Nairobi, the Capital City of Kenya. It was established as the second university in Kenya by an Act of Parliament, the Moi University Act of 1984. The first cohort of 83 students was admitted in 1984 through a transfer system from the Department of Forestry, University of Nairobi. Since then, the University has experienced phenomenal growth from its initial one faculty in 1984, to a total of fifteen (15) Schools and five (5) Directorates in 2009. The University currently operates four campuses, two (2) constituent colleges, and eight (8) Satellite Campuses.

Singleton (1993), in his study pointed out that in choosing study locale, the ideal setting for any study should be directly related to the researcher's interest. For this study, the researcher's interest was on learners with visual impairment and these institutions were the only ones who had learners with the

characteristic of interest (learners with visual impairment) at the time of the study. The other public universities had not yet admitted any learner with visual impairment except for Nairobi University which had only one learner with visual impairment. Moreover, no research had been conducted on integration education and other factors in career choice of visually impaired learners in public universities.

3.4 Target Population

The target population of the study were learners with visual impairment in public universities in Kenya. At the time of the study there were a total of sixty six (66) learners with visual impairment in public universities. There were five (5) visually impaired learners at Moi University, sixty (60) learners at Kenyatta University and only one (1) learner from the University of Nairobi. At the time of the study, only 41 learners with visual impairment were available: 37 from Kenyatta University and 4 learners from Moi University. One of the learners was undertaking a master's degree while the rest were undertaking undergraduate degree programmes.

3.5 Sampling Techniques and Sample Size

The researcher used purposive sampling technique. Purposive sampling is a technique that allows a researcher to use cases that possess the required characteristics with respect to the objectives of the study. Cases of subjects are, therefore, hand picked because they are informative or they possess the

required characteristics (Mugenda & Mugenda, 1999). In this case, purposive sampling was used to select the universities that were deemed suitable for the research in respect to the objectives of the study. The universities i.e. Kenyatta University and Moi University were the only public universities that had the required characteristics necessary for the study, that is, learners with visual impairment. The subjects were also purposively sampled since they were the only ones available for the study at that time. The sample consisted of 41 subjects all of whom were visually impaired learners in public universities in Kenya. 16(39%) of them were males while 25(61%) were females. The sample was obtained from two public universities: 37 of the respondents (90%) from Kenyatta University and 4 respondents (10%) from Moi University. 40 of the respondents were undertaking their undergraduate studies and only 1 respondent was doing a master's degree. A preliminary survey was done in various public universities to establish where learners with visual impairment could be found.

3.6 Research Instruments

Two types of research approaches were used in this study i.e. interview schedules and focused group discussions (FGDs).

3.6.1 Interview Schedule

Satnarayama (1983) observes that, interviewing is an appropriate instrument in any study because it helps the interviewer to cover all the dimensions of the

investigation through probing of the participants. Lawson (1970) emphasizes that many persons are more willing to communicate orally than in writing and therefore, provide data more readily and in full in an interview. For these reasons, interviews helped the researcher to gather information from the respondents that were deemed truthful and with more clarity. The interview schedule was designed to collect information on career choices among visually impaired learners. The instrument consisted of twenty (20) items.

Items 1-10 collected demographic information of the respondents, items 11, 12, 17-20 focused on questions concerned with integration education and the influence it has had on their career choice and items 13-16 aimed at identifying other factors that they thought to have influenced their career choice.

3.6.2 Focused Group Discussions

According to Orodho (2005), Focused Group Discussions are a special type of group interviews composed of six to eight individuals who have been selected because they share certain characteristics which are relevant for the topic being studied.

The focused group discussion schedule had four guiding questions which were used in the research. Its purpose was to probe the respondents during the discussions in order to get clarification on various issues brought out during the interviews.

3.7 Pilot Study

Before the actual study, the interview schedule was piloted in one of the public universities (University of Nairobi), with one visually impaired student (the only one in that university). The purpose of pilot study was to ensure the clarity and suitability of the language used in the instrument. Adjustments were made on a few items which presented ambiguity. This ensured that the items in the interview schedule were suitable and adequate to solicit the needed information from the respondents.

3.7.1 Validity of the Research Instruments

Mugenda and Mugenda (1999), defines validity as the accuracy and meaningfulness of inferences, which are based on the research results. In other words, it is the degree to which results obtained from the data accurately represent the phenomena under study. Validity, therefore, has to do with how accurately the data obtained in the study represent the variables of the study.

To enhance the validity of the research instruments and ensure that they measured what they intended the researcher established whether the variables under study were reflected in items that were in the instrument. A critical examination of the test items was done by the researcher. Furthermore, expert opinion was sought from the supervisors. Each item was judged in terms of its relevance to the variable under investigation and also in terms of the research objectives.

3.7.2 Reliability of the Research Instruments

According to Mugenda and Mugenda (1999), reliability is a measurement of the degree to which a research instrument yields consistent results or data after repeated trials. The intention here is to ensure that the results obtained from administering the research instruments were essentially the same results that would be obtained if the research was to be repeated. A pre-test was done which involved administering the same instrument three times to a visually impaired learner. This was because there was only one learner with visual impairment at the University of Nairobi which was the selected pilot centre.

3.8 Data Collection Techniques

Before actual collection of data, research assistants were recruited and satisfied the following conditions:

a) That they were fluent in the English language which was the language of communication during the interview sessions.

b) That they were available throughout the entire period of data collection.

The researcher conducted exhaustive interviews with the respondents while one of the research assistants took notes on the responses. The other research

assistant helped in the tape-recording of the interviews.

The researcher held group discussions with visually impaired learners and gave them an opportunity to present their opinions over integration education. This helped in having them challenge one another on some controversial issues that arose from the discussion. At the same time, these sessions provided a chance to gauge the understanding of the visually impaired respondents over their attending higher education and their expectations thereafter.

3.9 Data Analysis

Data collected from this research was manually coded, and tabulated. Descriptive statistics that is percentages and frequency distributions were used to present the results. Data were analyzed both qualitatively and quantitatively. Descriptive statistics were used to analyze quantitative data. Results were presented in frequency distributions and percentages. Qualitative data was analyzed by looking at the thematic areas of the study based on the study objectives.

Peil (1995) observes that percentages are easier to understand than the more complex inferential statistics. Gay (1976) highlights that simple statistics are as good as the complex ones in the analysis of data. He particularly notes that the complexity of data analysis is not an indication of its goodness. The

implication is that what is important in data analysis is not how complex data have been made to look but how well they have been done. To identify relationships between different variables, the chi-square analysis was employed.

3.10 Logistical and Ethical Considerations

The graduate school at Kenyatta University issued a letter authorizing the researcher to conduct research. The researcher then sought permission from the Ministry of Education Science and Technology before collecting data. She then took the letter to the Dean of Students at Kenyatta and Moi Universities and there after arranged for a meeting with the visually impaired students. She also sought consent from the respondents to participate in the study. The researcher assured them that the information gathered would be kept confidential and used for the purpose of the study only.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the results of the data collected and discusses the research findings of the study. This study aimed at finding out how the career choice of learners with visual impairment in Kenyan public universities has been affected by the practice of integration education among other factors of career choice. This study attempted to answer the following research questions:

1) To what extent did integration education influence the career choices of visually impaired persons?

2) What were the career choices being undertaken by learners with visual impairments in Kenyan public universities?

3) What other factors determine the career choices of learners with visual impairments in the Kenyan public universities?

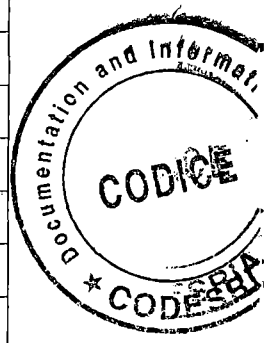
Responses were obtained from visually impaired students in the public universities in Kenya, sampled from Moi University and Kenyatta University through interview schedules and focused group discussions.

4.1 Demographic Information of the Respondents

The researcher investigated the background (demographic information) of the respondents. This is represented in the table 4.1.

Table 4.1: Demographic Data of the Respondents

Variables	Description	Frequency	%
Gender	Male	16	39.0
	Female	25	61.0
	Sub-total	**41**	**100**
Year of study	1st	11	26.83
	2nd	13	31.71
	3rd	6	14.63
	4th	8	19.51
	5th	3	7.32
	Sub-total	**41**	**100**
Upbringing	Rural	17	42
	Urban	19	46
	Partly rural, partly urban	5	12
	Sub-total	**41**	**100**
University	Kenyatta	37	90
	Moi	4	10
	Sub-total	**41**	**100**
Early type of learning institution	Integrated	20	49
	Not integrated	21	51
	Sub-total	**41**	**100**
Mode of admission at University	Regular/government sponsored	7	17
	Parallel/self sponsored	34	83
	Sub-total	**41**	**100**



The demographic information in table 4.1 indicated that the total sample of the study consisted of 41 respondents. 16(39%) were males whereas 25(61%) were females. Majority of the respondents in the study were females. 11 of the respondents (26.8%) were in 1st year, 13 of them were in 2nd year, 6(14.6%)

were in 3rd year, 8(19.5%) were in 4th year and 3(7.3%) were in the 5th year. There is an indication that majority of the respondents were in 2nd year. 17 of the respondents (42%) were brought up in a rural environment, 19 of them who were the majority, (46%) in an urban environment whereas 5 of them (12%) were brought up in a partly rural partly urban environment. Majority of the respondents 37(90%) were from Kenyatta University whereas 4(10%) were from Moi University. There was also an indication that 20 of the respondents (49%) went through integration education whereas 21 of them (51%) did not go through integration education. Majority of the respondents that is 34(83%) were self sponsored (parallel) whereas 7 of them (17%) were admitted by the Joint Admission Board (JAB) which is an indication that they were government sponsored (regular students).

This information was important because from the theories of career choice as presented in Chapter Two of this study, several factors could influence a person's career choice. This could include gender, home environment, parents' occupation, and parents' level of education, siblings' level of education, type of schools attended among other factors.

4.1.1 Gender of the Respondents

From the sample, the number of female students was almost 1.5 times more than the number of male students who responded to the interview schedule. The female students were 25(61%) and the male students were 16(39%).

Table 4.2 represents the careers that were being undertaken by the respondents according to their gender.

Table 4.2: Courses Pursued According to the Gender of the Respondents

Degree Course	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
BED Arts	13	32	16	39	29	71
Special Education	1	2.4	4	10	5	12.4
Sociology	1	2.4	-	-	1	2.4
LLB	1	2.4	-	-	1	2.4
B.Com	-	-	1	2.4	1	2.4
Hospitality & Management	-	-	1	2	1	2
Bsc. Medical Laboratory Science	-	-	2	5	2	5
Master in Education Mgnt & Policy Studies	-	-	1	2.4	1	2.4
Total	**16**	**39.2**	**25**	**60.8**	**41**	**100**

Mgnt-Management

The findings of the study as shown in table 4.2 suggested that there was a slight variation in the courses undertaken by the university students with visual impairment across gender. The study showed that 29(71%) of the respondents both male and female were undertaking a Bachelor of Education-Arts course, sixteen of them (39%) were females whereas thirteen of them (32%) were males. Five (12.4%) of the respondents were undertaking a course in Special

Education, one (2.4%) of them being male and four (10%) of them being females. There were two male respondents who were doing other courses different from the female respondents. One of them (2.4%) was doing a bachelors degree in law while the other one was doing a bachelors of arts in sociology. The other female respondents were also taking other courses different from the male respondents. One of them (2.4%) was doing a business oriented course, the other one (2.4%) was doing a bachelors of arts in hospitality and tourism management whereas only 2 (5%) were doing a bachelors of Science degree in medical laboratory which was the only science based course. There was also one of the female respondents who was undertaking a master of education degree in management and policy studies.

From these results, there was an indication that the female respondents were more than the male respondents in the courses that they were both pursuing, that is bachelors of education-arts and bachelors of education (special education). In the other courses that they were pursuing separately, the female respondents seemed to be undertaking more courses than the male respondents. Statistically, when a chi square test was done to show whether there was a significant relationship between gender and the careers chosen by the respondents as shown in table 4.3, there was an indication that gender was not a factor in career choice made by the students.

Table 4.3: A Chi-Square test to Determine the Relationship between the Gender of the Respondents and the Type of Course Pursued

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.496	7	0.057
Likelihood Ratio	9.951	7	0.011
N of Valid Cases	41		

The results in table 4.3 showed that there was no significant relationship between gender of the respondents and the type of career taken (=7.496, DF x^2=7, p = >0.05). Thus, the null hypothesis was retained.

This is inconsistent with the research that has demonstrated that one of the important factors affecting career development is gender (Betz & Fitzgerald, 1987).

Studies have found that young women have lower career aspirations than young men (Betz, 1994; Betz & Fitzgerald, 1987) and perceive significantly more career-related barriers than young men (Luzzo & McWhirter, 2001). College women often underestimate their potential for educational and career success.

This is inconsistent with the current study because according to the results, majority of the respondents are indicated to have chosen the same career which is education. It further emerged that the female respondents however, were doing a wider range of courses compared to the male respondents. This includes the only science course in the list. This further conflicts with a study by Betz and Hackett (1981) who argue that women avoid male-dominated

occupations due to a lack of self-confidence in such occupations. This is because in this study despite the fact that most of the respondents more or less were undertaking similar courses, 2 of the respondents who were undertaking a science based course were female. The researcher concluded that this could be because most of the students with visual impairment in Kenyan public universities were female and thus creating a bias in the study. Learners with visual impairment tend to be restricted on the career choice to undertake mainly due to their visual limitation. This is mainly evident especially with learners who are totally blind. This study did not examine the visual acuity of the learners but knowing that one of the major barriers to career choice for persons with visual impairment is access to proper facilities and technology that can especially be useful to the totally blind the researcher concluded that the female respondents who were undertaking a science based course were low visioned.

Most of the male respondents that is 14 out of 16 were pursuing education, that is Bachelors of Education-Arts and Bachelors of Education (special). The remaining two male respondents were pursuing a Bachelors Degree in Law and Sociology respectively. This reflects a narrow scope in career choices of the male respondents. The female respondents on the other hand seemed to be pursuing a wider range of courses and this is because they were more than the male respondents. The female respondents who were pursuing education that is Bachelors of Education-Arts and Bachelors of Education (special) were 20. The researcher therefore, concluded that gender was not a factor in this case

because of the imbalance in numbers.

4.1.2: Environment in Early Years of Schooling

From the responses, there was almost an equal representation between those brought up in urban and rural environments as presented in table 4.4:

Table 4.4: Where Brought up Early in Life versus Degree Courses Pursued

Environment	Degree Course Pursued	Frequency	%
Rural	Bachelor of Commerce	1	2.4
	BED Arts	10	24.4
	BED Special Ed.	4	9.8
	Medical Laboratory Science	2	5
Both town and rural	BED Special Ed.	1	2.4
	BED Arts	4	9.8
Urban	BED Arts	15	36.6
	Hospitality Management	1	2.4
	Bachelor of Law(LLB)	1	2.4
	BA Sociology	1	2.4
	Master in Education	1	2.4
	Total	**41**	**100**

The results from table 4.4 indicate that 17 of the respondents were brought up in the rural environment. One of the respondent (2.4%) was pursuing a

Bachelors of Commerce degree, 10 of them (24.4%) were pursuing Bachelors of Education-Arts, four of them (9.8%) were pursuing a Bachelors of Education (special), and the remaining 2 respondents (5%) were pursuing a Bachelors of Science degree in Medical Laboratory. 5 of the respondents were brought up in the partly rural partly urban environment. One of these respondents (2.4%) was undertaking a Bachelors of Education (special) while the other four (9.8%) were doing a Bachelors of Education-Arts. The other 19 respondents were brought up in an urban environment. 15 of these (36.6%) were undertaking a Bachelors of Education-Arts, one of them (2.4%) was doing a Bachelors of Law (LLB), the other 3 were pursuing a Bachelors of Arts in Hospitality Management, Sociology and a Master of Education in Management and Policy Studies respectively.

Majority of the respondents were brought up in an urban setting though there was only a difference of 2 respondents between those brought up in an urban environment and those brought up in the rural environment, that is 19 and 17. The different careers that were being undertaken were almost equally spread along the different environmental backgrounds. In all the environmental backgrounds however, majority of the respondents were undertaking a Bachelors of Education-Arts. The implications of the responses received indicated that the environment in which visually impaired learners were brought up, whether urban or rural, did not influence the careers the respondents had chosen. It is good to note that the only two respondents who were pursuing a science course were brought up in the rural environment.

Table 4.5: A Chi-Square Test to Determine the Relationship between Career Choice and the Place where the Respondents were Brought up.

	Value	Df	Asymp. Sig. (2sided)
Pearson Chi-Square	13.231	14	0.508
Likelihood Ratio	17.760	14	0.218
Linear-by-Linear Association	3.822	1	0.051
N of Valid Cases	41		

The results in table 4.5 shows that there was no significant relationship between the career choice of the respondents and the place they were brought up (x^2 =13.321, DF=14, p>0.05). Thus the null hypothesis was retained.

This is inconsistent with McCracken and Barcinas (1991), who studied the relationships between the occupational and educational aspirations of rural and urban students and specific findings were that expectations of students in rural areas are not as high as those of students in urban areas and parents of rural students were less likely to expect their children to attend college. These results further conflict with the current study because the respondents were all pursuing a university education. In addition the 2 respondents who were pursuing a science based course were both brought up in a rural environment.

As seen in the first section of this chapter, majority of the visually impaired learners were pursuing education related careers regardless of whether they

were brought up in urban, rural or partly rural, partly urban places. This is an indication that the environment where the students with visual impairments were brought up was not one of the factors in this case that influenced their career choices. Many careers especially those in the science field require visual observation. This could have been a limiting factor for the respondents in this study since they were all learners with visual impairment. However, a few of them had low-vision and this made it possible specifically for the 2 respondents who were undertaking a science based course to pursue their career choice.

4.1.3: Level of Education of Siblings

Concerning the siblings' level of education, the researcher was trying to understand if brothers and sisters provided some form of inspiration to the visually impaired learners in their choice of careers. The responses are presented on table 4.6 below:

Table 4.6: Level of Education of Siblings and Respondents' Degree Course Pursued

Siblings Level of Education	Respondents' Degree Course Pursued	Frequency	%
No Education	B.ED Arts	1	2
Primary	B.ED Arts	3	7.3
Secondary	B.ED Arts	8	20
	B.ED Special Ed.	2	4.9
College and Above	B.ED Special Ed.	3	7.3
	B.ED Arts	17	42
	BSc. Medical Laboratory science	2	4.9
	Bachelor of Commerce	1	2
	Hospitality Management	1	2.4
	Bachelor of Law (LLB)	1	2.4
	BA Sociology	1	2.4
	Master of Education	1	2.4
	Total	**41**	**100**

The results in table 4.6 indicate that one respondent (2%) had siblings who had not acquired any education. This respondent was undertaking a Bachelor of Education-Arts. 3 of the respondents (7.3%) had siblings who had just gone through primary school. All of these respondents were pursuing Bachelors of Education-Arts. 10 of the respondents, 8(20%) of whom were undertaking Bachelors of Education-Arts and the other 2(4.9%) undertaking a Bachelors of

Education (special) had siblings who had achieved secondary education. 27 of the respondents (65.9)who were the Majority in this case had siblings whose level of education was college and above. These respondents are also seen to be the ones undertaking a variety of courses including the only science course being pursued. 3 of the respondents)7.3%) were undertaking a Bachelors of Education (special), 17 of them (42%) were undertaking a Bachelors of Education-Arts, 2 of the respondents (4.9%) were pursuing a Bachelors of Science in Medical Laboratory, and the other five respondents were each undertaking a different course, that is Bachelors of Commerce, Bachelors of Law (LLB), Bachelors of Arts in Sociology, Bachelors of Arts in Hospitality Management and a Master of Education in Management and Policy studies.

This is an indication that this could have been one of the factors that influenced the respondent's career choice. To affirm this argument a chi square test was done to try and test the null hypothesis that there was no relationship between the siblings' level of education and career choice of the respondents.

Table 4.7: Chi-Square Test to Determine the Relationship between the Siblings' Level of Education and Respondents' Career

	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	36.540	21	0.016
Likelihood Ratio	23.306	21	0.002
Linear-by-Linear Association	14.06	1	0.000
N of Valid Cases	41		

According to the results of the Chi square test in table 4.7, there was a significant relationship between the level of education of the siblings and the type of career taken by the respondents (x^2=36.540, DF=21, p<0.05). Thus, the null hypothesis failed to be accepted and instead accepted the alternative hypothesis that, there was a significant relationship between the level of education of the siblings and the type of career taken by the respondents.

There is an indication that siblings also can influence one another's career choice but not necessarily their level of education. Dunn (1994) highlights the impact of siblings in competition with that of parents and teachers. This can last until, as young adults, the siblings adopt their separate lives. The birth order of the siblings is what has been indicated by many studies to be affecting career choices.

This study did not factor in the birth position of the respondents in their families. However, no matter the birth position of the respondents which was not the focus in this study, the level of education of the siblings seemed to have been one of the major factors that affected the respondents' career choices.

The limited literature that is available about families with siblings with disabilities don't emphasize on the influence on career choice. The teaching career was being pursued by the majority of the respondents regardless of whether one's sibling had acquired no education or had achieved college and above. Teaching is one of the careers that have been practised by adult persons

with visual impairments. This career attracted 83% of the learners indicating that they are still engrossed in occupational stereotypes that narrowly express what persons with visual impairments have been perceived to be able to do. The implication of this study is that learners with visual impairments were influenced by their siblings' level of education such that most of them had siblings who had achieved college and above and it is this category of learners with visual impairment that had all careers being represented.

4.1.4: Parents Level of Education (Mother/Father)

Parental level of education was also investigated. The responses are represented on table 4.8:

Table 4.8: Level of Education Attained by Fathers and Mothers and Respondents' Degree Course Pursued

Level of Education	Respondent Degree Course	Fathers		Mothers	
		Frequency	%	Frequency	%
College and above	B.ED Arts	11	26.8	10	24.4
	B.ED Special Ed.	2	4.9	2	4.9
	BSc. Medical Lab	1	2.4	1	2.4
	Hospitality Management	1	2.4	1	2.4
	Bachelor of Law (LLB)	1	2.4	1	2.4
	BA Sociology	1	2.4	1	2.4
	Master of Education	1	2.4	1	2.4
Secondary	B.ED Arts	6	14.6	4	10
	Bachelor of Commerce	1	2.4	1	2.4
	BSc. Medical Lab	0	0	1	2.4
Primary	B.ED Arts	6	14.6	5	12.2
	B.ED Special Ed.	1	2.4	0	0
	BSc. Medical Lab	1	2.4	0	0
No Education	B.ED Arts	6	15	10	24.4
	B.ED Special Ed.	2	4.9	3	7.3
	Total	**41**	**100**	**41**	**100**

According to the results in table 4.8, 17 of the respondents had both parents whose level of education was college and above. 10 of these respondents (24.4%) were pursuing Bachelors of Education-Arts, 2 of them were pursuing

Bachelors of Education (special), and the other five were each undertaking a different course: a Bachelors of Science in Medical Laboratory, Bachelors of Arts in Sociology, Bachelors of Arts in Hospitality Management, Bachelors of Law (LLB) and a Master of Education in Management and Policy studies respectively. One of the respondents who was pursuing Bachelors of Education-Arts however, had just one of the parent that is the father whose level of education was college and above. 5 of the respondents had both parents whose level of education was secondary school. 4 of these respondents were pursuing Bachelors of Education-Arts whereas one of them was pursuing Bachelors of Commerce. 2 of the respondents who were undertaking Bachelors of Education-Arts had just the father who had achieved a secondary education whereas one of the respondents undertaking a Bachelors of Science in Medical Laboratory had just the mother whose level of education was secondary. There were 8 respondents whose parents or at least one of the parents had achieved primary education. 5 of these respondents who were pursuing Bachelors of Education-Arts, had both parents who had achieved primary education whereas the other 3 who were pursuing Bachelors of Education-Arts, Bachelors of Education (special) and Bachelors of Science in Medical Laboratory respectively, had just their fathers who had achieved primary education. 6 of the respondents who were undertaking Bachelors of Education-Arts and 2 who were under taking Bachelors of Education (special) had fathers who had no education. At the same time, 10 of the respondents who were also undertaking Bachelors of Education-Arts and 3 respondents who were undertaking Bachelors of Education (special) had mothers who had no education.

There was a clear indication that the respondents who were pursuing Bachelors of Education-Arts were the majority in all the education levels of the parents. The courses that were being undertaken by one respondent each, that is Bachelors of Law (LLB), Bachelors of Arts in Sociology, Bachelors of Arts in Hospitality Management and Master of Education in Management and Policy studies all had parents who both had achieved college and above. Despite this there was no clear indication whether the parents of these learners with visual impairment had a great influence on their career choices. This is because there is a significant number of these respondents whose parents had not acquired any education and yet they were in a process of achieving a university education. There was also an indication that majority of the parents had not acquired a college education.

The theories reviewed indicated that the parents' level of education could also influence a child's career choice. However, correlation analysis using chi-square tests shown in the Tables 4.9 and 4.10 statistically showed that there was no significant relationship between the level of education of the parents and the type of career choice made by the students.

Table 4.9: Chi-Square Test to Determine the Relationship between the Respondents' Career Choice and Fathers' Level of Education

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.424	28	0.940
Likelihood Ratio	17.853	28	0.930
Linear-by-Linear Association	4.320	1	0.038
N of Valid Cases	41		

Table 4.10: Chi-Square Test to Determine the Relationship between the Respondents' Career Choice and Mothers' Level of Education

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.872	28	0.068
Likelihood Ratio	29.90	28	0.364
Linear-by-Linear Association	3.981	1	0.046
N of Valid Cases	41		

The results from the two chi square tables 4.9 and 4.10 indicated that there was no significant relationship between the career choice of the respondents and the level of education of the fathers (x^2=17.424, DF =28, p = >0.05) and mothers (x^2=39.872, DF =28, p = >0.05) respectively. Thus the null hypothesis failed to be rejected that there is no relationship between the type of career choice of respondents and the level of education of the father/mother.

The results were supportive of previous research conducted by Kniveton

(2004), who reported that parental educations levels are not suggested to be statistically significant influencers on career choice. The researcher suggested that this could be due to the idea that the students further their education or aspire to achieve higher levels of education than their parents. This does seem to be consistent with the present study because the majority of the parents were not graduates; however, all of the participants were attending university. In addition to supporting current research concerning levels of parent education, the results also differed from various past research studies. DeRidder (1990) suggested that low levels of parental education decrease the likelihood of students attending college at a 4-year institution or 2-year institution. This was not found in the current study. Levels of education were not correlated with college attendance in the present study because all of the participants in the current study were attending university. However, the majority of the parents of the participants in the current study did not graduate from college, suggesting lower levels of education. So, it would appear that the lower levels of parent education did not negatively affect the decision to attend college.

The findings of the current study could also have been due to the overwhelming number (57%) of the mothers and fathers of the participants that had not graduated from college. Not graduating from college is suggestive of low levels of education for the purposes of this study.

This was an indication that the parents' level of education was not one of the factors that influenced the choice of careers that were being undertaken by the

respondents such that all of them were in the university despite the fact that majority of the parents had not graduated from college.

4.1.5: Occupations of the Heads of the Household

As shown in the literature review, theories of career choice and development have tended to propose that parental, or role models' profession influences one's choice of the career. It was in the light of this assumption that the researcher asked the respondents to specify the profession of their parents and/or guardians. Results are as shown in Table 4.11 below.

Table 4.11: Occupation of the Parents/Guardians and Respondents' Degree Courses Pursued

Parents/Guardians Occupation	Respondent Degree Course	Frequency	%
Professional Employment	BED Arts	11	26.8
	Masters in Education	1	2.4
	BA Sociology	1	2.4
	BSc. Medical Lab	1	2.4
	Hospitality Management	1	2.4
Business	BED Arts	6	15
	BED Special Ed.	1	2.4
	Bachelor of Law	1	2.4
Farming	BED Arts	11	26.8
	BED Special Ed.	4	9.8
	BSc. Medical Lab	1	2.4
No Occupation	BED Arts	1	2.4
	Bachelor of Commerce	1	2.4
	Sub-total	**41**	**100**

The results in table 4.11 indicate that 15 of the respondents' parents (36.5%) were employed. 11 of these respondents were undertaking Bachelors of Education-Arts, and the other 4 of the respondents were each undertaking different courses: Bachelors of Arts in Sociology, Bachelors of Arts in Hospitality Management, Bachelors of Science in Medical Laboratory and Master of Education in Management and Policy studies respectively. 8 of the

respondents' parents (19.5%) were doing business. 6 of the respondents were undertaking Bachelors of Education-Arts, 1 was undertaking Bachelors of Education (special) whereas the other 1 was undertaking Bachelors of Law (LLB). 16 of the respondents' parents (39%) who were the majority were farmers. 11 of these respondents were pursuing Bachelors of Education-Arts, 4 of them were pursuing Bachelors of Education (special) whereas 1 of the respondents was pursuing Bachelors of Science in Medical Laboratory. 2 of the respondents' parents had no occupation. 1 of these respondents was undertaking Bachelors of Education-Arts whereas the other 1 was undertaking Bachelors of Commerce.

Table 4.12: Chi-Square Test to Determine the Relationship between the Household Heads/Parents' Occupation and Respondents' Career Choice

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.601	21	0.081
Likelihood Ratio	18.177	21	0.638
Linear-by-Linear Association	2.185	1	0.139
N of Valid Cases	41		

According to the results of the Chi square test in table 4.12 there was no significant relationship between the occupation of the household head/parent and the type of career taken by the respondents (x^2=30.601, df =21, p = >0.05). Thus the null hypothesis failed to be rejected.

These findings are inconsistent with Betz and Fitzgerald (1987), who suggests

that family members provide a tremendous amount of influence on student career choice. The researchers specifically suggested that parental employment is a major influence on student career choice, and specifically female career choice. This further conflicts with the current study because majority of the parents of these respondents were not employed but were either farmers or doing business. It is also good to note that 1 of the parent of the 2 of the respondents who were undertaking Bachelors of Science in Medical Laboratory, was employed whereas the other 1 parent of the other respondent was a farmer. This was an indication that the occupation of the parents did not have any effect on the career choices of the learners with visual impairment.

Betz and Fitzgerald (1987) concluded that females whose mothers work were more likely to develop careers outside the home than females whose mothers do not work. In addition, daughters of working females were more likely to develop careers outside of the realm of the occupations traditionally considered to be female careers. This study did not correlate gender and occupation of the respondents' parents.

From the focused group discussions, the participants indicated that the role models they observed during the early stages of life were parents/guardians and siblings who influenced their current career choices. For example, some parents insisted that they cannot make it in sciences like normal children. One of the participants explained that his parents did not see the importance of them educating him beyond primary school. He had to depend on well-wishers who

took him through high school and who were still sponsoring him through university. Some of the participants on the other hand indicated that their parents were very supportive till then and they were their source of inspiration. Most of them however, indicated that due to the fact that they spent most of their lives in residential schools, a close relationship with their parents was not evident and therefore, didn't have much influence on their choice of careers. Knowing that their fellow visual impaired colleagues have made it in various careers gave them inspiration when it came to choosing careers.

This is supported by some studies that indicate that the perceptions and expectations that many people hold about blindness can have a significant negative effect on personal and social development (Scott, 1969). Tuttle (1984) linked the development of self-concept and self-esteem in blind and visually impaired individuals to expectations of significant others and to the quality of interactions within the social and physical environment. This to some extent may hinder learners with visual impairment from choosing careers similar to their parents' according to the attitude their parents have towards them. For this reason, the researcher concluded that parental occupation was not one of the factors that influenced the career choice of learners with visual impairment.

4.1.6: Mode of Admission

The Study also investigated on careers taken by government sponsored students and those who were self sponsored. The results are illustrated in Table 4.13:

Table 4.13: Degree Courses Pursued and Mode of Admission

Degree Course	Mode of Admission				Total	
	Government sponsored		Self Sponsored			
	Freq.	%	Freq.	%	Freq.	%
Special Education	1	2.4	4	10	5	12
B.ED Arts	3	7.3	26	63.4	29	71
Bachelor of Commerce	0	0	1	2.4	1	2.4
B.SC in Medical Lab	2	4.9	0	0	2	5
Master in Education	0	0	1	2.4	1	2.4
Hospitality Management	0	0	1	2.4	1	2.4
BA (Sociology)	1	2.4	0	0	1	2.4
LLB	0	0	1	2.4	1	2.4
Total	**7**	**17**	**34**	**83**	**41**	**100**

According to the results in table 4.13, 7 of the respondents (17%) were regular students or government sponsored. This meant that they were admitted by the Joint Admission Board (JAB) to join university. 1 of these respondents (2.4%) was undertaking Bachelors of Education (special), 3 of them (7.3%) were undertaking Bachelors of Education-Arts, 2 of them (4.9%) were undertaking Bachelors of Science in Medical Laboratory whereas 1 of the respondents (2.4%) was undertaking Bachelors of Arts in Sociology. On the other hand 34 of the respondents (83%) were parallel students or self sponsored. This meant

that they paid all their fees by themselves. 4 of these respondents (10%) were undertaking Bachelors of Education (special), 26 of them (63.4%) were undertaking Bachelors of Education-Arts whereas 1 of each of the other 4 respondents were undertaking Bachelors of Commerce, Bachelors of Arts in Hospitality Management, Master of Education in Management and Policy Studies and Bachelors of Law (LLB) respectively.

Table 4.14: Chi-Square Test to Determine the Relationship between the Mode of Admission and Courses Pursued

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.352	7	0.022
Likelihood ratio	13.183	7	0.068
Linear-by-association	1.816	1	0.178
N of Valid cases	41		

The results for chi square (table 4.14) indicates that there was a statistically significant relationship between the mode of admission and the course pursued by the respondents(x^2=16.352, DF =7, p = <0.05). Thus the null hypothesis failed to be accepted but accepted the alternative hypothesis that, there is a significant relationship between the mode of admission and the course pursued by the respondents.

The study also clearly showed that majority of the respondents (83%) were self-sponsored while only a small proportion (17%) were government sponsored. The implications were that in the event that the respondents were self-sponsored, then they did not meet the minimum requirements for

government regular programmes. Consequently, they bore the burden of raising their own fees. Depending on parental socio-economic status, these learners got their careers adversely affected.

In an increasingly competitive world in terms of jobs, public appointments and leadership positions, education has continued to gain currency over other factors like family relations, next-of-kin or inheritance. Businesses are going for highly-qualified candidates. A bachelor's degree is considered a must for managerial positions. In job adverts, a master's degree is always desirable and an added advantage.

Many learners who are visually impaired are therefore left out because they cannot be able to raise the fee. Majority of them are not able to reach the cut-off point set by the Joint Admission Board (JAB). The researcher therefore, concluded that the mode of admission of the respondents whether parallel (self sponsored) or regular (government sponsored) affected their career choices such that majority of the learners with visual impairment were self sponsored which implies that most of them may not have qualified for their preferred careers.

4.1.7: Type of Educational System Attended

It emerged from the interviews that some of the respondents attended

integrated schools while others had not. The number of those who went through integrated system and those who did not were almost the same (48.8% and 51.2% respectively) as shown on table 4.15.

Table 4.15: Education System Attended versus Degree Courses Pursued

Respondent Degree Course	Education System Attended				Total	
	Integrated		Special School			
	Freq.	%	Freq.	%	Freq.	%
B.ED Special Ed.	5	12.2	0	0	5	12
B.ED Arts	11	27	18	43.9	29	71
Master of Education	1	2.4	0	0	1	2.4
Bachelor of Commerce	1	2.4	0	0	1	2.4
Hospitality Management	1	2.4	0	0	1	2.4
Bachelor of Law	1	2.4	0	0	1	2.4
BSc. Medical Lab	0	0	2	4.9	2	5
BA Sociology	0	0	1	2.4	1	2.4
Total	**20**	**48.8**	**21**	**51.2**	**41**	**100**

Results in table 4.15 indicates that 20 of the respondents (48.8%) had gone through integration education. 5 of these respondents (12.2%) were undertaking Bachelors of Education (special), 11 of them (27%) were undertaking Bachelors of Education-Arts and 4 of them were undertaking Master of Education, Bachelors of Commerce, Bachelors of Arts in Hospitality Management and Bachelors of Law (LLB) respectively. 21 of the respondents (51.2%) on the other hand had attended a special school. 18 of the respondents (43.9%) were undertaking Bachelors of Education-arts, 2 of them (4.9%) were

undertaking Bachelors of Science in Medical Laboratory and 1 of them (2.4%) was undertaking Bachelors of Arts in Sociology.

Majority of the respondents in both instances that is those who attended integrated schools and those who attended special schools were undertaking bachelors of education-arts. It was also good to note that the 2 respondents who were pursuing bachelors of Science had gone through a special school. This was an indication that the type of education system one attended did not affect the respondents' career choices. To affirm this argument further, a chi-square test was done to determine the relationship between the type of education system attended and careers chosen by the respondents.

Table 4.16: A Chi-Square Test to Determine the Relationship between the Type of Education System Attended and Respondents' Degree Courses

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.673	7	0.057
Likelihood Ratio	18.318	7	0.011
Linear-by-Linear association	0.002	1	0.964
N of Valid Cases	41		

From the Chi square test it was found out that there was no statistical difference between these two variables when compared (x^2=13.673, DF =7, p = >0.05) as shown in table 4.16. Therefore, the null hypothesis failed to be rejected that the courses pursued and the Education system attended by the

respondents had no statistical relationship.

In the focused group discussions however, those respondents who attended integrated school said that they believed that their school contributed to their choice of career. Those who attended integrated schools argued that because they were attending schools alongside their normal sighted peers, they developed confidence in what they can do. This is supported by Haring (1991) who argues, that peer acceptance is a primary outcome of schooling, with important consequences for the quality of life of students with disabilities. Existing discourse reveals low childhood peer acceptance induces loneliness, truancy, psychopathology and suicide (Parker and Asher, 1987), as it deprives children of opportunities to learn normal, adaptive modes of social conduct and social cognition as well as undermining their academic progress.

This is inconsistent with Fazelbhoy (1989), who argues that every visually impaired child, however, cannot be educated in common schools. It can not be denied that learning with sighted children imposes a certain amount of strain on the visually impaired child; there are times when the child finds himself on the sidelines, unable to participate in certain activities.

This is congruent with the current study where one of the respondents in the focused group discussion who attended an integrated school indicated that as much as learning together with the sighted peers gave them confidence, there were lessons that they were not able to fully participate in but only sat and

listened. He gave an example of biology and chemistry lessons. Explaining further, some of the respondents indicated that they didn't have any specialized teachers in their schools who could take them through subjects like mathematics and the science subjects like biological sciences. This in turn caused them to lag behind when it came to these particular subjects. According to these respondents, the schools were not fully equipped to cater for learners with visual impairment, for example, when there was a change of curriculum, the books took quite sometime to be produced.

This was supported by Kenya Society for the Blind (2008). Who stated that due to frequent change of curriculum, teaching/learning materials, especially production of the braille books, has become expensive leading to inadequacy. It is approximated that pupil to braille book ratio for the visually impaired learners is still at 5:1 against the recommended 1:1.

It was further established that only about 50% of the children enrolled in the integrated schools are handled by teachers with requisite special skills. In Kenya, it is estimated that pupil to specialized teacher is 1:20. The recommended PTR is 1:5 (Kenya Society for the Blind, 2008).

Concerning school environment in an integrated school, Kenya Society for the Blind (2008) states that up to 85% of school environment is unfriendly to learners with visual impairment and an impediment to quality education. School environments are without building ramps, pavement, rails, appropriate

colours and improved lights. The import is that rehabilitation services such as activity of daily living, orientation and mobility, all contributing to quality education, are inhibited.

On the other hand special schools and colleges have infrastructure that are fully accessible because they have been designed to meet the needs of this group of pupils (Shah, 2005). Moreover, academic staff members are usually very experienced at adapting their teaching to meet the individual needs of each pupil. As Watson, Shakespeare, Cunningham-Burley, Barnes, Corker, Davis and Priestley (1999) argue, special schools provide young disabled people with supportive environments, both physically and socially, in which they can explore and develop a sense of self without mainstream barriers. This enabling environment could be the reason why the 2 respondents undertaking Bachelor of Science in Medical Laboratory were able to venture into that course. This is due to the fact that they were both in a special school which according to reviewed literature is fully equipped and specially designed to meet individual needs of learners with visual impairment.

The group of respondents that believed that school environment undermined their career choice reported that had they been given special instruments in science courses, they would have done different careers. They explained that just as a well-equipped learning environment was important to their sighted peers, it was important for them too. This point was accepted by all the participants. At the end of the discussion, it emerged that indeed, a well-

equipped learning environment was essential in determining the career that a student chooses.

It was evident that the challenges faced by the respondents who attended integrated schools may have to some extent caused them not to pursue their preferred careers. However, it was also evident that despite the respondents attending different education systems; that is integrated schools and special schools majority of them (83%) were pursuing Bachelors of Education-Arts and Bachelors of Education (special). This implied that the education system attended by the respondents did not affect their career choices. The researcher therefore, concluded that despite the fact that the respondents who attended integrated schools argued that integration education influenced their career choice because learning with their sighted peers gave them confidence, it seemed to have been over-shadowed by the challenges. This is an indication that the career choices of the respondents may have been negatively affected by the type of education system attended. However, there is no indication that this could have been one of the factors that affected their career choices.

4.2 The Effect of the Current Practice of Integration Education and Training in Kenya on the Career Choices of Visually Impaired Learners

Essentially this first research question explored the effect of integration education on the career choices of learners with visual impairment in Kenyan public universities. First, the researcher sought to find out

whether integration education had any influence on the career choices of the respondents. From the interviews, all of the respondents who attended integration education indicated that it influenced their career choice. Two areas of influence were mainly highlighted and these included:

(a) Enhanced their self-esteem.

(b) Enhanced independence

A large proportion of respondents indicated that integration system did not have any influence over their career choice. These observations are herein represented on the table 4.17:

Table 4.17: Effects of Integration Education on Respondents' Career Choice

Effect	**Frequency**	**%**
Enhanced self-esteem	17	42
Enhanced independence	3	7
Not influenced	21	51
Total	**41**	**100.0**

From the results in table 4.17, 20 of the respondents interviewed (49%) indicated that integration education had an influence on them. 17 of these respondents (42%) indicated that integration education had enhanced their self-esteem whereas 3 respondents (7%) indicated that it enhanced their independence. However, 21 of the respondents (51%) indicated that integration

education had not made any effect on their career choice. All these respondents are those who had attended special schools and therefore, integration education had no influence on them until they joined university. Those who indicated that integration education had an influence on them had all gone through integration education. This implies that integration education according to the results had a significant influence on those who went through the system.

This is similar with Mani (1998) who indicates that over the years, studies in child development, sociology, and special education have led enlightened educators to the conclusion that blind children grow, flourish, and achieve greater self and social fulfilment by being nurtured in the least restrictive environment. Through local education, supported by well-prepared specialists in education of the blind, these children may enjoy everyday common experiences essential to the development of a keen awareness of the realities of the world around them. With proper technical assistance, consultation given to regular classroom teachers, and a broad educational environment, blind children are able to show their true worth; they are then more readily accepted socially by their sighted counterparts.

The researcher, through the focused group discussions further asked the participants what they believed was the influence of integration education on their choice of career. Below is a summative discussion of their responses:

(i) Source of encouragement for the visually challenged by the sighted

students.

Participants who had attended integrated schools explained that this setting gave them encouragement and inspiration as it reduced inferiority feelings. They were to have experiences with their sighted colleagues in performing tasks thereby knowing that despite the loss or lack of sight, they were still people who would still meet their responsibilities. This is supportive of Mani (1998) who indicates that one of the objectives of integration education is to provide a natural basis for adult life experiences so that blind students may take their proper places as contributing members in all sectors of society.

The participants went further to note that even at high school; many of their sighted colleagues did not get marks to enable them to join the university. In the university, they favourably compete with their sighted peers. One of the participants proudly mentioned that on many graduation ceremonies, visually impaired learners get First Class Honours or Upper Second Class Honours degrees, while many of their sighted peers get Lower class degrees.

(ii) Support services received/accorded by normal sighted students including reading, guiding, discussion and explanation of the surrounding environment by the sighted peers.

The participants said that in the integrated schools, their colleagues

gave them support in the areas of reading and discussions and information on their environment. Their sighted peers also guided them to various places around the school environment. Even those who did not attend such schools appreciated the fact that they received support from other sources. A neutral platform was at the university in which all the participants said they attended classes alongside their sighted colleagues who provided support whenever a need arose. The participants noted that this type of atmosphere gave them what they described as social acceptance and positive personality development. This way, they got the confidence to pursue their careers of choice.

This was an indication that there was a better understanding of the sighted whereby under integrated education, a sighted child obtains a better understanding of a visually impaired student, his needs, his aspirations and the true picture of a disability, it helps to reinforce that a disability need not bar a student from attaining academic excellence.

In addition, it enables sighted students to appreciate the problems and feelings of the visually impaired and to learn proper ways of dealing with them.

(iii) Enhanced exposure to a learning environment that is much faster

and that introduces a sense of competition. This is also supportive of Mani (1998) who suggests that integration education provides the same opportunities and educational experiences for blind children as those provided for sighted children.

(iv) Integration affords opportunity of actual assimilation of the learners into the general world. Sense of social isolation is minimized.

With all the discussions and the results from the interviews, there is a clear indication that integration education at least for those who went through the system enhanced their self-worth. This gave them the confidence to compete with their sighted peers. However, there was no clear link how this influenced them into choosing the careers they were undertaking.

4.2.1 Constraints in the Practice of Integration Education

From the interviews, the researcher sought to find out the constraints faced by the respondents as they pursued their careers in the University. According to the results, 11 of the respondents indicated that they experienced misunderstanding by the lecturers. They explained further by indicating that the teaching method used by many lecturers did not accommodate them. This was more evident when they used devices which required vision such as projectors in their lectures to display the

lecture notes. 3 of the respondents further explained that there was no proper adaptation of the learning materials. They also pointed out that in some classes the students were so many such that there was no special attention accorded to them by lecturers.

12 of the respondents indicated that there was lack of brailed textbooks which forced them to depend highly on sighted readers who were also not always available. 2 of the respondents indicated that they sometimes lacked co-operation from sighted students. 2 of the respondents indicated of a high work load. 11 of the respondents felt that the environment was not conducive for them. For example some of them indicated that they had problems in tracing their classes when going for lectures. Others indicated that they could not see the blackboard.

From the focused group discussions, the participants identified the following as constraints in the practice of integration education:

(i) Poor government policies that have continued to limit opportunities for the visually impaired even after learning in school.

(ii) Pre-determined arrangement for majority of students joining university to go to Kenyatta University for degree studies. The respondents suggested that deliberate effort should be made by all other universities to accept these students and allow them to undertake other courses. Kenyatta University is perceived to be the

only suitable institution for such students. This perception has to be discouraged. The respondents felt that they are all condemned to study for education degree preferably at Kenyatta University only. This has created a negative attitude in opportunities for higher studies.

(iii) Financial ability at home dictated the kind of course one had to undertake; law which was a popular choice for some of the respondents could not be attained because of cost.

The constraints mentioned from the interviews and the focused group discussions, indicate that a lot still needs to be done for integration education to be fully effective in the learning process of learners with visual impairment. The impediments caused by the constraints do not give learners with visual impairment equal opportunities even as they pursue their careers.

4.2.2 Advantages of Integration Education

The researcher then asked the respondents to state what they thought were the advantages of attending integrated school system. They identified the following advantages:

(i) Introduced a sense of competition both among the visually impaired and normal students.

(ii) It boosted social acceptance and thus reducing stigmatisation. This

is supported by Biklen, (1985). Who states that the belief has developed that integration maximizes handicapped children's potential, social and language skills, and provides opportunities for interaction so that the non-handicapped learn to understand and accept the handicapped.

(iii) Students got exposed to challenges in life that helped to shape them later when under this environment.

(a) They were exposed to peer pressure from their fellow students who were sighted which made them realize their position in society.

(b) Helped them to build self-esteem. This is supportive of Biklen, (1985); Forest, (1985); Marshall, (1986) who suggest that preparation for daily living in an integrated setting through practice of functional skills and development of social skills has been viewed as more beneficial than if taught in the abstract in a segregated setting

(iv) Integration education afforded a variety of experiences in life both socially and academically. This is supported by Howarth, (1983); Winzer, Rogow, & David, (1987) Who argue that changes in moral, ethical, and social values have been reflected in educational thinking which has made integration more humanely attractive in the belief that exceptional children are given opportunity for other

experiences if integrated with regular education, and such integration provides the benefits of special and regular students interacting with one another.

(v) Integration helped to manifest practically the fact that disability is not inability.

4.2.3 General Opinions on Integration Education and its Influence on Career Choice

The researcher further sought to find out the respondents' general opinions on integration education and its influence on their career choices.

One of the respondents indicated that integration education makes an effort to create a least restrictive environment. However, he added that more needs to be done for it to achieve its intended goals. Other respondents indicated that the environment experienced by learners with visual impairment in integration education prepares them for the future. They further indicated that integration education is a milestone towards inclusion but requires continued improvement in terms of government policies and social attitudes towards the potentials of persons with visual impairment to pursue other challenging careers other than education. Some of the respondents also indicated that assistive technology should be enhanced so as to reduce the restrictive learning environment that currently exists. They further indicated that learners with visual impairment in integrated schools and universities are restricted by the institutions to only undertake courses that are deemed to be easy and manageable by them instead of being allowed to explore themselves and decide for themselves what course

or career to pursue. Other respondents however disagreed with this point by indicating that integration education widens one's scope of careers. They also indicated that it changes the society's perception on persons with visual impairment thus reducing stigmatisation and thereby enhancing self-acceptance.

The respondents were able to point out how integration education influenced them and made them to be better people. This was observed from the advantages of integration education that they outlined. The respondents who attended integrated schools stated that the system influenced them by enhancing their self esteem and independence. This together with the results from the discussions were more or less the benefits that they received by attending integrated schools. On the other hand, the constraints mentioned indicated that there was still a lot to be done in order to improve integration education such that it benefits all learners with visual impairments. This was also supported by some respondents when giving their opinions on integration education. From these results however, there was no clear indication of the influence of integration education on the career choices of learners with visual impairment. The researcher therefore, concluded that integration education was not a factor in the career choices of the learners with visual impairment. This was because the respondents were not able to clearly link the benefits they received from integration education to the career choices they were undertaking.

4.3 Career Choices Made by Learners with Visual Impairments in Kenyan Public Universities

Concerning the second research question, the researcher sought to identify careers being undertaken by learners with visual impairment. In the practice of education in Kenya, and consequent choice of careers at the entry into the university, one could conceive of Arts-based and Science-based careers. Art-based could be further seen as the rational courses that require the use of reason as opposed to sensory perceptions. Examples of these courses are Philosophy, Music, Education (Arts) teachers of History, Religious Education, Languages, to mention but a few. Science based courses according to GoK (1999) are practical in nature and require sensory perceptions to draw conclusions. Examples of these courses are medicine, architecture, and engineering, science education, such as teachers of chemistry, physics and biology. The researcher decided to use these two broad categories to find out the ratio, of arts-based to science-based courses among the sampled visually impaired learners. At the same time the researcher sought to find out whether the courses they were pursuing were the ones they preferred and initially chosen or not. This is summarized in table 4.18:

Table 4.18: Degree Courses Pursued Versus those Preferred

Degree Courses	Frequency		Percentage	
	Pursuing	Preferred	Pursuing	Preferred
LLB	1	7	2.4	17.1
Hospitality Management	1	1	2.4	2.4
Medicine	0	3	0	7.3
BSc. Medical Laboratory	2	2	5	5
BA Sociology	1	1	2.4	2.4
B.ED Arts	29	9	71	22
BA in Economics	0	1	0	2.4
B.ED Special Ed.	5	1	12	2.4
B.ED Science	0	2	0	5
Bachelor in Nursing	0	6	0	14.6
Bachelor of Business Management	0	1	0	2.4
Bachelor of science in Engineering	0	2	0	4.9
Human Rights	0	1	0	2.4
BA in Hotel Management	0	2	0	4.9
BA in Journalism	0	1	0	2.4
Bachelor of Commerce	1	1	2.4	2.4
Master of Education	1	0	2.4	0
Total	**41**	**41**	**100**	**100**

Table 4.18 shows that there were courses that were being pursued by the respondents and yet they were not preferred by some who were pursuing them. For example, 7 of the respondents (17.1%) preferred if they could have been undertaking bachelors of law (LLB) whereas it was only 1 respondent (2.4%) who was pursuing the course. 9 of the respondents (22%) out of the 29

respondents (71%) who were undertaking Bachelors of Education-Arts were undertaking it as their preferred course. 1 of the respondents (2.4%) out of the 5 respondents (12%) who were undertaking Bachelors of Education (special) chose it as a preferred course.

5 of the respondents (12%) were undertaking courses that they preferred and were not being undertaken by other respondents. These included 1 of the respondent (2.4%) who was undertaking Hospitality Management, 1(2.4%) who was undertaking Bachelors of Arts in Sociology, 2(5%) who were undertaking Bachelors of Science in Medical Laboratory and 1(2.4%) who was undertaking Bachelors of Commerce.

There were other courses that were a preference to some of the respondents but were not being pursued by any of them. These included 3 of the respondents (7.3%) who indicated that they preferred if they could have been pursuing a career in medicine, 1(2.4%) indicated he would have preferred Bachelors of Arts in Economics, 2(5%) preferred Bachelors of Education-Science, 6 (14.6%) preferred Bachelors in Nursing, 1(2.4%) preferred Bachelors in Business Management, 2(4.9%) preferred Bachelors of Science in Engineering, 1(2.4%) preferred a course in Human Rights, 2(4.9%) preferred Bachelors of Arts in Hotel Management, and 1(2.4%) preferred Bachelors of Arts in Journalism. 1 of the respondent (2.4%) who was pursuing Master of Education Degree was not pursuing it as a preferred course.

From the results, it further emerged that only two respondents (4.9%) out of the 15 respondents (37%) who had science based courses as a preference, did a science based course i.e. medical laboratory sciences. The other respondents did art-based courses, such as Bachelor of Education (Arts) (71%), bachelors of education (special) (12%), Bachelor of Law (2.4%), Bachelors of Arts in Hospitality Management (2.4%), and Bachelors of Arts in Sociology (2.4%). One respondent (2.4%) was found to be undertaking a Master of Education Degree. There was also only 1 respondent (2.4%) who was undertaking Bachelor of Commerce which was a business oriented course.

From these results, it emerged that only 16 respondents (39%) were pursuing their preferred courses whereas 25 respondents (61%) preferred other courses other than those that they were pursuing. This was an indication that majority of the respondents were actually not pursuing their preferred courses.

During the focused group discussion of this study, participants observed that for them, they are unable to choose science-based courses because of their visual limitation. This is supported by Wolffe, (1999) who states that the presence of disability as a result of visual impairment, whether congenital or adventitious can create developmental delays due to restricted range and variety of experiences. An adventitious disability disrupts development resulting to developmental delays as well. These pose limits in what the learner with a disability can do in comparison to non-disabled peers of the same age. Hence, for learners with visual impairment, having profound visual loss, or

impaired vision, makes it difficult for them to learn incidentally about work roles, the types of jobs available, what tasks are inherent in different jobs, and what work behaviours are expected of employees. Furthermore, the severity of the disability poses greater limitations than mild or moderate disability. Githang'a (2007) in her research suggests that, there are certain occupations that were beyond the aspirations of learners with total blindness such as becoming a doctor or being a pilot. This implies perceived limitation posed by disability.

This further concurs with the current study whereby the results indicate that only 2 respondents were able to pursue a science based course. This is because the visual impairment could have been a limiting factor when it came to career choices. Those who thought they could pursue science courses such as engineering and medicine portrayed a lack of awareness of what these careers required where vision is concerned.

However, in the focused group discussions, those who felt that they could do science-based courses argued that they had only one of the sensory organs defective and this was the sense of sight. In which case, science depended on the sensory perceptions and they could use other sensory organs to perceive. An interesting argument was advanced by one of the participants that he still had other four sensory organs to effectively respond to empirical data. For example, he can distinguish things by touching, smelling and perceive the teacher in class by hearing. At this point, the rest of those who supported this

proposition argued that the mainstream teachers and manufacturers of science equipment dictated their plight. They argued that such manufacturers should make equipment that could be responsive to the other sensory organs.

This is further supported by Brazier, Parry, & Fischbach, (2000); Heidare, (1996); Stevens, Steele, Jutai, Kalnins, Bortolussi, & Biggar, (1996), who indicate that there are barriers which are also imposed by inaccessible facilities, curriculum materials, computers, scientific equipment, and electronic resources; inadequate academic supports to bridge pre-college, college, and employment; and lack of understanding about accommodations on the part of pre-college and postsecondary educators.

In the current research, those who opposed their colleagues argued that it was not fair to subject people who cannot effectively manipulate scientific variables to the realm of science. They argued that every person is born with some amount of personality suitable for survival and what education does is that it prepares one for such functions as may be necessary for survival. They argued, for instance, that giving a visually impaired person a course in medicine was difficult as such a person cannot make observations relevant for medical applications. They said the same remarks could be made for courses in engineering and architecture, pharmacy and all such related courses. At this point, their counterparts challenged them and said that in such incidences, visually impaired doctors or engineers could make use of assistants to make observations.

This is supported by Jones, (1983) who suggests that assistive technology has provided tools which compensate in many work settings for visual loss. The student with visual impairment, however, has additional need for knowledge and use of adaptive equipment, such as closed circuit televisions, talking computers, clocks, calculators, dictionaries, Braille, slate and stylus, specialized tape recorders, electronic readers and dictaphones.

In the Kenyan context however, some of the technology that can effectively be used by persons with visual impairment when pursuing some careers, is not up to the required standard compared to the developed countries and this can pose a challenge for the persons with visual impairment.

In addition, the research by Jones (1992) found adults and high school students with visual disability more likely than their sighted peers to select occupations associated with the helping professions, for example teachers, counselors, and social workers. This is similar with the current study whereby majority of the respondents were pursuing occupations associated with the helping professions. According to this study 35 (83%) of the respondents were pursuing education, one of them sociology and another hospitality management.

In part, this appears to be a function of the stimuli used for the assessment. It is likely, however, that another factor contributing to this expression of preference is related to the occupations of adults with whom the person has had

the most contact. For example, Cunningham & Noble, (1998); Seymour & Hunter, (1998), argue that low expectations and lack of encouragement from educators, counsellors, and others with whom they interact impede the realization of their full potential in challenging fields such as those in science, technology, engineering and mathematics (STEM). Since they do not consider STEM careers an achievable goal, students with disabilities do not take the courses necessary to prepare for postsecondary studies in these areas.

4.4 Other Factors that Determine Career Choice Among Students with Visual Impairements

In the third research question, the researcher sought to find out other factors that determined the careers chosen by learners with visual impairment.

From the interviews, most of the respondents indicated that they were not able to take up their preferred courses because according to them, their visual impairment was a limiting factor especially in courses like engineering and medicine. They indicated that in Kenya, there is no technology that can enable them to undertake such courses. 14 of the respondents indicated that they opted for the careers they were undertaking because of salary. 5 of them indicated that they were motivated by their parents. 1 of the respondent who was pursuing law indicated that he chose it because his desire was to advocate for the rights of people with disabilities. 13 of the respondents indicated that they chose their careers out of interest. At least 6 of the respondents indicated that their academic performance did not qualify them to pursue their preferred

courses and they therefore had to settle on the careers that they were undertaking. Other reasons such as interaction with the community which was given by the respondent who was pursuing Bachelors of Arts in Sociology, job availability, popularity and prestige, were indicated. This shows a contradiction because according to the results majority of the respondents were not pursuing their preferred courses and yet they gave similar reasons in both instances.

This was an indication that apart from visual limitation, majority of the respondents were undertaking their careers because of the salary and also interest. These 2 reasons were also indicated by the majority when they were asked to give reasons for the courses they preferred. For example, most of those who had indicated science courses as their preference attached salary to those careers. Most of the other respondents who preferred other courses other than the science courses indicated that they preferred them out of interest. A small proportion especially those who preferred careers in hotel management and journalism indicated popularity and prestige as their major reason.

During the focused group discussions, the respondents gave some of the other factors that influenced their career choices. These include the following.

4.4.1 Social Influence

During the focused group discussions, the respondents indicated that social influence apart from their parents was one of the factors that played a major role when it came to the choosing of their careers. The respondents explained

that this was from both within and outside the social life. They said that the encouragement and acceptance they received from their colleagues, friends and relatives gave them the confidence they needed in life. One of the respondents said that in school, teachers and fellow students treated him as a human being and got to interact with the rest. From here, he decided what he would want to be in life. Because of his class teacher's kindness, he chose to become a teacher. From the discussions that ensued, all the participants gave tribute to their teachers, peers or generally people around them, whether at the church or marketplaces for having influenced their choice of career.

This is inconsistent with Seymour & Hunter, (1998), who suggest that some students with disabilities, those with visual impairment included, experience isolation as a result of not being accepted by their peers. They rarely have access to positive role models with disabilities. This is further supported by Blackorby & Wagner, (1996), who suggest that support systems available in high school cease after graduation, and many students with disabilities lack the self-determination, college and employment preparation, and independent living skills necessary to make successful transitions to adulthood. Youth with disabilities continue to live with their parents or in other dependent living situations after high school, more often than their peers without disabilities; they also engage in fewer social activities. Social isolation has a negative effect on personal as well as academic and career success (Seymour & Hunter, (1998); Smith & Nelson, 1993).

On the other hand in supporting the current research, Krumboltz (1976) points out that there are associative learning experiences that occur in several ways; by reacting to external stimuli, by observing real or fictitious models, or associating two events in time or location. For example, one may decide to become a doctor because he/she grew up poor and he/she wants a career that will help in having a secure income (reaction to external stimuli); one may want to be like a favourite uncle who is a doctor (observations of the models); or associating being a doctor with helping others (association of events).

In this case, the students were influenced by the people around them whom they considered as their role models. Despite the fact that parental education and parental occupation did not have an influence on the career choices of the respondents, some of the respondents indicated that their parents motivated them to pursue their chosen careers. Parents in this case were part of the social influence of the respondents.

4.4.2 Academic Performance in Secondary School Level

The researcher explored academic performance as one of the reasons given out by the respondents for the careers chosen. During the interviews some of the respondents stated that they chose the careers that they were pursuing because of low academic performance which disqualified them from undertaking their

preferred careers. These also included those students who were in the regular programme. For example, one of the students who was pursuing a BSC in Medical Laboratory pointed out that she wanted to pursue medicine. This was not possible because her grade was a bit lower than the set cut off point for medicine. In the focused group discussion, the participants agreed that because of the standards set to pursue given courses, they ended up undertaking their current careers. One of the participants explained that it did not matter whether you attended integrated school or not, whether you are visually impaired or not, standards have to be met. At this point, the researcher chose to find the opinion of the participants on the standards.

Participants generally agreed that it is important to have standards in order to ensure quality of the products. None of the participants felt that learners with visual impairment should be given lower standards to compete with their sighted peers. The group maintained that it was necessary to have standards so that only the best get what is best for them. In fact, one of the participants drew the attention of others to the fact that they met the standards to be admitted in their current courses that now continue to shape the future of their careers.

This is similar with the research by ACT (2007), which shows that academic achievement in high school is a strong predictor of college degree attainment. It also shows that high academic skills also predict future occupational attainment (Austin & Hanisch, 1990).

From the discussions, the number of those who indicated academic performance as one of the factors that affected their career choice increased. In this case majority of the participants agreed that their career choice had been affected adversely by their academic performance more than any other factor. The men even did mention that the female students got into the university with lesser marks than men, regardless of their visual state or attendance of integrated schools.

This argument was supported by the interview results which indicated that the female respondents were more than the male respondents. It was also evident that academic performance was a major impediment to most of the respondents in the choice of their careers. This was supported by the interview results which indicated that an overwhelming number of the respondents (83%) did not achieve the cut-off points to join university and had to therefore sponsor themselves fully in paying their own fees.

To further support the argument on academic performance as an impediment in career choices of learners with visual impairment, The Kenya National Examination Council (KNEC,2007) in their research observed that blind candidates have difficulties when handling the bulky question papers, answer sheets, Braille machines and the abacus in mathematics.

This is similar with the current study in that most of the respondents pointed out that some of the examination papers were very long and bulky and the extra

half hour they were given was not enough. They indicated that this was mainly with mathematics, English and Kiswahili. According to the respondents, other papers like geography which contained maps also required more time together with all those other exams that contained diagrams.

This is similar with Kaburia (2008) who indicates that blind candidates have difficulties in acquisition of concepts due to lack of visual stimulation e.g. visual aids and hence, it takes them longer to understand and comprehend diagram and related information. Extra time should be allocated depending on the degree of disability, and the length and complexity of the paper or subject.

In addition, a comprehensive education in this context may be able to bring on board necessary accommodations for learners with visual impairment such as teaching and learning materials that are modified to facilitate learning experiences; assistive technologies such as talking books, screen readers and magnifiers as well as necessary specialized equipment. This is because lack of resources propel majority of the learners to performances at the basal level. For this reason, only a few learners are able to access higher education and most often they are compelled by their subject clusters to join careers such as teaching or law as it is the case in the current study where the majority of respondents were pursuing a teaching career.

If these challenges are overcome then the academic performance of learners with visual impairment may be able to improve and there may be fewer

students who will be self-sponsored because a majority of them will be able to achieve the cut off points. This will in turn enable them to take up careers of their choice.

4.4.3 Lack of Exposure

The transition from school to work has always been a crucial time in the lives of young people. Students became increasingly aware of career opportunities and vocational pathways during their final years of senior school (Harvey, 1984). How and when such transitions are made can have a major impact on the young person's sense of identity, the kind of person they want to be and their view of the world in general (Hodkinson, sparkes and Hodkinson, 1996).

In the current study it emerged that the visually impaired at times were in the dark as regards to careers till they went higher up in education e.g. secondary school before starting to think of possible future careers. One of the participants in the focused group discussion indicated that she was not aware of what careers she could choose in future due to lack of information concerning the various careers in the job market. This was also a major concern with the other participants. They indicated that in their early school years they were not exposed to the careers that could especially be undertaken by persons with visual impairments.

This is similar to a research by Wartoney and Cooney (1997) who found, in

their study, that students were unlikely to make optimal choices as they lack sufficient and appropriate vocational information. In addition, if learners are not guided to link their academic subjects to their preferred occupations, they are likely to concentrate on subjects that may land them in occupations they may not be interested in. This may be caused by poor academic guidance by educators at the high school level.

Learners with visual impairment lack exposure when it comes to the careers that can be undertaken by persons with visual impairment especially in the Kenyan context. This is mainly because many schools lack career education. This was evident in the results from the interviews where the respondents stated their preferred careers. Some of the careers mentioned by the respondents and especially the science-based careers portrayed a lack of knowledge on the visual capacity that would be required when performing those careers.

CHAPTER FIVE

SUMMARY, CONCLUSIONS and RECOMMENDATIONS

5.0 Introduction

This chapter presents a summary of research findings, conclusions, recommendations and suggestions for further research. The purpose of this study was to find out how career choice of learners with visual impairment in Kenyan public universities has been affected by the practice of integration education among other factors associated with career choice. It must be pointed out that the integration of visually impaired students with other learners starts from primary school level to university, but this study focused on university students only.

Its objectives were; to find out how career choices of visually impaired learners were affected by the current practice of integration education and training in Kenya, to find out career choices that were being undertaken by learners with visual impairments in selected public universities and to identify other factors that determined their career choice. To realize its objectives, the study adopted a theoretical framework rooted in career developmental theories. Developmental theories consider career development as a process that occurs over time, usually beginning in early childhood and continuing into late adulthood. This study focused on three theories: Social Cognitive Theory of Albert Bandura (1986), Ginzberg, Ginsburg, Axelrad and Herma Theory of

occupational choice of 1951, and Holland's Theory of vocational Choice and Career Development of 1985,

The study was carried out in two public universities in Kenya, namely; Kenyatta University and Moi University. The target population of the study consisted of visually impaired learners in public universities in Kenya. A total of forty-one learners with visual impairment were selected as respondents for the study. The researcher used the purposive sampling procedure. Two types of research instruments were used in this study i.e. interview schedules and focused group discussions (FGDs). Interviews helped the researcher to gather information from the respondents that was deemed truthful and with more clarity. The researcher held group discussions with visually impaired learners and gave them an opportunity to argue out their opinions over integration education. The survey instrument was pre-tested on one student with visual impairment from the University of Nairobi to find out if the items were clear and relevant. Both qualitative and quantitative techniques were used to analyze data that were generated for the study.

5.1 Summary of Findings and Implications

The research findings showed that:

1) From the demographic information of the respondents, several aspects were explored in regard to the career choice of persons with visual impairment.

(i) Regarding gender and its relation to career choice, the number of female students was almost 1.5 times more than the number of male students who responded to the interviews such that it brought a bias in the study. The findings of the study as shown in table 4.2 suggested that there was a slight variation in the courses undertaken by the university students with visual impairment across gender.

From the results in table 4.2, there was an indication that the female respondents were more than the male respondents in the courses that they were both pursuing, that is Bachelors of Education-Arts and Bachelors of Education (special). In the other courses that they were pursuing separately, the female respondents seemed to be undertaking more courses than the male respondents.

Statistically, when a chi square test was done to show whether there was a significant relationship between gender and the careers chosen by the respondents as shown in table 4.3, there was an indication that gender was not a factor in career choice made by the students.

(ii) Regarding the environment where one grew up and its relation to career choice of the respondents, there was an indication that there was almost an equal representation between those brought up in urban and rural environment. The implications of the responses

received could be that environment where visually impaired learners were brought up, whether urban or rural, did not influence the career the respondents were likely to choose. This was supported by the results of a chi-square test in table 4.5 which showed that there was no significant relationship between the career choice of the respondents and the place they were brought up such that it was not considered as being one of the factors that affected the career choices of learners with visual impairment.

(iii) Concerning the siblings' level of education, the researcher was trying to understand whether brothers and sisters provided some form of inspiration to the visually impaired learners. Majority of the respondents (65.9%) according to the results had siblings whose level of education was up to college and above. These respondents were also seen to be undertaking a variety of courses including the only science course that was being pursued. This was an indication that this could have been one of the factors that influenced their career choice. This was supportive of the results of the Chi square test in table 4.7 which indicated that there was a significant relationship between the level of education of the siblings and the type of career taken by the respondents such that it was considered to have been one of the major factors that affected the career choices of learners with visual impairment.

(iv) Regarding the parents' level of education, there was a clear indication that the respondents who were pursuing Bachelors of Education-Arts were the majority in all the education levels of the parents. However, there was no clear indication whether the parents of these learners with visual impairment had a great influence on their career choices. This is because there is a significant number of these respondents whose parents had not acquired any education and yet they were in a process of achieving a university education. There was also an indication that majority of the parents had not acquired a college education which was suggestive of lower levels of education. The correlation analysis using chi-square test in table 4.9 and 4.10 statistically showed that there was no relationship between the level of education of the parents and the type of career choice made by the students such that it was not regarded as being one of the factors that influenced the career choices of the learners with visual impairment.

(v) As stipulated in the literature review of this study, theories of career choice and development have tended to propose that parental, or role models' profession influences one's choice of the career.

Results from table 4.11 indicated that majority of the parents of these respondents were not employed but were either farmers or doing business. It is also good to note that 1 of the parent of the 2 of the respondents who were undertaking bachelors of Science in

medical laboratory, was employed whereas the other 1 parent of the other respondent was a farmer. This was an indication that the occupation of the parents did not have any effect on the career choices of the learners with visual impairment. This was supported by the results from the chi-square test in table 4.12 which showed that there was no significant relationship between the occupation of the household head/parents and the type of career that was being pursued by the respondents such that it was not regarded as one of the factors that influenced the career choices of learners with visual impairment.

In the focused group discussions, some students argued that their parents had a great influence on their career choice. Most of the respondents however, indicated that due to their absence from home, most of the time owing to the fact that they were in special schools, their parents had very little to do with their career choice. This further affirmed the results from the interviews.

(vi) The study investigated careers taken by students admitted by the Joint Admission Board (JAB) and those who are self-sponsored. According to the results in table 4.13, 7 of the respondents (17%) were regular students or government sponsored. This meant that they were admitted by the Joint Admission Board (JAB) to join university. On the other hand 34 of the respondents (83%) who were

the majority were parallel students or self sponsored. This meant that they paid all their fees by themselves.

The implications were that in the event that the respondents were self-sponsored, then they did not meet the minimum requirements for government regular programmes. Consequently, they bore the burden of raising their own fees. Depending on parental socio-economic status, these learners got their careers adversely affected. The results for chi square (table 4.14) indicated that there was a statistically significant relationship between the mode of admission and the course pursued by the respondents. The researcher therefore, concluded that the mode of admission of the respondents whether parallel (self sponsored) or regular (government sponsored) affected their career choices such that majority of the learners with visual impairment were self sponsored which implied that most of them may not have qualified for their preferred careers.

(vii) Regarding the type of education system attended and its influence on career choice, results from table 4.15 indicated that 20 of the respondents (48.8%) had gone through integration education. 21 of the respondents (51.2%) on the other hand had attended a special school.

Majority of the respondents in both instances that is those who

attended integrated schools and those who attended special schools were undertaking Bachelors of Education-Arts. It was also good to note that the 2 respondents who were pursuing Bachelors of Science had gone through a special school. This was an indication that the type of education system one attended did not affect the respondents' career choices. To affirm this argument further, a chi-square test as shown in table 4.16 found out that there was no significant difference between these two variables when compared. The researcher therefore, concluded that despite the fact that from the focused group discussions the respondents who attended integrated schools argued that integration education influenced their career choice because learning with their sighted peers gave them confidence, it seemed to have been over-shadowed by the challenges. This was an indication that the career choices of the respondents may have been negatively affected by the type of education system attended. However, there is no indication that this could have been one of the major factors that affected their career choices.

2) Concerning the influence of integration education on career choice there was an exploration of the benefits visually impaired students got from undergoing integration education and training. All of the respondents who attended integration education indicated that it influenced their career choice. Two benefits were mainly highlighted during the interviews and

included:

(a) Enhanced their self-esteem.

(b) Enhanced independence.

However, a large proportion of respondents indicated that integration system did not have any influence over their career choice. This was mainly because these were all those who had not gone through integration education until they joined university.

Other benefits were outlined in the focused group discussions. The respondents indicated that integration education was a source of encouragement. They also indicated that they received support services such as reading and being guided by the sighted. Other benefits included enhancement of exposure and assimilation into the general world.

Several constraints faced by the respondents while going through university were also outlined such as: misunderstanding by lecturers, lack of brailed textbooks, inability to trace classes among others.

It was evident from the responses given by the respondents that integration education influenced them and made them to be better people. This was observed from the advantages of integration education that they indicated. This together with the results from the discussions were more or less the benefits that they received by attending integrated schools. On the other hand the constraints mentioned indicated that there was still a lot to be done in order to improve integration education such that it benefits all learners with visual

impairments in all levels of education. This was also supported by some respondents when giving their opinions on integration education. From these results however, there was no clear indication of the influence of integration education on the career choices of learners with visual impairment. The researcher therefore, concluded that integration education was not a factor in the career choices of the learners with visual impairment. This was because the respondents were not able to clearly link the benefits they received from integration education to the career choices they were undertaking.

3) Out of the careers chosen by the students with visual impairment in the public universities, only two students (4.9%) sampled did a science-based course i.e. medical laboratory sciences. Most of the other respondents did art-based courses, such as Bachelor of Education (Arts), who were the majority that is (71%) Bachelors of Education (special) (12%), Bachelor of Law (2.4%), Bachelors of Arts in Hospitality Management and Bachelors of Arts in Sociology (2.4%) each. Only 1 respondent was pursuing Bachelor of Commerce which was a business oriented course. One student (2.4%) was found to be undertaking a Master Degree in Education. This implied that most of the respondents were pursuing teaching as a career.

It also emerged from the results that only 16 respondents (39%) were pursuing their preferred courses whereas 25 respondents (61%) preferred other courses other than those that they were pursuing. There was an increase in number of those who wanted to pursue science-based courses from only 2(4.9%) who were

actually pursuing a science-based course to 15(37%) who did not get the chance of pursuing those careers. This is an indication that majority of the respondents were actually not pursuing their preferred careers.

4) Other factors associated with career choice emerged from the interviews and focused group discussions. From the interviews most of the respondents indicated that they were not able to take up their preferred courses because according to some their visual impairment was limiting especially in courses like engineering and medicine. They indicated that in Kenya, there is no technology that can enable them to undertake such courses. Others indicated that they did not qualify for the courses they had aspired to do and for that they settled for what they were pursuing then. Other reasons were given by the respondents for undertaking their careers. They indicated that they chose their careers because of salary, interest, advocacy, motivation from parents, popularity and prestige.

From the focused group discussions other factors emerged. These included social influence whereby the respondents indicated that social influence apart from their parents, was one of the factors that played a major role when it came to the choosing of their careers. The respondents explained that this was from both within and outside the social life. Academic performance was also a factor that was pointed out in the focused group discussions whereby there was an increase of the respondents from those who had initially indicated it in the interviews. Lack of information was also indicated by the respondents.

5.2 Conclusions

From the study it is concluded that gender, the environment in which learners with visual impairment were brought up, parental education, the occupation of the head of the household, and the type of education system one attended did not influence the career choices that were being undertaken by the learners. On the other hand however, the level of education of siblings and whether one was self sponsored or government sponsored seemed to a large extent affect the career choices of learners with visual impairment.

When exploring integration education as one of the major factors that may affect career choice, several benefits and advantages were highlighted by the respondents. However, they were not able to clearly explain how these benefits and advantages contributed to their career choices.

Several constraints in integration education especially at the university level were pointed out. The major constraints being misunderstanding by lecturers, lack of brailed textbooks and an environment that was not conducive for learners with visual impairment. The researcher therefore concluded that integration education did not influence the career choices of the respondents despite having contributed greatly to the improvement of their personality. This indicated that alot still needed to be done to make integration education starting from primary all through to tertiary institutions viable to all learners with visual

impairments.

The significance of this study lies in the fact that it clearly showed flaws in the education received by these participants. With the Government clearly stating its commitment to Education for learners with Special Needs, serious attempts should be made to not only improve education, but to also improve guidance. When identifying career choices made by learners with visual impairment, it was found that majority of the respondents were undertaking education thus pursuing teaching as a career. A few of them were undertaking other courses such as hospitality management, Bachelors of Law, Bachelors of commerce and Bachelors of Arts in sociology. Only 2 respondents were undertaking a science course in Medical Laboratory. This indicated that most learners with visual impairment tend to lean towards teaching as a career and are underrepresented in other careers especially those that are science-based. It was also evident that most of the respondents were not pursuing their preferred careers.

When exploring the reasons to the choices of careers that were being undertaken, visual limitation seemed to have been one of the major impediments. The respondents further indicated that there was lack of appropriate technology that would enable them as persons with visual impairment to venture into other careers. Another major impediment was academic performance which was mentioned by majority of the respondents during focused group discussions despite few of them indicating it as a factor

during the interviews. Lack of career awareness was also indicated by the respondents as one of the factors that affected their career choices.

All of the factors mentioned seemed to have negatively affected the career choices that the respondents were undertaking. This implied that their career choices were limited. Social influence was the only mentioned factor in the focused group discussions that seemed to have a positive influence on the career choice of the respondents.

Other factors such as salary, interest, parental motivation, advocacy, job availability, interaction with the community, popularity and prestige among others were mentioned in the interviews. These however, were reasons that seemed to have been more of a driving force or motivating factors to the chosen careers.

5.3 Recommendations

(i) It is apparent from the study that integration education has several advantages in the choice of careers of visually impaired learners. It is therefore recommended that the government develops a policy that fully embraces integration education.

(ii) From the conclusions of this study, it has been shown that several constraints continue to undermine the successful practice of integration education. In the light of integration education as has

been shown from this study, it is recommended that more research be carried out to effectively eliminate these constraints.

(iii) From the study, it has been found out that factors such as gender, where one was born and brought up, the level of education of parents and parents' occupation did not influence career choice of the students which was a contradiction with many studies. It is therefore, recommended that further research be conducted on these factors.

(iv) It also emerged from the study that the integration process did not open up chances of accessing career development. As already evident from the results, visually impaired learners are not considered alongside their normal counterparts when it comes to government financing of university education, they are disadvantaged. They are hence forced to look for funding. It is possible that many of the visually impaired who attended integrated schools but did not make it for government sponsorship and failed to raise fees have stayed away from their career development. The Joint Admission Board (JAB) should consider lowering the cut-off points which will in turn allow more learners to access higher education.

(v) It was also apparent that most students with visual impairment lack awareness when it comes to choosing careers. In this case, it is recommended that career education be introduced in all schools. This will give them a wide range of experiences on various careers and this will enable them make wiser career choices. There is need for general vocational education, as well as the need for career education offered specifically for blind and visually impaired students. Many of the skills and knowledge offered to all students through vocational education can be of value to blind and visually impaired students. They will not be sufficient, however, to prepare students for adult life, since such instruction assumes a basic knowledge of the world of work based on prior visual experiences. Career education will provide the visually impaired learner of all ages with the opportunity to learn first-hand the work done by the banker, the gardener, the social worker, the artist among others. It will provide the student opportunities to explore strengths and interests in a systematic, well-planned manner. Once more, the disadvantage facing the visually impaired learner is the lack of information about work and jobs that the sighted student acquires by observation. Because unemployment and underemployment have been the leading problem facing adult persons with visual impairment in Kenya, this portion is vital to students, and should be part of the curriculum for even the youngest of these individuals.

(vi) Lack of proper and advanced technology seemed to be a major impediment to most of the students with visual impairment. In this case, the government together with the private sector should do research in the developed countries on the technology they have and see what they can borrow and fit into the system. This will go a long way in giving persons with visual impairment a wider range of skills to enhance their careers of choice.

5.4 Suggestions for further Research

Based on the findings of the research, the following additional research was recommended:

(i) A replication of this study using a wider cross section of literacy institutions including colleges, and vocational training centres since the current study was limited to universities.

(ii) Further research should be conducted on the role of parents and siblings of students with visual impairment on career choice.

(iii) There should be further research on the role of technology on career choice of persons with visual impairment in Kenya.

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APPENDICES

APPENDIX 1

INTERVIEW SCHEDULE FOR RESPONDENTS

1. Gender of the respondent?
2. Which university are you attending?
3. Which course are you pursuing?
4. Under what mode of admission parallel/self sponsored or regular/government sponsored) did you join campus?
5. What is your year of study?
6. Where were you brought up during your early years of schooling?
7. Do you have brothers or sisters?
8. If Yes, what is the highest level of education attained by at least one of them?
9. What is the Education level of your:
   (i) Father?
   (ii) Mother?
10. What is the main occupation of the head of your household?
11. Were you attending an integrated school before joining the university?
12. Are you attending classes alongside your sighted peers at the moment?
13. What were your choices of courses you wanted to pursue at the university?

14. What were your reasons for choosing the above courses?
15. Are you at the moment undertaking the course you preferred?
16. What has made you to do the course you are undertaking now?
17. How did attending classes alongside your sighted peers influence your career choice?
18. What constraints do you face while attending your training at the moment?
19. What advantages do you find in attending an integrated university education?
20. Give your opinion about the influence of integration education and training to the career choice of visually impaired learners

APPENDIX II

FOCUSED GROUP DISCUSSIONS WITH RESPONDENTS

Topics to be discussed:

1. Career choices made before joining university

2. Influence of integration education on career choice

3. Advantages of attending integrated education with specific reference to career choice

4. What other factors influenced career choices of visually impaired learners.

KENYATTA UNIVERSITY

GRADUATE SCHOOL

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Our Ref: E55/6521/03
Your Ref:

Date: 26th August, 2008

The Permanent Secretary,
Ministry of Higher Education,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION

I write to introduce Ms. Jacqueline M. Osoro who is a Postgraduate Student of this University. She is registered for M.Ed. degree programme in the Department of Educational Psychology.

Ms. Osoro intends to conduct research for a Thesis entitled, **"Integration Education as a Factor in Career Choice and Development among Learners with Visual Impairment in Selected Kenyan Public Universities."**

Any assistance given to her will be highly appreciated.

Yours faithfully,

M. C. MAKOKHA
FOR: DEAN, GRADUATE SCHOOL

MCM/fwk

REPUBLIC OF KENYA

MINISTRY OF HIGHER EDUCATION SCIENCE & TECHNOLOGY

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When Replying please quote
Ref. MOHEST 13/001/ 38C 560/

15th September 2008

Jacqueline M. Osoro
Kenyatta University
P.O. Box 43844
NAIROBI

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on, ***'Integration Education as a Factor in Career Choice and Development among Learners with Visual Impairement in Selected Kenyan Public Universities,***

I am pleased to inform you that you have been authorized to carry out research in selected Public Universities Countrywide for a period ending 30th September, 2009.

You are advised to report to the Vice Chancellors of the Public Universities you will visit before embarking on your research.

On completion of your research, you are expected to submit two copies of your research report to this office.

pp **M. GATOBU**
FOR: PERMANENT SECRETARY

Copy to:

The Vice-Chancellors

All Public Universities