INFLUENCE OF ORIENTATION AND MOBILITY TRAINING
ON SOCIAL INTEGRATION OF ADULTS WITH VISUAL
IMPAIRMENT IN KANO STATE, NIGERIA

BY
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UNIVERSITY

MARCH, 2019
DECLARATION

I certify that this thesis is carried out, written and compiled by myself. I have not submitted some part of the work elsewhere (universities/institution) for the purpose of the award of any degree or for publication. This thesis has been complimented in the way of citations. The data, text, pictures, tables and graphics that are borrowed from other sources are specifically accredited and references cited using APA style and in accordance with anti-plagiarism.

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DEDICATION

This thesis is enthusiastically dedicated to my humble parents Mal. Isa Ibrahim and Salamatu lawan; Fatima and Ummul-Kursum who supported my academic career with renewed vigour and determination. To my lovely wife Ummi Abbas and our children Abbas, Isa, Abubakar and Ahmad who endured my grand and long educational traveled. God bless you all.
ACKNOWLEDGMENTS

I am grateful to my supervisors Dr. Chomba Wa Munyi and Dr. Margaret Murugami for their wisdom, dedication, inspiration and encouragement without which this work would not have been a success.

Thanks to Almighty Allah whose help made me compiled this thesis. My gratitude also goes to Bayero University Kano for given me fellowship to enable me undertake this program. I am also grateful to my brothers and sister for their endless prayer.
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### ABBREVIATION AND ACRONYMES

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>BUK</td>
<td>Bayero University Kano</td>
</tr>
<tr>
<td>DAPDB</td>
<td>Discrimination against Persons with Disabilities Bill</td>
</tr>
<tr>
<td>IDEA</td>
<td>Individual with Disability Education Act</td>
</tr>
<tr>
<td>IDEIA</td>
<td>Individual with Disability Education Improvement Act</td>
</tr>
<tr>
<td>NDD</td>
<td>Nigerians with Disability Decree</td>
</tr>
<tr>
<td>NDDL</td>
<td>Nigerian Disability Discrimination Law</td>
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<tr>
<td>OMT</td>
<td>Orientation and Mobility Training</td>
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<tr>
<td>SI</td>
<td>Social Integration</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package of Social Science</td>
</tr>
<tr>
<td>UNCRPD</td>
<td>United Nations Convention on the Right of Person with Disabilities</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational Scientific and Cultural Organization</td>
</tr>
<tr>
<td>VI</td>
<td>Visual Impairment</td>
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<td>WHO</td>
<td>World Health Organization</td>
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ABSTRACT

The purpose of this study was to investigate the Influence of Orientation and Mobility Training (OMT) on Social Integration (SI) of Adults with Visual Impairments (VI) in Kano State. The study sought to achieve the following objectives: influence of OMT on Self-Esteem; Self-reliance; Community Participation and Economic participation of adults with VI aged 25 to 45. Havighurst’s Developmental Task Theory was used to guide the study. The study used descriptive survey research design. Three geographical zones of Kano State had been selected as the location of the study that is, South, Central and Northern regions. This locale was chosen due to significant number of persons with VI and rehabilitation centers. The population of the study was 512 adults with VI, 44 Social Welfare Officers and 72 Parents, the total of 628 target populations. Stratified random sampling technique was used in selecting 18 out of 44 local governments. Simple random sampling and purposive sampling techniques were used in selecting 200 adults with VI out of 512, 18 Social welfare Officers out of 44 and 22 Parents out of 72, totaling to 240 sample sizes out of 628 target population. The instruments for data collection were questionnaires including: State Self-Esteem Scale, Self-Reliance Achievement Scale, Likert scale instrument for Measuring Community Involvement. Focus Group Discussion and Interviews were also used. To ascertain validity and reliability of the instruments, test retest was done and pilot study conducted. Quantitative and Qualitative methods were administered to analyze the data. Questionnaires were analyzed quantitatively using a Statistical Package of Social Sciences (SPSS) version 20, while interviews and Focus Group Discussion were coded and presented in a narrative form qualitatively. Findings were presented using descriptive methods. The major finding was most of respondents believed that OMT influences SI of Adults with VI. Findings revealed that O&MT has positive influence on social integration of Adults with visual impairment. The study recommended that Government through the Ministry of Education should include orientation and mobility training in regular school curriculum. This will burst the self-esteem of persons with visual impairment and a harmonious relationship between them and the society. Government through the ministry of women affairs should provide more gadgets be it a traditional collapsible white canes or the electronic collapsible white canes as well as relevant instructional materials to improve their access to toilets and birth rooms. Government through the Ministry of Women Affairs should established more rehabilitation centres and keep on providing orientation and mobility training to ensure that the training is adequate. And to adopt expanded core curriculum used in United State of America to replace the existing one which does not future O&M as a training subject. Finally, Government through the ministry of labor, Nongovernmental organizations and the wealthy individuals should provide adequate funds for professionals to provide training and sheltered workshops to increase employment for adults with visual impairment in the public and private sectors. This will facilitated their fully integration in the society.
CHAPTER ONE
INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction
This chapter discusses the following: Background to the Study, Statement of the Problem, Purpose of the Study, Objectives of the Study, Research Questions, and Significance of the Study. It also presents Limitations and Delimitations of the Study, Assumptions of the Study, Theoretical framework, Conceptual Framework and Operational Definition of Terms.

1.2 Background to the Study
United Nations Convention on the Rights of Persons with Disabilities (2008) has played essential role in promoting and advocating equal rights for the disabled as mentioned in Article (19) that all persons with disabilities should live in the community with full inclusion and to participate in the community with choice equal to others. Within the period of 1940’s to 1960’s, disability prevention and rehabilitation was the primary focus of United Nations. Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. 794 and Title II of the Americans with Disabilities Act of 1990, 42 U.S.C. 12131, emphasized on protecting and integrating individuals with disability based on disability discrimination.

It was discovered that one of the human’s biological organs used to facilitate social interaction is vision, because one third to one over two of the brain is devoted to pure visual processing and 90% of sensory input is vision (Clemente, Higgins, &
Shah, 2015). Vision allows people to gather process and react to the environment, enables them to plan movements, move within their environment, and maintain an upright position in space. It also allows individuals to accurately attend to environmental information, integrate it, and use it to make daily decisions (Clemente, Higgins, & Shah, 2015). Suttie, Howley, Dryden, Magnusdottir and Verstraten (2014) observe cumulative negative impact of blindness and vision loss, the compound impact includes: Reduced ability to access information and health services; Increased risk of depression and anxiety and loss of self-esteem; Loss of independence for self-care, daily activities and mobility; Reduced social participation; Increased risk of falls and domestic accidents so also vision impairment is associated with decreased life expectancy among older people, even in high income countries.

The International Labour Organization (2017) observed that people with disabilities, persons with visual impairment inclusive faced discrimination and other barriers to full participation in social, economic, political and cultural life. They are more likely to be unemployed or earn less than non-people with disability and be in jobs with poor promotional prospects and working conditions. Many work in the unprotected, informal economy. Few have access to skills development and other opportunities that would enable them to earn a decent living. The potential of very many women with disability and men remains untapped and unrecognized, leaving a majority in poverty, dependence and social exclusion.
Persons with visual impairment need to be involved in many forms of training in order to compensate the handicapping condition.

Orientation and mobility training, as one of the rights of persons with visual impairment has traditionally been defined in parts thus; orientation serves as the process of using the senses to establish one’s position and relationship to other objects in the environment, whereas mobility refers to the capacity, readiness, and ability to move about in the environment. Orientation and mobility training helps a person with a visual impairment know where he or she is in space and where he or she wants to go (orientation) and how to carry out a plan to get there (mobility). Orientation and mobility services are among the related services provided to eligible students as part of their individual education programs (IEP), with their focus being determined on the basis of an evaluation of the child by an orientation and mobility specialist. Because children exhibit a range of visual functioning, orientation and mobility instruction can encompass a range of content. A key feature of orientation and mobility training is that it takes place in natural environments, both inside and outside the school context. Mobility specialists typically place students in a real-world context and give them practical and age-appropriate problems to solve. Younger students may be asked to find their way to and around their school building, whereas older students may be taught to access community services, shop, arrange for and use public transportation, and find their way around their neighborhoods and business areas. Acquiring this kind of “fundamental and enabling life skill like the acquisition of academic and social skills, is of great importance to the social and economic independence of blind and visually impaired persons (Cameto, Nagle, & SRI International, 2007). These
categorically stated that persons with disability should be integrated and encouraged to participate in any societal activities, adults with visual impairment inclusive. The assertion regarding orientation and mobility was to assist persons with visual impairment to be fully integrated into society through developing self-esteem skills, self-reliance skills, community involvement and economic participation.

IDEA (2004) considered Orientation and Mobility Training as the services provided to persons with visual impairment by certified personnel to enable those visually impaired to systematically attain orientation to and safe movement within their vicinity in home, school, and community. The ability to move around independently and safely was considered one of the areas of needs. The ability to establish and maintain an awareness of one’s position in space is regarded as orientation (Berube, 1991), while the act of moving through space in efficient and safe manner is regarded as mobility (William, Richard & Bruce, 2010).

Training on orientation and mobility skills was begun in 1950 during World War II, when many U.S. soldiers who had been blinded in battle were sent to hospitals at Valley Forge and Dibble, then to a rehabilitation program for the blind in Avon, Connecticut to cater for the needs of that category of people (Sauerburger, 1997). Accordingly, studies in orientation and mobility were based upon clinical experience and theory borrowed from other disciplines. Gradually, orientation and mobility specialists began documenting their experiences, conducting research, and submitting articles to peer reviewed journals. In 1976, the field of orientation
and mobility took a step forward when the American Foundation for the Blind published the first textbook that documented the various non-visual techniques that make up orientation and mobility training (Boone & Wiener, 2004). The aim was to burst trainers to train persons with visual impairment some skills that would help in reducing the level of dependency and improve quality of life among children and adults with visual impairment in the world which was supported by various declarations, conventions and other legislations in most of the continents.

Heckmann (2006) affirms that social integration stands for the inclusion of new individual actors in a system, for the creation of mutual relationships among actors and for their attitudes to the social system as a whole. New actors in this study refer to adults with visual impairment who need to be integrated among their sighted peers in all aspects of life and participate toward nation building. Categorically, International Classification of Functioning, Disability and Health (ICF) states that participation involved: **Domestic life**, which comprises light household activities (e.g. doing the dishes, dusting, ironing, and cooking), heavy household activities (e.g. window cleaning, vacuuming, and mopping), assisting others (i.e. informal assistance of others outside the individual’s own home), and shopping (alone or with someone else). **Interpersonal interactions and relationships** which was defined as socializing, defined as meeting relatives, friends, or neighbors in person, including contact by telephone or e-mail. **Major life areas** which comprises paid work and voluntary work and the **community, social and civic life** which comprised involvement in clubs or associations in hobby activities going out to recreational places for entertainment (e.g. nature
reserve, forest, public garden, recreation area; cultural places (e.g. theatre, cinema, museum) and public places (e.g. café or restaurant; going on holidays, involvement in sports activities and in religious activities. (Cite from website or Alma 2012). The above factors could be summarized as self-esteem, self-reliance, community participation and economic participation which were the objectives of this study.

In United States, Johnson (2010) conducted a study entitled “Social Accessibility for Students with Visual-Impairments: The finding shows that women noted the challenge of socializing at campus events. The researcher suggests that a pre-college transition program where students can practice identifying, navigating to, and participating in social events may prove to be useful. Orientation and mobility training may be one of the programs that will help people with visual impairment to practice identifying, navigating to, and participating in social events in schools.

In Netherlands a study conducted by Alma (2012) entitled “Participation of the Visually Impaired Elderly: Determinants and Intervention” provided a valuable insight. The result of the comparison with reference data of the elderly showed that visually impaired elderly persons participated less in heavy household activities, recreational activities and sports activities. No differences were found for the interpersonal interactions and relationships domain. Anderson (2010) conducted a study on “Orientation and Mobility, Reading, And Math: Analysis of Data for Children with Visual Impairments” From the Special Education Elementary Longitudinal Study. The studies suggest that functional and academic outcomes for students with visual impairment are related to educational programs that provide
instruction in both the vision-specific expanded core and the general core curriculum. In Australia, Soong, Grace, Lovie-Kitchin; Jane; Brown and Brian (2000) conducted a study titled “Does Mobility Performance of Visually Impaired Adults Improved Immediately after Orientation and Mobility Training?” The result indicates that for the group of persons with visual impairment there was no improvement in mobility performance immediately after orientation and mobility training as compared to untrained control group. Dodgson (2013) investigated the professional practice of the rehabilitation worker in delivering Orientation and Mobility (O&M) training to older visually impaired people. Analysis of the findings suggested that the prevocational training of the rehabilitation worker equipped them with techniques that in the majority of cases required substantial adaptation to meet the needs of their predominant client group (older people). Kohal, Tafreshi and Aghasi (2015) conducted a study entitled “The Influence of the Olfaction, Audition and Tactile Senses in Mobility and Orientation of Blinds”. Results showed that the close relationship between the senses, and according to the null hypothesis, based on senses role from the blind's opinion, audition sense has a highest rating and tactile sense has a lowest rating in mobility and orientation of blinds.

In African countries, Kenya for example, coordinated effort to train individuals with blindness in Orientation and mobility was established in 1940s during the World War II. The milestone dated back to 1974, when a private international organization from West Germany (Christoffel Blindenmission) sponsored the first workshop to train a group of teachers in Kenya’s schools for the visually impaired in several subjects including orientation and mobility. Between 1978 and 1979,
another attempt was made by a private British agency, the Royal Commonwealth Society for the Blind (RCSB). The next phase occurred in 1982 when the Ministry of Education granted a work permit to a Christoffel Blindenmission mobility teacher Inge Danielcek, from Switzerland was assigned to St.Lucy's School for the visually impaired in Egoji-Meru, where she taught mobility until 1985 (Milimu, 2008).

Namibia country, Human (2010) investigated the Social Inclusion of Learners with Visual Impairment in a Mainstream Secondary School. The result found that the learners with disabilities and the able-bodied learners do not truly mix, however, the learners with disabilities are content in the mainstream school and they prefer it. The mainstream secondary school offers them more opportunities, freedom and prepares them for their future. Barriers like bullying are present at the school, but the learners with visual impairment don’t see this as their biggest threat. Social interaction between learners with visual impairment and able-bodied learners is very scarce. The learners with visual impairment stay together and the able-bodied learners stay together. In concluding the views of the participants in this research were that prejudice did not play such a big role in the school community. According to the able-bodied learners, they were prejudiced at first, but after getting to know the learners with visual impairment, they realized that it was a lack of knowledge and awareness that kept inclusion un receptive. Milimu (2008) conducts a study on “Factors Hindering Teaching of Orientation and Mobility to Students who are Visually Impaired in Thika Primary School for the Visually Impaired”. From the research, it was confirmed that the teaching of orientation and
mobility was not effective in the school for the visually impaired due to shortage of instructors and enough mobility cane. The researcher recommended that there was need for the students who are visually impaired to be taught skills on orientation and mobility before leaving primary education. Niyisabwa (2016) conduct a study entitled “Strategies For Enhancing Access And Retention Of Learners With Visual Impairments In Universal Primary Education Schools In South Western Uganda Region” She concluded that most of the required facilities to help LVI access learning were missing in regular UPE schools. The overall strategies for enhancing access and retention of LVI were generally lacking in regular UPE schools. The study recommended that government should guarantee good quality education to LVI in regular UPE schools by providing human and financial resources as a way to reinforce the UPE policy which gave priority to children with disabilities to access regular UPE schools.

In Uganda, Strømsø (2008) determined “Places of Participation: The Lived Experience of Persons with Disabilities in Kampala, Uganda. The researcher explores the commonalities and differences of the lived experience of persons with disabilities in Kampala. The result shows that the barriers and opportunities identified were of political, socio-cultural and socio-economic, and physical character. However, lack of implementation of various laws and policies, and also lack of information of the opportunities available to the PWDs, creates further barriers to the inclusion of PWDs in the mainstream society. Negative attitudes toward PWDs influence all areas of the society, implying barriers to participation
of socio-cultural character. The physical and built-up environment of Kampala represents physical barriers for the mobility of PWDs.

In Nigeria, Orientation and Mobility Training started as far back as 1953 with the coming of Missionaries and other voluntarily agencies such as Sudan United Mission, Roman Catholic Mission and Sudan Interior Mission, thereby establishing School for the Blind in Plateau state and Pacelli School for the Blind Centre Oshodi in Lagos and Blind School Eye Unit in Sudan, Interior Eye Hospital (E.C.W.A.) was established in Kano in 1944 to treat Blinded veterans of the Second World War (Jatau, Uzor & Lere, 2001). The Federal Government of Nigeria (FGN) in association with the United Nations Development Programme (UNDP) established six rehabilitation centres at Enugu, Kano, Kaduna, Oyo, Lagos and Sokoto in 1961. The services were targeted at reducing or removing the Handicapping effects of disabilities and thus facilitating the integration of disabled into the society and their fullest participation in the gainful and social activities of his able bodies peers. Many more rehabilitation centres each were established in all states of Nigeria after the civil war in 1974 under the Ministry of Social Welfare and Development. The then Head of State General Yakubu Gawon in a nationwide broadcast on October 1st 1974 promised to cater for the victims of the war and to reduce dependency especially through effective orientation and mobility training for persons with visual impairment (Ozoji, 2005).

Ofuani, (2011) portrays that most of the PWDs in Nigeria continually face barriers to their participation in society and are often marginalized. They are often afforded little or no opportunities to express themselves and to contribute to their
development or that of their families, communities and nation. More often than not, they are regarded as people to be pitied rather than as people who can contribute to the development of Nigeria. As such, they face stigma, discrimination and lack access to opportunities guaranteed by law, such as education, rehabilitation, employment, and the like.

Aliyu (2014) conducted a study entitled “Effects of Orientation and Mobility Training on the Locomotors Behavior of Students with Visual Impairment at Tudun-Maliki Special Education School Kano”. The result shows that orientation and mobility is very essential for persons with vision problem if he is to live an independent life. The researcher recommended that the mobility specialists and special educationists should join forces in facilitating innovative methods and developing new approaches to learning in mobility.

1.3 Statement of the Problem

Within contemporary Nigerian society, there is little appreciation that disability is fundamentally an issue inexorably link to and rooted in human rights. The common perception, held by policy-makers and the public at large, is that people with disability and disability issues are viewed in terms of charity and welfare. Consequently, this viewpoint is a significant, entrenched factor that seriously militates against the social inclusion of people with disability within the country. These situations compound the level of social exclusion that they experience. In Kano State of Nigeria, integration of persons with visual impairment has been deteriorating and continues to become worse indicating a need for intervention.
Persons with disabilities, especially adults with visual impairment are perceived as dependent, isolated from participation in community services and as having poor self-esteem and limited mobility and living skills resulting into their continuous begging on the streets. In this context, an investigation of strategies to facilitate their social integration is essential, hence the justification for the present study.

1.4 Purpose of the Study
The purpose of the study was to investigate the Influence of Orientation and Mobility Training on Social Integration of adults with visual impairment in Kano state, Nigeria.

1.5 Objectives of the Study
Four objectives were formulated to achieve the purpose of the study as stated below:

1. To investigate the influence of orientation and mobility training on self-esteem of adults with visual impairment in Kano state, Nigeria;

2. To describe the influence of orientation and mobility training on self-reliance of adults with visual impairment in Kano state, Nigeria;

3. To investigate the influence of orientation and mobility training on community participation of adults with visual impairment in Kano state, Nigeria;

4. To determine the influence of orientation and mobility training on the economic participation of adults with visual impairment in Kano state, Nigeria.
1.6 Research Questions

1. To what extent does orientation and mobility training influence self-esteem of adults with visual impairment?

2. To what extent does orientation and mobility training influence self-reliance of adults with visual impairment?

3. What is the influence of orientation and mobility training on community participation of adults with visual impairment?

4. What is the influence of orientation and mobility training on economic participation of adults with visual impairment?

1.7 Significance of the Study

The findings of this study would be used to serve as a good advocacy material for propagating the essence and needs for orientation and mobility training among persons with visual impairments right from the early age. The existing education policies would be improved considering the findings of the study there by co-opting orientation and mobility services in school curriculum for training persons with visual impairments in a formal way. The results of this study would also encourage the society to fully accept those with visual impairment and integrate them in all community activities. It is the hope of the researcher that the results of this study would promote collaborative teamwork in service provision especially in the area of orientation and mobility training. The study also hopes to serve as a source for literature for further research activities in the area of orientation and mobility training for adults with visual impairments, not only at Kano state, but elsewhere in Nigeria.
1.8 Limitations to the study

This study was limited to three research instruments. However, the reliability of these instruments was not above question due to the nature of the instrument used which included: questionnaires, interviews and focused group discussion. There was an adequate sample size and sufficient time for respondents to express themselves during the interview.

1.9 Delimitations

This research work intended to investigate the influence of orientation and mobility training on integration of adults with visual impairment. The study was conducted in Kano State at some selected local governments. Kano State was selected due to its significant number of persons with Visual Impairment and numbers of rehabilitation centers. The study did not investigate social integration of other categories of disabilities and all persons with visual impairment below the age of 25 or above the age of 45.

1.10 Assumptions of the Study

The following assumptions were considered in this study:

1- Formal training on orientation and mobility were provided to the adults with visual impairment.

2- Persons with visual impairment are engaged in various types of economic activities.

3- Adults with visual impairment are socially integrated.
1.11 Theoretical Framework

The researcher employed Havighurst’s Developmental Task Theory (1972) to guide the study and to explain the rational of acquiring orientation and mobility skill for adults with visual impairment.

Robert Havighurst considered Developmental Tasks of Adolescence to include the following: Achieving new and more mature relations with age-mates of both sexes; Achieving a masculine or feminine social role; Accepting one's physique and using the body effectively; Achieving emotional independence of parents and other adults; Preparing for an economic career; Acquiring a set of values and an ethical system as a guide to behavior; Developing an ideology; Managing a home; Taking on civic responsibility. One of the tasks for adults with visual impairment is managing orientation and mobility that may help them to successfully achieve the entire tasks as mentioned by Havighurst. He asserts that none of the schools can ignore the developmental tasks. Research had shown that those tasks are closely interrelated and that difficulty in one task lead to difficulty in another. For instance, failure in social interaction of persons with visual impairment may be due to lack of other developmental tasks like orientation and mobility training. According to the present study acquiring skill of orientation and mobility will be of significant to individuals with visual impairment.

Havighurst further emphasized that learning is basic and that it continues throughout life span, occurring in stages, where the individual moves from one stage to the next by means of successful resolution of problems or performance of developmental tasks (such as learning orientation and mobility skills). These tasks
are those that are typically encountered by most people in the culture where the individual belongs. If the person successfully accomplishes and masters the developmental task, he feels pride and satisfaction, and consequently earns his community or society’s approval. This success provides a sound foundation which allows the individual to accomplish tasks to be encountered at later stages. Conversely, if the individual is not successful at accomplishing a task, he is unhappy and is not accorded the desired approval by society, resulting in the subsequent experience of difficulty when faced with succeeding developmental tasks. This theory is applicable and relevant to the present study in the sense that it presents the individual as an active learner who continually interacts with a similarly active social environment, (the Psychology Notes Headquarter 2016). Concerted efforts need to be made in providing successful instructions in orientation and mobility to persons with visual impairment.
1.12 Conceptual Framework

Relationship between independent variable (Orientation and Mobility Training) and its influence on the dependent variable (Social integration of Adults with Visual Impairment)

**Independent variable**
- Orientation and Mobility Training

**Dependent variable**
- Social Integration of Youth and Adults with Visual Impairment
  - Self-esteem
    - Gaining self-confidence
  - Self-reliance
    - Independent travel
  - Community participation
    - Working with community
    - Attaining social interaction
  - Economic participation
    - Access to place of work

**Intervening variable**
- Fear of unknown
- Inability to monitor changes in the environment
- The family's attitude, feelings and beliefs

![Diagram](image)

Fig 1: Designed by the researcher (2018)
Looking at the above table, the independent variable (Orientation and Mobility Training) affects the dependent variable (Social integration of adults with visual impairment) through self-esteem; self-reliance; community participation and economic participation. The diagram also indicates other extraneous variables that can affect social integration of adults with visual impairment such as; Fear of unknown, Inability to monitor changes in the environment, the family’s attitude, feelings and beliefs etc.

1.13 Operational Definition of Key Terms

**Community Participation** means being able to have an input into structures in which decisions are made. In such structures the communities' views are generally sought and their representatives can participate in taking decisions (Craig, 1995).

**Economic participation** refers to participation in paid employment self-employment and enterprise development employment.

**Impairment** refers to the partial or complete loss of the function of the body part, organ or system as a result of pathological causes or injury and may be either temporary or permanent (Keane, 2003).

**Orientation and Mobility** refers to the skills and technique required by persons with visual impairment for independent travel.

**Participation:** According to the ICF, participation is defined as “involvement in life situations”. (Cite from website or Alma 2012)
Rehabilitation: This is a process through which individuals with disabilities come to gain a new understanding of themselves and their handicaps, the new skills or their new state, and new control of their emotions.

Social Integration: social acceptance that enables persons with disabilities to access basic human needs such as companionship, social relationships, self-reliance, Self-esteem and economic well-being.

Special education: refers to designed education to suit the special needs children identified with learning problems and difficulties due to handicapping conditions (Obani, 2004).

Self-esteem: refers to a personality variable that represents the way people generally feel about themselves (Brown & Marshall 2006).

Self-reliance: individual’s ability to help himself in mobility and activities of daily living

Visual impairment: Any clinically diagnosable deviation in structure or functioning of the tissues or parts of the eye that result in a reduction of visual acuity and restriction in the field of vision to an extent of causing blindness or low vision.
CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Introduction
This chapter presents related literature and is organized according to the study objectives. The chapter covers the following areas: influence of orientation and mobility training on self-esteem of adults with visual impairment, influence of orientation and mobility training on the self-reliance of adults with visual impairment; influence of orientation and mobility training on community participation of adults with visual impairment and influence of orientation and mobility training on the economic participation of adults with visual impairment.

2.2 Influence of Orientation and Mobility Training on the Self-esteem of Adults with Visual Impairment

Persons with visual impairment should be given opportunities to understand their environment, discover their potential, their rights and take control of their destiny (Hartley 2000). According to American Foundation for the Blind (AFB) (2007), well-developed social interactions skills are critical for building relationships, developing positive self-esteem, and finally for acceptance into the society. Tuttle and Tuttle (1996) state that person’s expression of sympathy or curiosity toward persons with special needs make them to feel hopeless, desperate, and lack self-esteem, have self-pity and inability to cope, resulting in helplessness and dependency.

Ardail (2005) observed that self-esteem is how people feel and like much about them. Person who perceives him- or herself as competent in domains in which he
or she aspires to excel will have positive self-esteem. The term self-esteem may reflect a person’s overall emotional evaluation of his or her worth and a person’s sense of pride and is closely associated with his or her self-consciousness and psychological well-being. A person’s self-esteem may be dependent upon his or her psychological adjustment, the quality of life, and adaptive behavior, relationships with friends, motivation, school performance, and success in life (Augestad, 2017).

In the UK, the study by (Bowen, 2010) entitled “Visual Impairment and Self-esteem: What Makes a Difference?” The purpose of the investigation was assessing self-esteem levels amongst a sample group of 60 children with visual impairment. Four children, whose self-esteem were measured as low or very low, at the outset of the study, the participants were provided with educational programs in school designed to enhance self-esteem, and their self-esteem were subsequently re-tested on two further occasions. The strategic interventions trial were ‘circle time’, ‘circle of friends’ and individual mentoring. The interventions were trial singly and in combination. There was no conclusive evidence that one strategic intervention, or combination of interventions, was more successful at enhancing self-esteem than the other. However, three out of the four pupils had achieved higher scores for self-esteem by the second assessment; all of them had increased self-esteem levels by the third assessment six months later; and their schools openly commented about the benefits of the interventions for the young people concerned.
The researcher provides educational programs to find out its effects on enhancing self-esteem among persons with visual impairment while this research was designed to determine the influence of orientation and mobility training on social integration of adults with visual impairment. This defined precisely the relationship and differences of the two studies.

In Germany, Konstantinos, Lefkothea, Doxa, Athanasios, and Eleni (2017) investigated the possible differences in the self-esteem between the two groups of the participants – adults with visual impairments and sighted adults and to examine whether the self-esteem of people with visual impairments is related to their individual characteristics, such as gender, age, age at the onset of visual impairment, degree of vision loss, ability to travel independently, educational level, economic status and level of employment. The participants were 150 sighted adults and 102 adults with visual impairments. The results showed that sighted adults demonstrate higher self-esteem than adults with visual impairments. Moreover, a multiple regression analysis was implemented to examine the degree in which the individual differences of the participants with visual impairments are related to their self-esteem. Two questionnaires: Rosenberg Self-Esteem Scale and an informal questionnaire for the recording of the demographic/personal data of the participants with visual impairments were used for data collection. The implementation of T-test, revealed that there is statistically significant differences ($t= -2.249$, df= 250, $p<0.05$) amongst the sighted participants and participants with visual impairments. However, the application of ANOVA (LSD post-hoc test) revealed that only the adults with low vision show a lower score on the self-esteem
scale (p<0.05) compared with the sighted adults. Moreover, there are no statistically significant differences amongst the blind or severely visually impaired participants and participants with low vision as well as sighted participants. In addition, a multiple regression analysis implemented, using the variables visual status, gender, age, age at loss of sight, ability of independent movement, educational level and employment status to predict self-esteem. The analysis yielded an adjusted $R^2$ of 0.118 ($F$=2.588, $p<0.05$). Significant individual predictors of self-esteem were the age at loss of sight ($\beta$= -0.201, $p<0.05$) and the educational level ($\beta$= 0.255, $p<0.05$). Vision status, gender, age, ability of independent movement and employment status were not significant individual predictors of self-esteem. The findings of this study reveal statistically significant differences with regards to the self-esteem amongst sighted adults and adults with low vision. Adults with low vision have less self-esteem when compared to sighted adults. The self-esteem of the participants with low vision is lower than that displayed by blind or severely visually impaired participants.

The present study was in line with the above study because self-esteem was the major variable of the two studies. The populations of the both studies were persons with visual impairment. However, the current study focused on influence of orientation and mobility on self-esteem while the former determined the possible differences in the self-esteem between the two groups of the participants – adults with visual impairments and sighted adults. This study was a descriptive study and the other researcher conducted a comparative study. Moreover orientation and mobility training was not involved in the former study as a variable that may improve self-esteem among the adults with visual impairment. This was the gap
which captured the attention of the researcher to determine the influence of orientation and mobility training on self-esteem of adults with visual impairment.

Nair and Anuradha (2014) came up with a study titled “Self-Esteem among Physically Disabled and Visually Disabled Late Adolescents” in Bangalore, India. The study highlighted the self-esteem of the late adolescent children with visual and physical impairment. A sample of the study includes 120 individuals, 60 persons with visual impairment (30 female and 30 male) and 60 physically disabled (30 female and 30 male) of 15 to 18 years. Rosenberg self-esteem scale was used in the study. Simple random sampling has been applied for data collection. The result of the study indicates that there is significant difference among the physically disabled and visually disabled late adolescents in self-esteem. The result also indicates that no significant difference was observed in gender difference of self-esteem in physically disabled and visually disabled late adolescents. Using Rosenberg self-esteem scale to find out the level of Self-esteem among physically disabled and visually disabled late adolescents, so also persons with visual impairment were among the respondents. These serve as the major points that relate to this research. Nevertheless the study is quite different from the current study as the researcher did not involve aspect of orientation and mobility as a variable which was the major area in this study.

A systematic review study was conducted by Augestad, (2017) on Self-concept and self-esteem among children and young adults with visual impairment. The purpose of the study was to summarize current scientific knowledge relating to
self-concept and self-esteem among children and young adolescents with visual impairment. The review was conducted of articles published between 1998 and 2016. A total of 26 publications, representing 15 countries, met the inclusion criteria, and 24 of the studies had used a cross-sectional design. Some studies found that the age and degree of vision loss influenced perceived self esteem. In general, independence in mobility, parenting style, social support, and friendship was reported as important for children with VI to enhance their self-concept and self-esteem. To be able to provide opportunities for a successful development and good self-evaluation, we need more knowledge and further longitudinal observation studies and randomized clinical trials with high quality to increase the possibilities to draw conclusions about cause and effect. The study differ from the current study owing to the design of the study which was desk/review systematic study, however is related to this study because the purpose was to sum up what scholars discovered about self-concept and self-esteem which are part and parcel of this study. Additionally, the population of the study were the same with the present study i.e. persons with visual impairment.

Bhagat (2017) studied the Relationship between Self-Esteem and Academic Achievement of Secondary school students. The study was conducted on a sample of 391 secondary school students studying in government and private schools of Jammu district. The collected data was analyzed with the help of Pearson product moment correlation. The results of the study showed that positive and significant correlation was found between positive self-esteem and academic achievement of secondary school students.
This study is relevant to the current study because both researchers investigated on positive/negative self-esteem on the respondents. However, the current study differs from the above study. The former was a correlational study which focused on academic achievement of normal and regular students while the latter was a descriptive study and focused on social integration of adults with visual impairment. At the same time the locales were not the same.

2.3 Influence of Orientation and Mobility Training on Self-reliance of Adults with Visual Impairment

Atlantic Province Special Education Authority (2003) observed that O&M training prepare students who are blind or VI to know where they are in relation to their environment and with confidence to move independently and safely. Sandra (2000) asserts that the development of independent life skills is important for full integration in society, employment, and independent living. Children with VI will not be assumed incidentally to acquire independent life skills due to their lack of vision, but rather specialized assessment and instruction must be provided.

Wahl, Oswald & Zinprich (1998) observed that young persons with visual impairment were at real risk of living lonely and unproductive lives, if they did not develop skills across all areas of life during adolescence and childhood. Such areas include activities of daily living, orientation and mobility and social interaction. Moreover, Ferrell (1997) said that children with visual impairment acquire knowledge differently, due to the fact that they cannot depend on their vision to
send information. The information they obtain via other senses is fragmented, inconsistent and passive.

Human (2010) states that one of the contributing factors for social inclusion for the learners with visual impairment is to be able to cope on their own and not depend on the other learners so much. Students who are blind or visually impaired face many obstacles in achieving academic success and having healthy social interactions that lead to successful, productive adulthood (Zwald, 2008).

The imperative aspect to understand about orientation and mobility is that it touches all segments of quality life of individual with visual impairment, beginning from ability to move and awareness of the present position to daily living activities which include knowing oneself, participating in the society and economic participation.

In UK, another report submitted by Hewett, Douglas, & Keil (2015) which find out the level of Wellbeing of young people with visual Impairments. The report presents findings from the research project: “A longitudinal study of blind and partially sighted young people in the UK”. The project has surveyed a sample of young people about their circumstances and views since 2010 when they were aged between 14 and 16 years old. The report draws upon interviews with 61 young people. The interviews took place in autumn 2014 / spring 2015 when the young people were aged between 19 and 21 years old. The data presented here relates to these young people’s views of their own wellbeing (including responses
to some standardized measures of wellbeing or well-related constructs) and friendships. This includes: Wellbeing: Short Warwick-Edinburgh Mental Wellbeing Scale, Wellbeing: Locus of Control, Wellbeing: Self-Image Profile for Adults, Friendship networks, Friendships with others with visual impairments, Peer Support from others with visual impairments, Anticipated benefits of peer support from others with visual impairments. The Short Warwick-Edinburgh Mental Wellbeing Scale shows the participants as a group to have an average psychological wellbeing, in line with national norms. Similarly, the responses to the questions on locus of control were very comparable to those given by participants in the LSYPE study, and a Self-Image Profile showed the participants Self-Image Profiles and Self-Esteem scores to be typical. It is interesting to note that when reviewing the responses to the LSYPE locus of control questions, the one notable difference was that large proportion of participants who responded that they ‘strongly agree’ that ‘if you work hard at something, you’ll usually succeed’. Additionally, when comparing rankings of characteristics within the Self-Image Profile, the participants appear to identify themselves more strongly as ‘hardworking’ than those from the comparator group. We also note that they were less likely to view themselves as ‘active’ and ‘sociable’ (which is explored further in the friendship questions).

A qualitative study was designed by (Fernández, 2004) to investigate Puerto Rican Family involvement in the orientation and mobility training of their children with visual impairments. The study examined various aspects of parental participation, namely how Puerto Rican families of children with visual impairments define
family involvement, and how they get involved in the orientation and mobility training of their children, how they encourage the use of orientation and mobility techniques in their children, and what meaning they make of their experiences. In addition, the research examined the teachers’ perception of the parents’ involvement in the orientation and mobility training of their children. Families of six children with visual impairment whose primary reading mode is Braille and their orientation and mobility teachers were interviewed in Spanish. Six narratives were presented to illustrate the findings of the interviews and observations of the families and teachers. Study findings show that although parents are supportive and interested in their children’s education, special education professionals and the school system do not promote parental involvement. Level of Wellbeing of young people with visual impairments is almost the same as level of self-esteem, self-reliance, community participation and level of economic development. So also the research examined the teachers’ perception of the parents’ involvement in the orientation and mobility training of their children. Therefore the literature is related to the current study. However the study was a longitudinal study. Instruments were completely different from those used in this study. The researcher were not able to examine the influence of orientation and mobility training on social integration of adult with visual impairment which indicate the need for further study.

In America, the article written by Stuart, Lieberman and Hand (2006) focused on Physical Activity among Children Who are Visually Impaired and Their Parents. The research examined the relationship between parents' and children's beliefs
about the children's physical activity behaviors. Specifically, it examined the value of, and expectations regarding, physical activity by children who are visually impaired. The survey enquired 50 participants which included 25 children (14 boys and 11 girls) aged 10-12 who attended a one-week summer sports camp for children with visual impairment and the primary parent of each of child. All the children were enrolled in inclusive general physical education classes during the school year. Children are legally blind. Likert-scale response items, parent value inventory, subjective task value inventory, child value inventory, expectations for success inventory and barriers inventory were used as instruments for data collection. One-way analyses of variance (ANOVAs) were conducted during data analysis. In nondisabled populations, consistent relationships have been found between parents' beliefs and their children's beliefs about achievement behaviors. The results indicate a relationship between parents' beliefs and beliefs by their children with visual impairment. The results indicate that these children perceived messages from their parents about the value of physical activity, as well as what their parents expected that the children could accomplish in the physical domain. Specifically, there was a positive relationship between children's expectations for success and parents' expectations for success.

The similarities exist between the above study and the happening study. Both studies enquired from the persons with visual impairment, used similar instrument for enquiry (Likert-scale response items) and physical activities were also among the variable of the two studies (activities of daily living). Yet the study had a huge
gap in determining the influence of orientation and mobility on self-reliance which was the purpose of this study.

In Norway, the study reported by Mikiashvili (2011) entitled “Strategies for Solving Tasks by Blind” The thesis is based on a research, which was held in Georgia in the autumn 2010. The thesis discusses various strategies used by blind adults to solve daily tasks. The study’s main focuses are morning routine and personal hygiene. Three groups of blind adults and their use of mental images, thus strategies for solving daily tasks were compared to one another. The study is qualitative. Purposeful sampling procedure was chosen for the study. However, the study had 7 respondents, out of which, 4 were male and 3 were female. The data were gathered qualitatively, using semi structured interviews and analyzed qualitatively using method of cross analysis. The results show that congenitally blind persons use haptic mental imagery and their strategies are based on the haptic images. Whereas, newly blind persons use visual images and combine them with spatial images. However, adventitiously blind persons seem to be dealing with daily tasks by using both, haptic and spatial images in addition to the visual remembrance of objects and environment. Moreover, ones having had training in particular activities have better strategies for solving activities of daily living, than those without any training.

The above mentioned study determines some strategies for solving daily tasks such as morning routine and personal hygiene. Persons with visual impairment were among the respondents. These served as the clear similarity among the two studies.
In contrast, the study was a comparative study, a qualitative design with semi structured interviews as the instrument of the study. Moreover, the data were analyzed qualitatively. The study did not involve orientation and mobility training as a strategy of identifying daily living activities which serves as a gap that the researcher intended to bridge.

In Taiwan, the study by Chen (2012) investigated the impact of a 10-week baseball training camp on visually impaired players. Sixteen blind and visually impaired subjects were evenly divided into an experimental group and a control group. The experimental group participated in baseball training three times a week for 1 h 14 min, while the control group did not participate in training. Test data were analyzed through analysis of variance with a paired sample t-test. Following the course of baseball training, the experimental group achieved a statistically significant improvement in orientation and mobility including: 1) a 33 foot unassisted fitness walking test; 2) a 33 foot walking test while holding a cane; 3) a 45 foot road map test, in which participants follow a predetermined course involving turns and orientation according to a sound beacon; 4) a test measuring the success rate of hitting a pitched ball. Following training, the time the experimental group required to complete the walking tasks and the success rate in hitting the ball both showed a statistically significant improvement (p<0.05). These findings strongly indicate how such training has a direct beneficial outcome towards orientation and mobility development for the visually impaired, and recommend further research into the effects of blind baseball training. The study was an experimental research that the researcher from Taiwan conducted while the
researcher from Nigeria conducted a survey research. The dependent variable was 10-week baseball training; on the other hand the dependent variable was orientation and mobility. The population which was included in the both study were persons with visual impairment. Therefore, the literature is related to the study and the gap was that the researcher did not determine the influence of orientation and mobility training on social integration of adults with visual impairment which was the focus of this study.

In Arizona another study done by Zwald (2008) entitled “Perceptions of Teachers of Students with Visual Impairments on the Importance of Physical Activity and its Effect on their Students' Academic Success and Social Interactions” the researcher pointed out that lack of physical activity and issues of weight can compromise the ability of the individual who is blind or visually impaired to maneuver through the environment safely and efficiently. The purpose of the study was to examine the perceptions of itinerant teachers of students with visual impairments about the importance of physical activity for their students with visual impairments and its effect on academic success and social relationship. Data were gathered from 175 teachers of students with visual impairments concerning their perceptions regarding the importance of physical activity and obesity and their relationship with academic success and social relationships. The teachers indicated that physical activity for their students is very important. They described a multitude of barriers that account for a lack of involvement in the general physical education classes in which they were enrolled. Teachers reported on their own personal physical activity levels in relationship to the importance they placed on
their students’ need to be active. The teachers did not indicate that being overweight was a particular issue with their visually impaired students, but they acknowledged that being overweight and a lack of physical activity create additional barriers for academic success and appropriate social relationships. The teachers also reported that the same barriers in physical education classes and access to recreation activities in the community that have been listed in past research studies were still in existence, and these barriers were also part of their dilemma in creating positive physical activity experiences for their students who are visually impaired. This study validated the necessity of further research to find the effective intervention strategies and programs to increase physical activity of students with visual impairments. The scholar from Arizona tried to see whether physical activities influence academic performance and social interaction among individual with visual impairment, he further suggested the necessity of further research to find the effective intervention strategies and programs to increase physical activity of students with visual impairments. The researcher was unable to consider orientation and mobility training as a program to enhance social integration as well as physical activities. It is a clear gap that needed to be filled. That was what prompted the researcher to embark on this study which might serve as a solution to the problem mentioned above.

A qualitative study entitled “Experience of Multisensory Environments in Public Space among People with Visual Impairment” prepared by Jenkins, Yuen and Vogtle (2015) explored the role of sensory characteristics embedded in the built environment and whether they support or hinder people with visual impairment in
their use of public spaces. The researchers only recruited people with visual impairment who have access to technology. It was an online survey, 451 direct invitations to participate were provided. Written responses of the survey questions from 48 respondents with visual impairment were analyzed. Three main themes: Barriers, Supporters, and Context-Dependence emerged from the respondents’ experience of multisensory characteristics within the built environment. The four subthemes subsumed in Barriers were: (1) Population specific design, (2) Extreme sensory backgrounds, (3) Uneven ground surfaces and objects, and (4) Inconsistent lighting. For Supporters, respondents provided specific examples of various sensory characteristics in built environments, including audible cues and echoes, smells, tactile quality of the ground surface, and temperature. Findings provide occupational therapy practitioners an in-depth understanding of the transactional relationship between embedded sensory characteristics in the built environment, occupations, and people with visual impairment in order to make appropriate modifications or removal of barriers that affect occupational performance and engagement. Suggestions for occupational therapists as well as architects, designers, planners, policy makers/legislators related to functional sensory cues in the design of built environments were provided to increase accessibility in the use of public spaces by people with visual impairment. Researchers recommended that further studies should be done to validate the findings by including people with visual impairment who do not use technology. The similarity between this study and the study by Jenkins, Yuen and Vogtle (2015) was employing similar participants who are persons with visual impairment by both researchers. The study differs from this study, firstly, the design of the two studies are different;
Jenkins used qualitative study while the present study employed mixed method design. And it was an online survey but the present study conducted face to face administration of the instruments. Besides, the researcher explored the role of sensory characteristics embedded in the built environment and whether they support or hinder people with visual impairment in their use of public spaces. While current study explored the influence of orientation and mobility training on self-reliance of adults with visual impairment which was the gap attached to the above study.

In South Africa, the study presented by Seesurrun (2015) which entitled “The Development of a Self-Help Skills Education Programme for a Group of Visually Impaired Children” Highlights the necessity for a curriculum that can be specifically designed to meet the needs of visually impaired children. The objectives of the study were; to conduct an evaluation to determine the visually impaired children’s educational goals; to establish the key orientation, mobility and independence skills required by children and young people at the School who are visually impaired; to identify ways in which the skills development programme can be implemented within, and beyond, the School’s curriculum; to propose a set of self-help skills training processes that can form part of the current curriculum to enable visually impaired children at the School for the Blind to become more independent. A triangulation research methodology constituting both qualitative and quantitative research was used. The participants consisted of 12 visually impaired children, the Head of the School, three NGO staff members and six teachers. Thematic analysis led to themes and categories emerging in the arena of
self-help skills development. Independence and self-help skills were the main themes determined through data analysis. The secondary themes which emerged from the main ones consisted of social skills, travel skills, daily living skills and education. Sub-themes derived from social skills were cultural differences and its associated feeling of discrimination. Sub-themes under travel skills included independent travel and assistance. Finally, education comprised sub-themes such as a special programme on self-help skills and training for teachers. The above analysis stressed the need to set up a committee in order to start developing a curriculum in the arena of self-help skills. The study was on developing self-help skills for a group of visually impaired children. The researcher proposed a curriculum that can be designed to meet the needs of persons with visual impairment while, the current research explore strategies that can be used to improve social integration of adults with visual impairment. However, the study is related to this study as the researcher focused on improving the self-help skills among persons with visual impairment and employed triangulation research methodology which were the same with current study.

The study conducted by Straw, Harley and Zimmerman (1991) determined the pretest and post-test mobility scores for indoor mobility and the inter-rater reliability of the assessment instrument in their attempted study to develop an assessment instrument and training curriculum in orientation and mobility for older visually impaired adults. The result of the study found a significant improvement in mobility performance immediately after orientation and mobility training. The poor physical health of some of their respondents (aged 58 years and above)
caused delays in the orientation and mobility training and in completing various phases of the study.

It was an experimental study as the researcher used control and experimental group to find out the significant improvement in mobility performance immediately after orientation and mobility training. In contrast, this study was a survey study design. The relationship emerged in our variables which were orientation and mobility which serve as the gap to be filled.

In Nigeria, Mahmoud (2015) explored orientation and mobility acquisition skills among students with visual impairment, the study was aimed at finding out whether mobility and orientation acquisition skills are incorporated in the curriculum of pupils with visual impairment, whether teachers do teach orientation and mobility acquisition skills to the pupils with visual impairment and find out factors militating against the utilization of orientation and mobility acquisition skills among pupils with visual impairment. Purposive sampling technique was employed in selecting twenty five respondents. The finding indicates that curriculum contents of the visual impaired children have been fully incorporated into the curriculum of the visually impaired of the school. The primary factors that militate against the teaching and learning of the orientation and mobility in the school were lack of professionals and equipment. All the visually impaired children unanimously agreed that they had never learned orientation and mobility skills in the school. Although both the studies used purposive sampling technique in selecting the respondents, the facilities for effective teaching and learning orientation and mobility skills were the purpose of the above study. Moreover,
whether teachers do teach orientation and mobility acquisition skills to the pupils with visual impairment was also part of the objectives. However, the researcher was unable to determine the influence of orientation and mobility training on social integration of persons with visual impairment. This cultivated the mind of the researcher to conduct the current study.

The following were the literatures reviewed under this objective thus; Hewett, Douglas and Keil (2015), Fernández (2004), Stuart, Lieberman and Hand (2006), Mikiashvili (2011), Chen (2012), Zwald (2008), Jenkins, Yuen and Vogtle (2015), Seesurrun (2015), Straw, Harley and Zimmerman (1991) and Mahmoud (2015). In contrast, no study investigated the influence of orientation and mobility on self-reliance. This limitation attached to the studies enabled the researcher to conduct the current study to find out the influence of orientation and mobility training on social integration of adults with visual impairment.

2.4 Influence of Orientation and Mobility Training on Community Participation of Adults with Visual Impairment

Charles Abrams in his book, “The Language of Cities: A Glossary of Terms” defines community as, “that mythical state of social wholeness in which each member has his place and in which life is regulated by cooperation rather than by competition and conflict”. It is clear that a community generally has two certain elements, that is, physical boundaries and social interests common among the people. On the other hand, a community sometimes may have one element
dominating the other, for example, a community of students or a community of artists generally need not belong to the same physical boundaries. In this case, they come together on certain ideological grounds.

The word participation can be defined as the “act of being involved in something” participation has two definitions with opposite meanings. Participation can either represent assigning certain decisive roles to the users, where they share the decision-making responsibility with the professionals. The other type of participation is where there is no shift of responsibilities between the users and professionals but instead only the opinion of the user is considered while making decisions.

Community participation means some form of involvement of people, with similar needs and goals, in decisions affecting their lives. Charles Abrams defines community participation as the theory that the local community should be given an active role in programs and improvements directly affecting it (Abrams). Involvement of persons with disability with the community helps them resolve the 'war' inside them and allows them to integrate their disabilities into a positive self-image. Moreover, this results, is in better relationships with the non-disabled world (Gill, 1997).

It is quite clear to define community participation of persons with visual impairment as an act of sharing the same milk of responsibilities and involvement
in decision-making within their local communities especially in activities that directly affect them.

Discrimination Against Persons with Disabilities, Bill 2014 sec. 32 (1) and (2, a, b and c.), mandates that disable persons shall be encouraged to fully participate in public and political life, which will effectively promote an environment in which individual with disabilities can actively participate in public affairs non-governmental organizations and associations activities and administration of political parties without discrimination. In Ghana, Persons with Disabilities Act, 2006 states clearly under the rights of persons with disabilities that “a person with disability shall not be deprived of the right to live with that person's family or the right to participate in social, political, economic, creative or recreational activities”. It also states that “a person shall not discriminate against, exploit or subject a person with disability to abusive or degrading treatment” (Republic of Ghana, 2006).

Section 13 of the 1993 Decree states that a Disabled person in Nigeria shall have the right of assistance by a person of his choice to vote; shall make polling places available and accessible to the disabled in all elections and the government shall respect and protect the civil liberty of the disabled to vote and be voted for in all elections “DAPD Bill 2014”.

Strømsø (2008) observed that. Disability may be both the cause as well as the consequence of poverty. Poor people have to a large extent limited access to health
care services which make them more vulnerable to preventable diseases that may cause impairment. PWDs are regarded to be opportunity or capability-poor. Access to education, healthcare, employment, land, and information represent barriers to participation for PWDs. These tend to be major incentives for PWDs to beg in order to gain access to income-generating activities. The Persons with Disabilities Act of 2006 focuses on the removal of discriminatory practices with regard to PWDs mobility, such as access to buildings and transport.

It is invaluable to ascertain the usefulness of the strategies use in training persons with visual impairment to enjoy their rights of participation into society. Many researchers across the world conducted studies in the field of quality life and social integration of individuals with visual impairments. Some of them can be stated as follows;

The study conducted in America by (Schur, L. & Adya, M., 2013) from School of Management and Labor Relations, Rutgers University on "Sidelined or Mainstreamed? Political Participation and Attitudes of People with Disabilities in the United States" They used three sources of data: the 2008 Current Population Survey (CPS), the 2006 General Social Survey (GSS) and the 2007 Maxwell poll. The result shows that people with disabilities are less likely than those without disabilities to vote and engage in other forms of political activity. Analysis of the CPS sample for 2008 confirms there is a substantial disability voting gap, indicating increased turnout of people with disabilities could make an important difference in elections. If the disability gap were fully closed, there would be an additional 3.0 million voters with disabilities. Researchers did not find differences
in general political attitudes or affiliations; people with disabilities tend to support a greater role for government in several areas, including health care and the economy. They also have more negative views of government performance in fighting unemployment and give lower ratings to government on responsiveness and trustworthiness, which may reflect negative messages and neglect from public officials. While they appear to have the same exposure to news as people without disabilities, they are less likely to say the Internet has affected their own political activity, perhaps reflecting a digital divide. While people with disabilities have made progress over the past several decades, their lower voter turnout and more negative views of government effectiveness and responsiveness lead them to conclude that they remain sidelined in American politics. It appears that much of this political inequality is not due to disability per se, but to economic and social inequalities associated with disability. Addressing the persistent barriers people with disabilities face and increasing their participation could make a difference in electoral outcomes and public policies, and help create a more vibrant and inclusive democracy.

The above study was limited to a political participation rather than general participation in community activities. He was able to find out that the people with disability were sideline in political participation. The researcher also confirmed a substantial disability voting gap between disabled and able-bodied in America. The researcher did not find out the influence of orientation and mobility in community or social integration of adult with visual impairment.
Lawson, (2014) described Monitoring Political Participation Rights of Blind and Partially-Sighted People in Europe: An Analysis of the European Blind Union CRPD Database, the aims of the study was to present and analyze the information relating to political participation rights contained in the European Blind Union CRPD online database. The researcher concluded that blind and partially sighted people are not legally prevented from participating in relevant organizations on an equal basis with others. The database also indicates that blind and partially sighted people have been elected into political positions and the database indicates that blind and partially sighted people are able to hold such office in all the countries apart from Serbia and possibly Russia. The study is related to the present one because it discussed the participation of blind people into the political matters which is one of the social activities that need participation of all the residence of the defined community. On the other hand, the gap that emerges was that the researcher did not discuss anything regarding orientation and mobility. This is what the current research intended to fill.

The study conducted by Lifshitz, Hen and Weisse (2007) entitled Self-concept, Adjustment to Blindness, and Quality of Friendship among Adolescents with Visual Impairments. The objectives of the study reported were to compare the personal (self-concept and adjustment to blindness) and social (quality of friendship and social-emotional adjustment as assessed by teachers) adjustment of students with visual impairments and their sighted peers and to examine differences in these measures according to the educational setting and type of disability. The researcher explores self-concept and quality of friendship of 40
adolescents with visual impairments (20 in public schools and 20 in a residential school) were compared to those of 41 sighted adolescents. The findings indicate a similar self-concept profile for sighted adolescents and adolescents with visual impairments. However, the sighted adolescents scored significantly higher on spending leisure time together and on confrontation and betrayal than did those who were visually impaired.

The literature above was quite similar to the study because the respondents of the both studies were persons with visual impairment. The differences include the design of the study. The former employed a comparative study and the later chooses survey research design. Personal and social adjustment between adolescents with visual impairment and sighted adolescents were compared. This served as a gap which made the current researcher to embark on this study to determine the influence of orientation and mobility training on social integration of Adults with visual impairment.

Another study done in the Netherlands by Alma (2012) entitled “Participation of the visually impaired elderly: determinants and intervention” The first objective of the thesis was to get insight in the degree of participation of visually impaired elderly persons and to identify determinants of this participation. A second purpose of the study is to develop a multidisciplinary group rehabilitation program which aims to enhance the level of participation of the visually impaired elderly. The effects of the multidisciplinary group rehabilitation program on participation and on psychosocial and physical functioning were studied. A cross-sectional survey study was conducted in order to assess the degree of participation and loneliness
among the visually impaired elderly and its determinants. The researchers also developed the multidisciplinary group rehabilitation program *visually Impaired elderly Persons Participating (VIPP)*. The effectiveness of this program on participation and on physical and psychosocial functioning was tested in a pilot study. The 350 visually impaired elderly persons were informed about the survey study by postal mail which was printed in a large font size. Of the sample, 264 persons met the inclusion criteria and were considered eligible for participation in the survey study. Finally, 173 visually impaired elderly persons agreed to participate (response rate 66%). The major reasons for refusal were: the interview takes too long or is perceived too tiresome, a lack of interest, health problems, and a lack of time. Data for the survey study were collected by means of telephone interviews. The results of the cross-sectional study underscore the prevalence of restrictions in participation among the visually impaired elderly. Despite these restrictions, the visually impaired elderly do participate in society. However, they participate less in society compared to peers. Perceived importance appears to be a major determinant of participation. Physical health, along with social and psychological status, also affects participation. The results showed, in addition, that the visually impaired elderly are at risk for loneliness. Other finding showed that participation in the *VIPP*-program improves physical and psychosocial functioning.

The researcher was able to get the degree of participation of visually impaired elderly persons, so also identified some determinants of this participation. Additionally, he developed a multidisciplinary group of rehabilitation program
which aims to enhance the level of participation of the visually impaired elderly. The study was related to the current study because participation of persons with visual impairment was the purpose of the two studies however the former employed only elderly participants and the later involved as the study respondents. The researcher also excluded influence of orientation and mobility training as one of the determinants and also as an intervention strategy. This was the overlapping gap in the above study.

A Report on the Observations and Recommendations Made by Voters with Disabilities in Tanzania's 2010 General Election (Comprehensive Community Based Rehabilitation in Tanzania, 2010) was conducted to assess the level of participation of people with disabilities in Tanzania’s general election which was held on 31st October 2010. The survey was carried out in three districts in Dar es Salaam region: Temeke, Ilala and Kinondoni. 100 people with disabilities were involved with four types of disabilities represented. These were: physical impairment, visual impairment, hearing impairment and albinism. All respondents were registered as voters and voted at polling stations that were located in various constituencies within Dar es Salaam. The survey was mainly motivated by inadequate participation of people with disabilities in previous elections which has resulted in their low representation in various decision and policy making bodies. The objective of the survey was therefore to assess and determine the participation of people with disabilities in the 2010 election process and to determine the extent to which NEC’s promises were successfully implemented. It also sought to determine different methods used by people with disabilities to access information
on elections. Among the key results, it was found that 63% of people with disabilities surveyed participated directly in the election campaign while 37% did not. Moreover, most people with disabilities (also 63%) accessed information on the general election through print and electronic media (newspapers, radio and television) as opposed to other methods such as friends, seminars and Non-Governmental Organizations (NGOs). With regard to the adequacy of the information provided, just over half of respondents said that the information provided was adequate in terms of meeting their needs and expectations but that leaves a large proportion of respondents – nearly 40% - who said that the sources of information were not adequate. Regarding accessibility of the polling stations to people with disabilities, 58% of respondents reported that polling stations were not accessible. Many polling stations had no parking areas or adequate signage to provide direction to people with disabilities. Also the doors were not wide enough for wheelchair users to get through and most of them had no ramps or pathways to enable access for people with disabilities.

A study entitled “Transitions to adulthood: the experiences of youth with disabilities in Accra, Ghana” by Gregorius (2014) focused about how youth with disabilities in the Global South make their transitions to adulthood. A qualitative method was used. Using innovative, participatory methods, it explores young people’s individual narratives within the areas of education, employment, and social and community life, and the ways in which these shape their life trajectories. The study shows that the transitions to adulthood of youth with disabilities in
Accra are substantially influenced by disability-related factors and processes that are socio spatially embedded and intricately intertwined. Disabling social and physical environments restrict disabled young people’s participation in education, employment, and social and community life, which increases their vulnerability to marginalization and exclusion in society. As a consequence, their transitions to adulthood are even more complex, protracted, and uncertain than for their nondisabled peers. Youth with disabilities, however, use a variety of coping strategies to navigate the challenges they face associated with school, work, and social life in their attempts to achieve adulthood. Foregrounding the voices of young people with differing categories of social difference challenges the hitherto existing homogenization of the lives of youth with disabilities in the Global South highlighting their agency and capabilities as well as the complex ways in which they negotiate transitions during the life-course.

In judging the above study, the work considered the areas of education, employment, and social and community life, and the ways in which these shape their life trajectories, the researcher did not ask anything regarding the orientation and mobility.

There is a study conducted by Nortey (2009) entitled “Barriers to Social Participation for the Deaf and Hard of Hearing in Ghana.” It was designed to explore issues of disable’s participation within work colleagues, family, among peers and in other societal settings. Also was explored the attending issues within
employment, education, government sponsorship and health care, cut into policies that impact on the issue of deaf participation. The personal experiences of the deaf and hard of hearing were explored with the sole aim of identifying variables which turn against their meaningful participation in environment. Hearing impaired participant consisted of 7 deaf and 3 hard of hearing adults between the ages of 25 – 45 years. Results of the research indicate multiple barriers for the Deaf and Hard of Hearing at the different levels of the Ghanaian society. Lack of participation in activities and lack of belongingness were felt by majority of the participants across the different settings of the Ghanaian society. There were impediments along the way in the different transitions the individual makes from the family to school through social life and work life. Participants’ recount of their life experiences highlighted areas besides communication in which they face barriers. These areas include education, family and social life, employment, healthcare and access to support for persons with disabilities. Although the study was related to this study, the researcher assessed the level of participation of four types of disabilities whom were physical impairment, visual impairment, hearing impairment and albinism. Moreover the study determined the participation of those disabled persons in general election not in all aspects of community activities which was the area of concern in the current study.

In Kenya, the research by (Kinyanjui, 2008) entitled Challenges Facing Integration of Visually Impaired Learners in Public Primary Schools in Trans-Nzoia West District. The study sought to investigate the challenges facing integration of the visually impaired (VI) learners in public primary schools in Trans-Nzoia West
district. The objectives of the study were; To assess the teaching and learning materials provided in addressing the education needs of the visually impaired learners in Trans-Nzoia West District; To establish the influence of teacher training in promoting the integration of visually impaired children in Trans-Nzoia West District; To establish the contributions of key stakeholders in addressing the needs of visually impaired children in Trans-Nzoia West District; To determine possible strategies to promote integration of the visually impaired in Trans-Nzoia West District. The study adopted the descriptive survey study research design. The study population included the 25 head teachers, 25 contact teachers in the 25 integrated public primary schools and 40 visually impaired learners. Study population also included the Educational Assessment and Resource centre coordinator (EARC). Research findings indicated that visually impaired children in schools were not many and that there was insufficiency of learning materials and few trained teachers in the field. The research also found out that the teachers in the schools assumed the role of supervisors. The common strategies to ensuring success of the integrated programme as proposed by a majority of the respondents included improving the teacher-visually impaired children ratio, encouraging more NGO support, soliciting for more government support and ensuring that the schools through the head teachers provided the required resource rooms and materials to help manage the visually impaired children in the schools. Study design (descriptive survey study research design) made a clear similarity among the two studies. Besides, the same area of interest was explored by the researchers (social integration). The researcher investigated the challenges facing integration of the visually impaired (VI) learners in public primary schools. The objectives
were different from the current study. The researcher assessed the teaching and learning materials; established the influence of teacher training in promoting the integration of visually impaired children; established the contributions of key stakeholders in addressing the needs of visually impaired children so also determined possible strategies to promote integration of the visually impaired. The current study intended to determine the influence of orientation and mobility training on social integration of Adults with visual impairment, which was the gap, emerged from the above study.

The reviewed literature were related to the main work as well as the mentioned objectives. Thus, the current study intended to determine the influence of orientation and mobility training on community participation on Adults with visual impairment, which was the gap, emerged from the above study.

2.5 Influence of Orientation and Mobility Training on the Economic Participation of Adults with Visual Impairment

According to International Labour Organization, (2017) People with disabilities make up an estimated one billion, or 15 per cent, of the world's population. About 80 per cent are of working age. The right of people with disabilities to decent work, however, is frequently denied. People with disabilities, particularly women with disabilities, face enormous attitudinal, physical and informational barriers to equal opportunities in the world of work. Compared to non-disabled persons, they experience higher rates of unemployment and economic inactivity and are at greater risk of insufficient social protection that is a key to reducing extreme
poverty. Persons with disabilities are more likely to find themselves in poverty as a result of their exclusion from economic activity. Lack of employment preparation has been identified as a major barrier to successful employment by people with visual disabilities. Specifically, people who are blind or visually impaired are not receiving the training necessary to be competitive in today’s job market (Crudden, Williams, McBroom & Moore, 2002). It is a fact that persons with disabilities are excluded from economic opportunities and when they are included, they earn much less than those without disabilities (Banks and Polack, 2014). In this regards it is imperative for the relevant persons to wake up and find out solutions or intervention strategies in addition to the existing once to help persons with special needs to reduce or overcome the abject poverty bedeviling their living standard and to enhance their social integration.

The ILO has a longstanding commitment to promoting social justice and achieving decent work for people with disabilities. It takes a twin-track approach to disability inclusion. One track allows for disability-specific programmes or initiatives aimed at overcoming particular disadvantages or barriers, while the other track seeks to ensure the inclusion of disabled persons in mainstream services and activities, such as skills training, employment promotion, social protection schemes and poverty reduction strategies.

Section 504 of the Rehabilitation Act stated that no any entity receiving federal financial assistance is allowed to discriminate on the basis of disability (U.S. Dept. of Justice, 2008). UNICEF/ROSA (2005) and UNICEF (2007) state that life skills
are said to enhance the quality of parenting, political and economic participation, reduce anti-social behavior and crime and ameliorate gender inequalities.

In Canada, hundreds of thousands of individuals are limited in their daily activities because of a physical or mental disability, but participate actively in the labour market and often hold jobs that match their qualifications. However, persons with disabilities remain less likely than others to be employed, both in Canada and other parts of the world (Turcotte, 2014). In Nigeria the Vocational Rehabilitation and Employment Decree 1993 states that measures should be taken by government to promote the employment of the persons with disabilities.

In America, Emuang, (2014), identified variables in the administrative records of the federal Rehabilitation Service Agency that impact self-employment outcomes and earnings among blind or visually-impaired consumers. The file, comprised of 13,998 cases closed in Texas from Fiscal Years 2008 through 2012, spans the national recession and subsequent slow recovery. From the original file, 798 cases closed through self-employment were examined by employment status at application, cost of services and returns on investments (ROI). This study found those who were self-employed at application were 50 times more likely to be self-employed at closure. Those who received assessments, diagnosis and treatment, technical assistance, and rehabilitation services were more likely to be self-employed at closure. The variables most closely related to weekly earnings at closure for self-employed consumers were: gender (male), being self employed at application and receiving some form of rehabilitation technology. Disproportionate
numbers of those who were self-employed at application were 55 to 65 and self-identified as White only with weekly earnings at application above the mean for the entire population of consumers whose cases were closed through self-employment. They received the fewest services on average over the shortest period of time at the lost average cost. Returns on investments in serving those who were self-employed at application were positive but small. The average cost of services provided to those employed at application was the highest. However, on average, they experienced decreases in the hours worked per week and weekly earnings.

The researcher identified variables in the administrative records of the federal Rehabilitation Service Agency that impact self-employment outcomes and earnings among blind or visually-impaired consumers. The researcher believed that those who received assessments, diagnosis and treatment, technical assistance, and rehabilitation services were more likely to be self-employed at closure. The next to do was to find out the influence of rehabilitation services provided to persons with visual impairment, and that was the focus of this study.

In New Zealand, O’Donnell, (2014) revealed that employment rates amongst blind people are at negative side. Also, the Royal New Zealand Foundation of the Blind (RNZFB) latest strategic plan identified the negative rate of employment as a priority to be addressed among its members and Vocational training was identified as being the most beneficial type of programme attended, followed by disability-specific training for adaptation.
In Canada an article entitled “Persons with disabilities and employment” compiled by (Turcotte, 2014) aim at examines the relationship between educational attainment and employment and providing information on the labour market participation of Canadians 25 to 64 years of age with a physical or mental disability related to seeing, hearing, mobility, flexibility, dexterity, pain, learning, development, psychological/mental disorders or memory. The factors associated with the employment participation of persons with disabilities are discussed, along with their job characteristics. The article uses data from the 2012 Canadian Survey on Disability (CSD) The statistics include information on youth with disabilities who are neither studying nor employed. The finding of the study illustrates that persons with disabilities are less likely to be employed than persons without a disability. Secondly, education significantly reduces the differences between persons with a mild or moderate disability and those without a disability. Among university graduates, persons with a mild or moderate disability had employment rates that were virtually the same as those of university graduates without a disability. The issue of employment discrimination was on the minds of a number of persons with disabilities, as 12% of them said that they had been refused a job because of their condition in the five years preceding the survey.

It was quite conspicuous that this study agreed with the current study as both of the two researcher examined participation of persons with visual impairment in their workplace. The former aimed at examines the relationship between educational attainment and employment and providing information on the labour market participation of Canadians 25 to 64 years of age with a physical or mental
disability related to seeing, hearing, mobility, flexibility, dexterity, pain, learning, development, psychological/mental disorders or memory. While the letter determined the influence of orientation and mobility on social integration in which economic participation serves as one of the vital cogs in social integration.

Teskeredžić, Alibegović and Salkić (2016) carried out a study titled “The Level of Social Distance towards Visually Impaired Persons Regarding to Occupation in Bosnia and Herzegovina.” The study included 361 adult respondents from the territory of Bosnia and Herzegovina, and who had no personal or professional contact with persons with visual impairment. This study used scale of social distance which is adapted in terms of required statements and opinions of respondents to visually impaired people, rather than toward people with intellectual disabilities. The statistical analyses used were methods of descriptive statistics, and methods of analysis of variance (ANOVA). All results of the study were obtained at a significance level of 0.05. The results indicate that there is no opinions and level of social distance in relation to the occupation of respondents and no statistically significant difference. The researcher explored the level of social distance and occupation. Though the study employed descriptive statistic as the method of data collection, the gap is that the study did not take orientation and mobility training as a variable that might reduced the level of social distance and occupation among persons with visual impairment. Perhaps, this was the aim of the current study.
Another study was conducted by Dodgson (2013) titled “Rehabilitation Workers’ Perspectives of Orientation and Mobility Training with Older Visually Impaired People.” These three sequential studies investigate practice by the professional of the rehabilitation worker in teaching Orientation and Mobility training to older people with visual impairment. The above studies clearly identify that the researchers investigated barrier to employment among persons with visual impairment and effect of orientation and mobility training on meeting the needs of older persons with visual impairment, but they did not look at role of O&M training toward empowering individual with visual impairment with employment and other economic needs. It is a gap that the present research intended to bridge by investigating the Influence of O&M training on the economic wellbeing of youths and adults with visual impairment.

In China, The study conducted by Chen (2012) investigated the impact of a 10-week baseball training camp on visually impaired players. The subjects who are sixteen both blind and visually impaired were divided into an experimental group and a control group. The results indicated how such training has a direct beneficial outcome towards orientation and mobility development for the visually impaired, and recommend further research into the effects of blind baseball training. This study was in line with the current study as the researcher came up with a strategy that enhances the orientation and mobility among persons with visual impairment. Although the researcher tried much in orientation and mobility but the current study was trying to come up with manner in which orientation and mobility training affects social integration of Adults with visual impairment.
In Malaysia, the study by (Ling, Wah & Leng, 2011) entitled “Employment of People with Disabilities in the Northern States of Peninsular Malaysia: Employers” The quantitative study was designed to identify factors that promote or hinder gainful employment of people with disabilities in Malaysia. Structured questionnaires were sent to about 250 private companies operating in the four Northern states of Peninsular Malaysia, in 2010 while only 39 respondents returned the questionnaires. The samples were selected at random from the listing in a government website and the Yellow Pages. The queries in the questionnaires included the company background, their experience in employing people with disabilities, their perceptions toward employees with disabilities and their perceptions on barriers they have to face when employing people with disabilities.

Results: The results indicated that most of the employers are in favour of employing persons with disabilities. However, very few have such enabling policies, or a mechanism to handle issues related to persons with disabilities, or a built environment which is fully accessible to persons with disabilities. They are also concerned about the ability of workers with disabilities to comprehend and follow orders, as well as the costs involved in employing and training them. These results imply that if employers want to fulfill their intentions of recruiting persons with disabilities, a lot has to be done to employ and sustain them in their jobs.

The study was a quantitative study designed and was carried out to investigate the accessibility of persons with disabilities into their work place and their ability to comprehend and follow orders in their work place. But the study was differed from the current study as it was designed to detect the influence of orientation and mobility training on social integration of persons with visual impairment.
In Zimbabwe the Attitudes of Employers and Co-Workers towards the Employment of Persons with Disabilities in Zimbabwe was a systemic enquiry by (Barbra & Mutswanga, 2014). A qualitative case study method was used to carry out the study. Purposive sampling method was used to select thirty 30 participants into the study. The interview and observation were used to generate data. The major findings in this study were that employees with disabilities were discriminated in the workplace. Co-workers perceived PWDs as generally incompetent as they would need the assistance of fellow workers to accomplish tasks while employers were of the view that some of these PWDS scare away customers while some are dependent on fellow workers for the accomplishment of tasks. The same employers perceived most PWDS as lacking knowledge and having poor qualifications rendering them unemployable. Co-workers felt that employees with disabilities need maximum supervision and needed to be assigned special tasks suitable to their conditions. The study was in consonance with the happening study as the two studies were discussing the situation of persons with visual impairment in their work place. And the above researcher explore the attitude of workers toward persons with visual impairment in the work place while the current study aimed at determining the influence of orientation and mobility training on social integration among persons with visual impairment in which economic participation plays a greater role.

Murugami (2010) explored career information learners with visual impairment acquire from school to enable them develop vocational self-concept and career decision-making self-efficacy. A mixed model research design was used and 149
persons with visual impairment were selected as the sample population of the study. Vocational Decision-making Interview (VDMI-R) and Career Decision Making Self-efficacy Scale (CDMSE-SF) served as the instruments for data collection. Data were analyzed using Statistical Package for Social Sciences for quantitative and Atlas Ti to code qualitative data. The major finding indicated a linear relationship between aspects implying that learners experienced increased development as they progressed in education. The findings affirmed the need for comprehensive career guidance and counselling for learners with disabilities, culminating to suggested vocational development model. The research was related with the current study because both of the researchers employed mixed method research design and the respondents were persons with visual impairment. Employing Vocational Decision-making Interview (VDMI-R) and Career Decision Making Self-efficacy Scale (CDMSE-SF) as the instruments for data collection was the measure differences that existed from the two studies. However the study did not determine the influence of orientation and mobility training on economic participation among adults with visual impairment.

In Nigeria a study was made by Omede and Tenimu (2013) which stated the significant of Counseling Persons with Visual Impairment for Effective Career Choice Career choice is an important issue in every man’s life. For persons with visual impairment, making a career choice is not always easy, and making an effective choice requires the inputs of many professionals amongst who are the guidance counselors. One technique through which counseling achieves results is through career education. Critical as career education and counseling may be, both
have received less significance attention which invariably impinges on the success of persons with visual impairment in making effective career choices. Many persons with visual impairment have lost out on their ambition for lack of proper counseling. The paper concluded that in counseling persons with visual impairment on career choices, counselors should among other things assess the strength of available resources, the interest of the visually impaired person, the intellectual capacity of the student, the excellent of the handicapping condition and the nature of the economy. The purpose of the above study was to determine the significant of counseling on career choice among persons with visual impairment, while this study determine the influence of orientation and mobility training on economic participation.


2.6 Summary of Related Literature

The purpose of this chapter was to examine the literature related to influence of orientation and mobility training on social integration on adults with visual impairment in Kano state Nigeria. The examined literatures were in support or
against the present study. The reviewed literature presented in the preceding pages shows that Adults with visual impairment individuals have been studied on different aspects of social integration. Most of the studies reviewed reveal several gaps in line with stated objectives which are influence of orientation and mobility training on self-esteem, self-reliance, community participation and economic participation of adults with visual impairment. For example, many studies on self-esteem were carried out on regular students and few others on persons with disabilities such as persons with Hearing impairment, finding out the relationship between self-esteem and academic performance. Taking into account of the reviewed related literature the investigator concluded that no attempt has been made so far to establish the influence of orientation and mobility training on social integration of Adults with visual impairment in Kano Nigeria. This was the gap investigator intended to bridge.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter discussed the research design, research variables, and location of the study, target population, sample size, sampling technique, instruments, piloting, validity and reliability, methods of data collection, data analysis and logistical and ethical issues.

3.2 Research Design

The research design adopted for this study was a mixed method survey study. Trochim, (2006) views survey research as the best method of assessing opinions, thoughts and feelings. The purpose of mixed method research is to build on the synergy and strength that exists between quantitative and qualitative research methods in order to understand phenomenon more fully than is possible using either quantitative or qualitative methods alone (Gay, Mills, & Airasian, 2006). The researcher employed this methods to achieve the effectiveness of both quantitative and qualitative methods. Qualitative data were collected by interviewing and interacting with the respondents in a focus group discussion. Qualitative method allows the researcher to study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them. It also involves the collection of a variety of empirical materials-case study, personal experience, introspective, life story, interview, observation, historical, interactional and visual text-that describe moments and meanings in individual’s lives (Maiwada & Yakasai, 2009). Besides, quantitative
methods were applied when presenting the findings using descriptive numerical representations which involved percentages and tables.

3.3 Research Variables

Variables refer to factors or conditions that can change during the course of an experiment. Ori (2017) mentioned three types of variables: independent, dependent and controlled variables. The independent variable is the variable that the scientist manipulates. For example, if scientists are studying how putting salt in cold water affects how long it takes to boil water, the presence of salt is the independent variable. The dependent variable is a variable that changes as the result of changing the independent variable. If water boils faster when salt is added to it, then the time water takes to boil is the dependent variable. Controlled variables are variables that the scientist does not want to change during the course of the experiment such as the amount of water used, size of the burners and the temperature of the heating element.

3.3.1 Independent Variables

The independent variables in this study were: Orientation and Mobility Training, Awareness of the environment, Ability to move independently, Recognition of sound, clean bodies and Feeling good.

3.3.2 Dependent Variables

In this study, the dependent variables were: Social Integration of Youth and Adults with Visual Impairment, Self-esteem, Self-reliance, Community participation and Economic participation. Intervening variables comprised Fear of unknown;
Inability to monitor changes in the environment and the family’s attitude, feelings and beliefs.

3.4 Location of the Study

The research study was conducted in three political zones of Kano State of Nigeria. They are Northern, Central and Southern parts. These places were selected due to significant number of adults with Visual Impairment and the numbers of rehabilitation centers, such as, Mariri Rehabilitation Centre Special Education Unit, School for the Handicapped Tudun Maliki, Sudan Interior Mission School for the Blind, Eye Hospital, Dawakin Kudu Alms House, Bichi Alms House, (Kano State Federal Ministry of Women Affairs & Social Development).

According to Yemi (2012) the population of Kano is 10,013,224. Kano city is at 472.45 metres above sea level and is geographically it is located between latitudes 10.3°-13°N and longitude 7.4°E- 10.39°E, and situated in a semi-arid region. It is bordered by Jigawa, Bauchi, and Katsina State, in the North-East, South-East, and in the North-West respectively, while in the South-West it is bordered with Kaduna State (Kano State Government of Nigeria State Strategic Health Development Plan 2010 – 2015).

3.5 Target Population

Target population is the actual list of sampling units from which the sample is selected (Creswell, 2012). The population targeted for study refers to the whole population from where the sample will be taken (Waters 2011). In this study, the total of 628 individuals were the target population which comprises 513 (82%) persons with visual impairment who attended rehabilitation centres, 72 (11%)
parents of persons with visual impairment and 44 (7%) social welfare officers in the local governments of Kano state. (NAB, Kano State Chapter 2015/2016 census). Persons with visual impairment were targeted because they had orientation and mobility training in the different rehabilitation centres in Kano state. At the same time, they were among the respondents and reliable data about their feelings and performance was sourced. Parents of persons with visual impairment were also targeted because reliable information about their children participation in the society was provided. The last group, which is social welfares, was also targeted because all the affairs of persons with disabilities including persons with visual impairments are treated in the state and local government welfare offices under the Ministry of Women affairs. Therefore, they were at the right position to tell the researcher more about their participation in the place of work.
Table 3.1: Target Population

N=628

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<th>Zones</th>
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<th>%</th>
<th>A. 25-34</th>
<th>%</th>
<th>A. 35-45</th>
<th>%</th>
<th>W.O</th>
<th>%</th>
<th>P</th>
<th>%</th>
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<td>11.4</td>
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</table>

Source: NAB, Kano State Chapter 2015/2016 census

Key

A: Adults with visual impairment
CZ: Central zone
LGA: Local government Area
NZ: North zone
SZ: South zone
W.O: welfare officers

3.6 Sampling technique and sample size

The sample size and the sampling techniques are described in this section below.

3.6.1 Sampling Techniques

Stratified random sampling was employed as a sampling technique of the study. According to the Trochim (2006) a stratified random sampling technique involves dividing the population into groups called strata. From each stratum simple random sampling was used to ensure every element in the population has an equal chance of being included in the sample. Also purposive sampling is a method in which the researcher attempts to select a sample that appears to him as being representative of the population defined by the research problem (Awotunde, Ugondulinwa, & Ozoji, 2002). Therefore, stratified random sampling technique
was employed appropriately to select eighteen Local Governments of Kano State. Purposive sampling was applied to select adults with visual impairment in order to determine their level of self-esteem, self-reliance, community participation and economic participation as a result of orientation and mobility training. This sampling technique was used because not all the adults with visual impairment in the state participated in the study. Only adults with visual impairment aged 25 to 45 years were the participant. In order to select the social welfare officers and parents and to give them equal chance of participating in the research simple random sampling technique was suitable. Lottery method was employed as a strategy of sampling. Lottery method involves drawing the sample from a receptacle or hat. The serial numbers of the units in a sampling frame are recorded on discs or piece of paper which are folded after the recording, placed in a receptacle and mixed thoroughly before picking once (Awotunde, Ugondulunwa, & Ozoji, 2002).

### 3.6.2 Sample Size

A small proportion of the general population selected for observation that has the same characteristics, values and attitude of the entire population will be regarded as the sample size (Best & Khan, 2011). Creswell (2012) added that sample is the group of participants in a study selected from the target population from which the researcher generalizes to the target population. According to Israel (2012) if descriptive statistics are to be used, e.g., mean, frequencies, and then nearly any sample size will suffice. On the other hand, a good size sample, e.g., 200-500, is needed for multiple regressions, analysis of covariance, or log-linear analysis, which might be performed for more rigorous state impact evaluations. The total
number of sample size in this study was 240 out of 628 using the table of determining sample size by Israel (2012). Below are the distributions which capture the percentage of 38% out of the 628 target population.

Table: 3.2  Distribution of the sample size from the target population

<table>
<thead>
<tr>
<th>Zones</th>
<th>LGA</th>
<th>%</th>
<th>A. 25-34</th>
<th>%</th>
<th>A. 35-45</th>
<th>%</th>
<th>W.O</th>
<th>%</th>
<th>P</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Z</td>
<td>6</td>
<td>33.3</td>
<td>12</td>
<td>5</td>
<td>24</td>
<td>10</td>
<td>6</td>
<td>2.5</td>
<td>5</td>
<td>2.1</td>
<td>47</td>
</tr>
<tr>
<td>C. Z</td>
<td>6</td>
<td>33.3</td>
<td>48</td>
<td>20</td>
<td>70</td>
<td>29.2</td>
<td>6</td>
<td>2.5</td>
<td>12</td>
<td>5</td>
<td>136</td>
</tr>
<tr>
<td>N. Z</td>
<td>6</td>
<td>33.3</td>
<td>20</td>
<td>8.3</td>
<td>36</td>
<td>15</td>
<td>6</td>
<td>2.5</td>
<td>5</td>
<td>2.1</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>100</td>
<td>80</td>
<td>33.3</td>
<td>120</td>
<td>50</td>
<td>18</td>
<td>7.5</td>
<td>22</td>
<td>9.2</td>
<td>240</td>
</tr>
</tbody>
</table>

Key

A: Adults with visual impairment
CZ: Central zone
LGA: Local government Area
NZ: North zone
SZ: South zone
### Table 3.3: Distribution of Local governments

<table>
<thead>
<tr>
<th>S/N</th>
<th>South Zone</th>
<th>Central Zone</th>
<th>North Zone</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kura</td>
<td>Nasarawa</td>
<td>Gwarzo</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Madobi</td>
<td>Gwale</td>
<td>Dawakin</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tofa</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Wudil</td>
<td>Fage</td>
<td>Rimin Gado</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Dawakin Kudu</td>
<td>Dala</td>
<td>Gezawa</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Bunkure</td>
<td>K M C</td>
<td>Bichi</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Gaya</td>
<td>Kumbotso</td>
<td>Munjibir</td>
<td>3=18</td>
</tr>
</tbody>
</table>

#### 3.7 Research Instruments

The instruments used in this research are adapted (slightly modified) version of instruments questionnaire such as State Self-Esteem Scale developed by Heatherton (1991), Self-Reliance Achievement Scale developed by Minnesota Community Action Association (2002), Instrument for Measuring Community Involvement developed by Staunton (2001), Structured interviews and Focus Group Discussion guides. In order to elicit data sourcing effectively, the face to face method were used in administering the questionnaire, because it ensures a high response rate and also eliminates the possibility of misinterpretation of the statements by the respondents. The use of a variety of instruments were used to
facilitate triangulation of data and enhance confidence in the result of the study as well as collection of comprehensive data (Atricher, Felman, & Somekh, 2008).

3.7.1 Questionnaire

A questionnaire is a written collection of self-report questions to be answered by a selected group of research participants. It requires less time, is less expensive, and permits collection of data from a large sample (Gay, Mills & Airasian, 2006). The questionnaire for this study was employed to the respondents of the study who are individuals with visual impairment (both male and female) aged twenty five to forty five years.

A ten questionnaire items were designed for each objective while some of the questionnaires were not transcribed into Braille because not all persons with visual impairment were conversant with the Braille. In this regard, the respondents were helped by the researcher and his assistant in the field to understand the content of the questionnaire while another option was provided to take the questionnaire home for participants to be assisted by their family members. Researcher employed questionnaire as one of the instruments for data collection because of the large sample size. This type of instrument is very efficient in descriptive statistics.

3.7.2 Interview

Interview guide has been defined by Orodho (2009) as a set of questions which the researcher asks the participants to obtain the required data needed to meet the research objectives. While collecting in-depth information from the parents of
persons with visual impairments and social welfare officers, an interview guide was used and responses from participants tape recorded for analysis.

3.7.3 Focus Group Discussion

The Focus Group Discussion (FGD) is a rapid assessment, semi-structured data gathering method in which a purposively selected set of participants gather to discuss issues and concerns based on a list of key themes drawn up by the researcher/facilitator (Escalada, & Heong, 2014). According to Evaluation Research Team, Centers for Disease Control and Prevention, (2008) focus group discussion is meant to get more in-depth information on perceptions, insights, attitudes, experiences, or beliefs, gather additional information as an adjunct to quantitative data collection methods and or as part of a mixed method evaluation approach. Focus groups typically last about 60 to 90 minutes. Focus group methodology is useful in exploring and examining what people think, how they think, and why they think the way they do about the issues of importance to them without pressuring them into making decisions or reaching a consensus. The method is especially valuable for permitting the participants to develop their own questions and frameworks as well as to seek their own needs and concerns in their own words and on their own terms.

The researcher employed FGD to understand the participants’ meanings and interpretations regarding the influence of orientation and mobility training on social integration of adults with visual impairment in Kano state Nigeria. Adults with visual impairment were the participants during focus group discussion
interaction. A time was set up and Forty five minutes were devoted towards the discussion. Each member of the group was individually invited to participate in the ensuing discussion. Their experiences were fully acknowledged and the rationale for selection to the focus group was provided.

**3.8 Pilot Study**

Piloting was taken place in two local governments (Shanono and Albasu). Ten respondents were the participants. Piloting was based on the study objectives to ascertain the validity and reliability of the instruments and to discover any weakness in the instruments, check for clarity of the questions or items and also elicit comments from respondents which assisted in the improvement and modification of the instruments. The Piloting also enabled the researcher to detect any flaws in the administration of the research instruments. All subjects used in the piloting were excluded in the main study. The procedure used in piloting was the same to the main study.

**3.9 Validity and Reliability**

Validity and reliability is a fundamental segment in research. For a result to be accurate and consistent researcher has to focus on validity and reliability. In this regard the researcher of the current study considered the two elements respectively.
3.9.1 Validity

The extent to which the research instrument is designed to measure the required data refers to as the validity (Easterby-Smith, Thorpe & Lowe, 2002). In another article, validity is the extent to which the instrument measures what it purports to measure. For example, a test that is used to screen applicants for a job is valid if its scores are directly related to future job performance. In the same article, validity determines whether the research truly measures that which is intended to measure or how truthful the research results are (Muise, Erman, Ahamad, Tasmuna, Zenny, Arida, Asnanah, & Supu, 2011).

Supervisors and other experts were engaged by the researcher to ascertain whether the content of the questionnaires (content validity) are up to standard. The comments and observations pertaining to readability, clarity and comprehensiveness of the construct of interest were noted and incorporated into the final draft before administering it to the participants in the piloting and the main study. Supervisors and experts in the same profession in the university in which the researcher works commended that all the items were relevant to the data collected. In addition, pilot study was carried out with people of the same category who were not part of the same research respondents. In this study, pilot means a lot as it helped the researcher to make some corrections. Pilot also indicated the need to transliterate the interview into native language which was permitted by the supervisors. Finally the items were so clear and comprehensive enabled the respondents to respond without much difficulty.
3.9.2 Reliability

Administration of the same instrument to the same group twice is a method of assessing reliability of data. Orodho, (2009) notes that, the degree to which a research instrument measures and yields consistent result after the repeated trials is referred to as reliability. Reliability is also defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trial (Muise, Erman, Ahamad, Tasmuna, Zenny, Arida, Asnanah. & Supu, 2011). To ensure reliability, the study used test and retest method. Fourteen respondents were participated who were not included in the main study. Mugenda and Mugenda, (2003) assert that the time frame between the first and the second test is two weeks.

Additionally, Mugenda and Mugenda (2012) confirmed that 1% to 10% of the questionnaires are enough for pre-testing and yield reliable data for determine the reliability of the study instruments. Therefore, the researcher employed 5% of the 200 questionnaire (10) and administered to the sampled participants for pre-testing. Cronbach’s Alpha Reliability Coefficient Test was used to analyze the pre-tested data to determine the reliability. Gliem, & Gliem, (2015), believes that a Cronbach’s Alpha Reliability Coefficient greater than 0.7 is considered adequate and reliable for pre-test and data collection instruments. Accordingly, the scores of the two occasions were then correlated through SPSS computer program as follows:
Table 3.4: Reliability test statistics

<table>
<thead>
<tr>
<th>S/N</th>
<th>Objectives</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
<th>standardized Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Self-esteem</td>
<td>10</td>
<td>0.893</td>
<td>0.892</td>
</tr>
<tr>
<td>2</td>
<td>Self-reliance</td>
<td>10</td>
<td>0.781</td>
<td>0.748</td>
</tr>
<tr>
<td>3</td>
<td>Community Participation</td>
<td>10</td>
<td>0.968</td>
<td>0.971</td>
</tr>
<tr>
<td>4</td>
<td>Economic participation</td>
<td>10</td>
<td>0.762</td>
<td>0.762</td>
</tr>
</tbody>
</table>

Source: researcher (2017)

The results presented in table 3.4 shows that the pre-tested questionnaires have a momentous internal consistency of above 0.7 on all the used instruments. So the internal consistency was adequate for the main data collection.

3.10 Data Collection Procedures

3.10.1 Logistical and Ethical Considerations

 Introductory letter was collected from Kenyatta University and presented to Kano State welfare office for the permission to conduct the pilot and the main study. Permission was granted by the office of the Director social welfare office under the ministry of women affairs Kano State and permission also was provided by Kenyatta University Ethic Review Committee. For a research on human subjects, this study was conducted within the ethical consideration of Kenyatta University. The purpose of the study was explained to the respondents and consent form and
assent was given to the adults with visual impairment, parents and welfare officers of each local government. The respondent willingness to participate was ensured. Confidentiality of the respondents was assured. Finally, the feedback of the findings was made available to the respondents.

### 3.10.2 Data Collection

In the process of data collection, the research assistant was trained and assisted the researcher while administering the questionnaire. The questionnaire was issued to the persons with visual impairment across the selected local governments; some were mate in their homes some in their place of work some in their business area. The researcher explained to the participants the purpose of consultations and highlighted the significance of the study toward improving social their integration into society. Sufficient time was provided to enable them fill the questionnaire not in haste.

The participants for the interview involved social welfare officers and parents of persons with visual impairment in Kano state. The researcher briefed the respondents about the purpose and the amount of time scheduled for the interview and asked for permission to record the information. Consent forms were presented to the respondents read and signed after having their consent to participate. The researcher conducted the interview together with help of a research assistant. Forty five minutes sessions were utilized. Some respondents needed more time to reveal some important information for the study, while some came up with irrelevant issues which consumed more time than was expected. Interview situation and
interviewer’s discretion was the baseline of the interview. Written notes and audio recorder were used to cater for the information during the interview.

Adults with visual impairment were the participants of focus group discussion. The respondents were informed about the purpose and amount of time required for completing the exercise. Ascent forms were provided to read and sign, after agreeing to participate in the study thumbprint were used on the forms to represent signatures. The discussions were made and audio recorder and a book were used to record the information. Each person was given an opportunity to contribute to the discussion. Occasionally, further elaboration was necessary, and therefore the researcher had to seek clarifications and request the participants to explain in greater detail. Furthermore, participants in the focus group were given an opportunity to respond or to react to the statements made in this discussion. Thus, this process enabled collection of a very rich set of data which was tape recorded and also scribed at the same time to ensure that the data was sufficiently backed up.

3.11 Data Analysis

The process of analyzing, interpreting and presenting data to obtain information useful to answer the research questions is termed as data analysis (Mugenda & Mugenda, 2003: Kvale & Brickmann, 2009). Researcher and the research assistant obtained raw data through questionnaire interview and focus group discussion. This signifies the used of quantitative and qualitative methods as earlier mentioned. The methods were used to analyze the data in this study.
The quantitative data from the respondents were analyzed using Statistical Package of Social Sciences (SPSS) version 20. The data were converted into percentages and was presented in tabular form and charts. The data obtained via interview and focus group discussion were analyzed qualitatively using words and through content analysis. All the objectives sought to establish the influence of orientation and mobility training on social integration of adults with visual impairment in Kano state. The objectives cover level of their feeling in the society (self-esteem), self-reliance in terms of the mobility and daily living activities, their acceptance in the society and participation in employment. The data were gathered from adults with visual impairment, social welfare officers and parents of persons with visual impairment.
CHAPTER FOUR

PRESENTATION OF FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

The aforementioned chapter presents details of the following: Findings, interpretation and discussion of data provided by the respondents during field work. The study aimed at determines the influence of orientation and mobility training on social integration of Adults with visual impairment in Kano state Nigeria. The study used both qualitative and quantitative analysis methods. The findings, presentation and discussion were presented in accordance with the objectives of the study. Themes were organized visa a visa beginning with demographic characteristics such as gender, age, the rehabilitation centre attended by the respondents, zones of the respondents and name of organizations the participants work with. The findings are presented according to the objectives of the study:

1. Influence of orientation and mobility training on self-esteem of adults with visual impairment,
2. Influence of orientation and mobility training on the self-reliance of adults with visual impairment;
3. Influence of orientation and mobility training on community participation of adults with visual impairment and
4. Influence of orientation and mobility training on the economic participation of adults with visual impairment.
4.2: Demographics

Demographic data were picked up from adults with visual impairment, parents and social welfare officers in Kano State Nigeria. Gender and Ages of the respondents (twenty five to thirty four and thirty five to forty five years only) were considered. The rehabilitation centre attended by the respondents, zones of the respondents and name of organization the participants work with were also part of the demographics information. The demographic characteristics are summarised in figure 4.1 below:
Table 4.1: Summary of the Demographic Data of the Participants

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34 years</td>
<td>74</td>
<td>37.0</td>
</tr>
<tr>
<td>35-45 years</td>
<td>126</td>
<td>63.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>152</td>
<td>76.0</td>
</tr>
<tr>
<td>Female</td>
<td>48</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**Name of Rehabilitation Centre Attended**

<table>
<thead>
<tr>
<th>Rehabilitation Centre</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dawakin Kudu Alm House</td>
<td>27</td>
<td>13.5</td>
</tr>
<tr>
<td>Mariri rehabilitation centre</td>
<td>74</td>
<td>37.0</td>
</tr>
<tr>
<td>Tudun-maliki special school</td>
<td>40</td>
<td>20.0</td>
</tr>
<tr>
<td>Sudan Interior mission school</td>
<td>34</td>
<td>17.0</td>
</tr>
<tr>
<td>Bichi Alm House</td>
<td>23</td>
<td>11.5</td>
</tr>
</tbody>
</table>

**Local Government Area**

<table>
<thead>
<tr>
<th>Area</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North zone</td>
<td>56</td>
<td>28.0</td>
</tr>
<tr>
<td>Central zone</td>
<td>109</td>
<td>54.5</td>
</tr>
<tr>
<td>South zone</td>
<td>35</td>
<td>17.5</td>
</tr>
</tbody>
</table>

**Name of Organization a Respondent is Working with**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>62</td>
<td>31.0</td>
</tr>
<tr>
<td>Public service in the Local Government</td>
<td>32</td>
<td>16.0</td>
</tr>
<tr>
<td>Business</td>
<td>32</td>
<td>16.0</td>
</tr>
<tr>
<td>Lecturers</td>
<td>19</td>
<td>9.5</td>
</tr>
<tr>
<td>Unemployed</td>
<td>26</td>
<td>13.0</td>
</tr>
<tr>
<td>Students</td>
<td>29</td>
<td>14.5</td>
</tr>
</tbody>
</table>
RESPONDANTS’ DISTRIBUTION BY AGE

Table 4.2: Respondents’ Age

From figure 4.2 above, majority of the respondents (63%) were between 35 and 45 years of age while the minority (37%) are between 25-34 years. Age is imperative in this study in order to show that most of the participants were acquainted with the training for quite long period of time and to have clear evidence on whether the training has influence on their ability to interact with society.
Figure 4.1: Respondents’ Gender

Figure 4.3 indicates that, a total of 200 respondents were used in the study majority were male and the females were the minority. Gender is equally important in this study because the researcher is addressing the issue of social integration which meant not only for male but also for female.
Figure 4.2: Name of Rehabilitation Centre Attended by Respondents

Figure 4.4 reports that majority of the respondents (31%) attended Mariri rehabilitation centre and minority (9%) Bichi Alm House. This distribution is also important inorder to know the most populated rehabilitation centre in kano state and the role it plays in rehabilitation of persons with visual impairment. The reasons of the disperities in the rehabilitation centers is that marriri rehabilitation has facilities and many of the visually impaired are provided with residence.
Figure 4.3: Respondents Local government area

Figure 4.5 indicates that majority of the respondents (49%) were from central zone while minority (11%) was from south zone. The reason being Dala local Government is the area with highest number of persons with visual impairment. Moreover, there is a quarter called Makafin Dala which occupied by persons with visual impairment and their families only. This may help the reader or other researcher to know the most populated local government and zone with persons with visual impairment in Kano state.
Figure 4.4: Name of the organization the respondent is working with

Figure 4.6 displays that majority of the respondents (31%) were Teachers while minorities (9%) were lecturers at various Tertiary Institutions in Kano state. The study aimed at finding out the extent at which adults with visual impairment are integrated in the society which includes participation in economic setting. Displaying the percentage of those participate in different field of economic activities may help the reader to justify the finding of the study.

4.3 Influence of Orientation and Mobility Training on Self-esteem of Adults with Visual Impairment

The first objective of the study sought to investigate Influence of orientation and mobility training on self-esteem of adults with visual impairment. Participants were asked to respond to a ten-item questionnaire. Results are indicated in table 4.2 below:
### Table 4.2: Influence of Orientation and Mobility Training on Self-esteem

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not At All</th>
<th>A Little Bit</th>
<th>Somewhat</th>
<th>Very Much</th>
<th>Extremely</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f %</td>
<td>f %</td>
<td>f %</td>
<td>f %</td>
<td>f %</td>
<td>f %</td>
</tr>
<tr>
<td>I feel confident about my abilities.</td>
<td>0 0</td>
<td>13 6.5</td>
<td>8 4</td>
<td>87 43.5</td>
<td>92 46</td>
<td>0 0</td>
</tr>
<tr>
<td>I feel satisfied with the way my body looks right now.</td>
<td>2 1</td>
<td>10 5</td>
<td>4 2</td>
<td>102 51</td>
<td>80 40</td>
<td>2 1</td>
</tr>
<tr>
<td>I feel concerned about the impression I am making.</td>
<td>15 7.5</td>
<td>8 4</td>
<td>19 9.5</td>
<td>86 43</td>
<td>70 35</td>
<td>2 1</td>
</tr>
<tr>
<td>I feel self-conscious.</td>
<td>20 10</td>
<td>6 3</td>
<td>24 12</td>
<td>80 40</td>
<td>69 34.5</td>
<td>1 0.5</td>
</tr>
<tr>
<td>I feel good about myself.</td>
<td>9 4.5</td>
<td>14 7</td>
<td>29 14.5</td>
<td>90 45</td>
<td>57 28.5</td>
<td>1 0.5</td>
</tr>
<tr>
<td>I feel that others respect and admire me.</td>
<td>2 1</td>
<td>4 2</td>
<td>54 27</td>
<td>75 37.5</td>
<td>64 32</td>
<td>1 0.5</td>
</tr>
</tbody>
</table>

The results of Table 4.2 show that, majority (43.5%) of the respondents felt confident about their abilities, some felt a little bit confident (6.5) and very few (4%), somewhat felt confident.

Most of the respondents felt satisfied with the way their body looked at the time of the study, while some did not at all feel or a little bit felt satisfied with the way their body looked, very few somewhat felt satisfied and only two respondent did not respond to the question.
The results also show that majority of the respondents were concerned about the impression they were making, some were not at all or were a little bit concerned and small numbers of the participants were somewhat concerned about the impression they were making. Only two respondents failed to respond to the question.

Majority of the respondents felt self-conscious while minority did not at all feel or a little bit felt self-conscious. Almost an equal percentage to those who a little bit or not at all feel self-conscious very few somewhat felt self-conscious and one respondent did not respond to the question.

Close to three quarters of the respondents felt good about themselves, small amount somewhat felt good and minority did not at all feel or a little bit felt good about them. One respondent failed to respond to the question.

More than half of the respondents felt that others respect and admire them, some of the participants somewhat felt respected and admired by others, again did not at all feel or a little bit felt that others respect and admire them while one respondent did not respond to the question.
Table 4.7.1 Negative Feelings about Self-esteem

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not At All</th>
<th>A Little Bit</th>
<th>Somewhat</th>
<th>Very Much</th>
<th>Extremely</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F %</td>
<td>F %</td>
<td>f %</td>
<td>F %</td>
<td>F %</td>
<td>F %</td>
</tr>
<tr>
<td>I feel unattractive</td>
<td>129</td>
<td>64.5</td>
<td>2</td>
<td>1</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>I am worried about what other</td>
<td>90</td>
<td>45</td>
<td>19</td>
<td>9.5</td>
<td>42</td>
<td>21</td>
</tr>
<tr>
<td>people think of me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
<td>6.5</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>I feel like I'm not doing well.</td>
<td>65</td>
<td>32.5</td>
<td>44</td>
<td>22</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>32</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>I feel frustrated or rattled</td>
<td>140</td>
<td>70</td>
<td>13</td>
<td>6.5</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>about my performance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

From table 4.7.1 many of the participants did not at all feel or a little bit felt unattractive, close to quota of the participants felt unattractive, very few somewhat felt unattractive and three participants failed to respond to the question.

Half of the respondents were not at all or were a little bit worried about what other people thought about them, many of the respondents were worried, some of the respondents were somewhat worried and two among the respondents did not respond to the question.

In addition, half of the respondents did not at all feel or a little bit felt they were not doing well, close to half of the respondents felt they were not doing well, very
few number of the participants somewhat felt they were not doing well and one point five percent did not respond to the question.

Majority of the respondents did not at all feel or a little bit felt frustrated or rattled about their performance while some of them felt frustrated or rattled, very few of among the respondents somewhat felt frustrated.

In general, based on the results in the figures above, orientation and mobility training has a positive influence on self-esteem since the respondents seem to be positive about most of the items in the table except for item 9 (I feel concerned about the impression I am making) that majority of them felt concerned about the impression they were making showing that they are kind of not so self-assured.

This finding agrees with the statement made by American Foundation for the Blind (AFB) (2007), which states that “well-developed social interactions skills are critical for building relationships, developing positive self-esteem, and finally for acceptance into the society. The finding also found that orientation and mobility training drastically improves social integration of Adults with visual impairment. It is also goes with Bray (1996) who observes that self-esteem is how people feel and like much about them. And the study asked much about how adults with visual impairment feel and like much about them. Most of the respondents believe that orientation and mobility training adjust their living standard in the society. The finding of the current study also concurred with the finding by (Bowen, 2010). The researcher investigated “Visual impairment and its impact on self-esteem”. Four children, whose self-esteem was measured as ‘low’ or ‘very low’ were the participants of the study. The researcher provided educational programs to find out
its effects on enhancing self-esteem among persons with visual impairment. The result indicated that overall, self-esteem levels improved for all four young people throughout the course of the study and primary pupils seemed to respond more quickly to the interventions than the secondary pupils. Their schools openly commented about the benefits of the interventions for the young people concerned. This study found that orientation and mobility as an intervention program increases self-esteem of Adults with visual impairment. The finding by Garaigordobil, & Bernarás, (2009) has differed from this study which concluded that women with visual impairment scored lower in self-esteem. However, in this study both male and female have higher self-esteem.

“I can say that Orientation and mobility has helped me a lot, because I was initially a sighted individual. When I lost my eyes, I came to Mariri Rehabilitation Centre where I was trained on how to control myself and my activities without depending on anybody. I am very happy and content in fact, I sometimes forget that I have a sight problem. Before the training I fight with my sighted guide but after the training we were friendly and sometime uses white collapsible cane”

“I will just begin by saying habarizaini, after that I want make it known to the Kenyans that we in Nigeria those of us with visual impairment like myself, I benefit a lot from O&M, it has drastically increased my self-esteem it has made me to be self-dependant I would not want to use the word independent because I don’t think anybody is independent even the so called able bodied cannot claim their independent talk less of those of us with visual impairment. So O&M has contributed a lot to my self-esteem and I should explain further I use collapsible white cane for my O&M skill after been aware of the environment I am in”

These were the response by two of the participants during focus group discussion portraying how orientation and mobility training influences their self-esteem. The finding shows that the respondents were satisfied with the way their bodies look. They were not frustrated about their performance and believed that others respect
and admire them. The participants also were confirming that they use collapsible white cane for their mobility.

“Yes, they have attended orientation and mobility training. They are confident in the place of work, people admire them. They are not isolated they like interaction with the other employee. They behave normally as expected.”

“They can do all the routine office jobs delightfully. They also cooperate fully when doing office jobs. They rarely show anger even if someone does something wrong to them. They enjoy working with fully sighted individuals.”

These were the interview results by welfare officers indicating how Adults with visual impairment interact with other employees in their place of work. The finding clearly shows that persons with visual impairment possess self-esteem in the place of work. The interviewees exposed that persons with visual impairment under their office feel good about themselves. They were not worried about what other people think of them. They do not feel unattractive. In addition they were very concerned about the impression they were making.

“Definitely, this training helps my son in many ways; the training has made him to feel himself. He does not stay in dirty he clean his clothes and iron them before he wear them. His friends invite him to attend some occasions. My son now feels very healthy, and as such, he intermingles with people happily, and without being discriminated against. The training has given him self-esteem as he feels like a normal human being. My son uses collapsible white cane and sometimes uses sighted guide”

“Yes, I have two sons who have visual impairment. One is 16 years and the other is 25 years old. I agree that orientation and mobility helps people with visual impairment in all aspect of their life. For example the older one did not get it easy he could not interact with people he was always isolated. He was quiet and at the same time we were shy to take him to one of the rehabilitation centres. It was later we decided to take him. After some weeks my son began to change. He was provided with cane to move along. He is always happy and he was no more in isolation. It also helps them to become acceptable members of the society. I cannot say they are
completely devoid of worry; there is still a difference between normal and those without visual impairment. But after this training, there is less of a worry on the part of them.”

These were the interview with parents describing how their sons behave after orientation and mobility training. The finding shows that the respondents were satisfied with the way their body looks like. They believe that others respect and admire them. They were self-conscious. They feel good about themselves. They were not worried about what other people think of them. This finding clearly shows that orientation and mobility has a positive influence on self-esteem among Adults with visual impairment.

4.4 Influence of Orientation and Mobility Training on Self-reliance of Adults with Visual Impairment

The second objective of the study sought to describe Influence of orientation and mobility training on self-reliance of adults with visual impairment. Participants were asked to respond to a twelve-item questionnaire. Responses were analyzed and the following results were obtained in table 4.3 below:
Table 4.3 Influence of Orientation and Mobility Training on Self-reliance

<table>
<thead>
<tr>
<th>Statement</th>
<th>Better</th>
<th>No Change</th>
<th>Worse</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Protective techniques</td>
<td>150</td>
<td>75</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Negotiating door and stairs</td>
<td>137</td>
<td>68.5</td>
<td>27</td>
<td>13.5</td>
</tr>
<tr>
<td>Street crossing</td>
<td>132</td>
<td>66</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>Identify presence of object in travel path</td>
<td>145</td>
<td>72.5</td>
<td>51</td>
<td>25.5</td>
</tr>
<tr>
<td>Discrimination of sound sources</td>
<td>138</td>
<td>69</td>
<td>59</td>
<td>29.5</td>
</tr>
</tbody>
</table>

The study shows in Table 4.3 that majority (75%) of the respondents felt that their protective techniques became better after the training. Minority (8%) experienced no change and small number became worse in terms of protective techniques.

Also more than half became better when it comes to negotiating doors and stairs; some became worse while remaining experienced no change.

In addition, most of the respondents became better in street crossing. Some experienced no change and minority became worse.

Also, almost three quarters of the respondents were better in identifying presence of objects in travel path after the training. The Majority did not change their ability to identify presence of objects in travel path while only 2% became worse.
Lastly, most of the respondents could discriminate sound sources better after the training. Very few (1.5%) did not change in terms of discrimination of sound sources while remaining participants became worse.

Table 4.4 Positive/Negative Responses about Ability to do Daily Independently

<table>
<thead>
<tr>
<th>Statement</th>
<th>Better F</th>
<th>Better %</th>
<th>No Change F</th>
<th>No Change %</th>
<th>Worse F</th>
<th>Worse %</th>
<th>Missing f</th>
<th>Missing %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bathing</td>
<td>110</td>
<td>55</td>
<td>86</td>
<td>43</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dressing</td>
<td>164</td>
<td>82</td>
<td>29</td>
<td>14.5</td>
<td>7</td>
<td>3.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Washroom</td>
<td>59</td>
<td>29.5</td>
<td>128</td>
<td>64</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Preparing meal</td>
<td>153</td>
<td>76.5</td>
<td>45</td>
<td>22.5</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Toilet</td>
<td>91</td>
<td>45.5</td>
<td>96</td>
<td>48</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

The table above indicated that, half of the respondents had improved in bathing and said they were better. Many did not experience any change and very few (2%) confirmed that they became worse after the training.

Also, more than three quarters of the respondents admitted that they were better in dressing. Some had not experienced any change and remaining became worse. Moreover, most of the respondents were better in preparing meal.

More than half of the respondents experienced no change in washroom, minority felt some improvement and were better in washroom after the training and very few became worse.
Also, many of the respondents did not experience any change in toilet. A closer percentage of them though consented to have become better in toilet and minority of them become worse.

In all the items except washroom and toilet, more than half of the respondents had experienced some improvement and were better in handling most of the things by themselves, this shows that the training had a positive impact on them and most of them became more self-reliant. The respondents however need more training on bathing and washroom.

This finding confirmed what Atlantic Province Special Education Authority (2003) observes that O&M training prepare students who are blind or VI to know where they are in relation to their environment and with confidence to move independently and safely. This finding assured that orientation and mobility improve self-reliance among person with visual impairment. The finding also agreed with assertion of Sandra (2000) that the development of independent life skills is important for full integration in society, employment, and independent living. The result of this study indicated how persons with visual impairment are independent after orientation and mobility training. The finding also was in line with statement by Human (2010) that one of the contributing factors for social inclusion for the learners with visual impairment is to be able to cope on their own and not depend on the other learners so much. This research also discovered that those adult with visual impairment who had been trained on orientation and
mobility were independents in their mobility and daily living activities. However, this finding disagrees with the finding of Hewett, R., Douglas, G. & Keil, S., (2015) the researchers noted that persons with visual impairment were less likely to view themselves as ‘active’ and ‘sociable’ whereas this finding confirmed that adults with visual impairment were active and sociable.

The finding of the current study agrees with that of Stuart, Lieberman and Hand K (2006). The study was on Beliefs about Physical Activity among Children who are Visually Impaired and Their Parents. The results indicate that these children perceived messages from their parents about the value of physical activity, as well as what their parents expected that the children could accomplish in the physical domain. This study also shows the participants were able to perceive different sound and do a lot of physical activities.

In Norway, the study reported by Mikiashvili, (2011) entitled “Strategies for Solving Tasks by Blind” The results show that congenitally blind persons use hepatic mental imagery and their strategies are based on the hepatic images. Whereas, newly blind persons use visual images and combine them with spatial images. However, adventitiously blind persons seem to be dealing with daily tasks by using both, hepatic and spatial images in addition to the visual remembrance of objects and environment. Moreover, ones having had training in particular activities have better strategies for solving activities of daily living, than those without any training. The same result was found in this study because the training
received by Adults with visual impairment influence their self-reliance in both mobility and daily living activities

Moreover, the present study was in consonance with the study conducted by Straw, Harley and Zimmerman, (1991) who determined the pretest and post-test mobility scores for indoor mobility and the inter-rater reliability of the assessment instrument and the result of the study found a significant improvement in mobility performance immediately after orientation and mobility training. The current study which concluded that orientation and mobility training has influence on self-reliance among persons with visual impairment confirmed the finding of the above study.

Present study agrees with the finding by Geruschat and Del’Aune (1989). They investigated the reliability and validity of mobility instructors’ scores of subjects’ performances in five areas (bumping, stumbling, drop-offs, street crossings, and orientation) and reported a significant reduction in total mobility incidents of a group of visually impaired subjects after orientation and mobility training. The present finding which indicates that orientation and mobility training has positive influence on self-reliance confirmed the above finding.

The finding of the current study were in argument with finding of Mahmoud, (2015) who explored orientation and mobility acquisition skills among students with visual impairment, and the finding indicates that curriculum contents of the visual impaired children have been fully incorporated into the curriculum of the
visually impaired of the school and all the visually impaired children unanimously agreed that they had never learned orientation and mobility skills in the school. The current finding shows that a lot of the adults with visual impairment benefited from orientation and mobility training that was learned from rehabilitation centers or schools.

“......I use white collapsible cane; the training also has helped me detect different sounds when I heard them while walking. For example I walked along a street, as soon as I reached the road side, I instantly knew it and before anybody assisted me, I raised up my hand when I heard the sound of approaching bus. I instantly knew that it was the bus I was to board. I rose up my hand and the driver stopped the car and asked me where I was going. I told him I was going to zoo road. And I boarded the bus and I was dropped at my destination. I tried to rise up my hand again and cross the road suddenly someone came and helped me cross the road. All this has become possible because of the training I received in O&M.”

“....... I am been provided the skill of moving about with the aid of white collapsible cane and that collapsible white cane has gone from the traditional one to the electronic one. I remember when I was in Manchester I was using an electronic collapsible white cane called ULTRA CANE and information about ultra cane could be got from www.ultracane.com, when you gate to their site you find some information about it and even there is information about training a person with visual impairment to ride a bike in that same wave site. So in essence what I am saying before I diverge orientation and mobility increased my self –esteem. In miraculous way I can say I can move about freely and independently without having any hurt. Initially when it was taught to me I was having that iota of fear that I will bump into an object or I will fall into an open dirge because in Nigeria there are places where we have open dirges. You have to know your way round in order to be able to cross the dirges. We were taught to identify colors of cloth and to put the same color on that was before the advent of color detector. We had been taught how to identify cloth by bottles attached to some color of cloth for examples round bottles are attached to white cloth, squire bottles are attached to black cloth than rectangular to say gray color and all those when you are able to distinguish one cloth than you are dependent in selecting your cloth by yourself.”
Above were the focus group discussions by the two persons with visual impairments. The findings indicate how orientation and mobility training influences self-reliance of these Adults with visual impairment. They acquired skill on how to negotiating door and stairs, street crossing discrimination of sound sources identifying presence of object in travel path. Therefore, they are very good in crossing roads and discriminating different sound sources.

".......my daughter feels herself no element of prostration by her performance she discriminate different source of sound. She knows the difference sound of any member of the family. If she hear a voice of one of the family she calls his/her name directly. My daughter uses her collapsible cane when moving to unfamiliar places. She knows how to prepare meal by herself."

"Yes I have a daughter who is visually impaired and she is twenty six years old. Yes she knows how to do a lot of thing by herself compared with the rest of people who has not got that kind of training. For example, sometimes she takes care of the children such as birthing and dressing her younger once. She uses her cane while entering birth room or toilet and she does all the activities perfectly. She prepares meals sometimes. But, she still does not want to associate with people and is still withdrawn. But at home, he does anything herself, she can wash clothes and takes bath. He can help me do many things."

These were the responses by the parents during an interview telling about their daughters. The finding shows that their sons are able to discriminate different sound sources dressing and preparing meal as some of the skills acquired during orientation and mobility training. Based on the responses the researcher concluded that individual with visual impairment are trained thoroughly there is tendency to develop self-dependence.
“They use white collapsible cane while moving about. They cross streets safely. They are able to negotiate doors and stairs therefore they take themselves to the local government and we send them different offices within or outside the secretariat. They are hardworking they do almost all of the office work assigned for them. They have never taken them to the birth room/ or toilets for their bladder care or bowel care we enjoy working with them.”

“They can do all the routine office jobs delightfully. They also cooperate fully when doing office jobs. They rarely do not show anger even if someone does something wrong to them. They enjoy working with fully sighted individuals.”

These were the interview result by welfare officers indicating how Adults with visual impairment are independent in the place of work. The finding clearly shows that persons with visual impairment are independent in their mobility and some of their daily living activities. The interviewees exposed that persons with visual impairment under their office take themselves to their place of work and are able to move all over the secretariat so also off secretariat independently.

4.5 Influence of Orientation and Mobility Training on Community Participation of Adults with Visual Impairment

The third objective of the study sought to investigate Influence of orientation and mobility training on community participation of adults with visual impairment. Participants were asked to respond to eleven-item questionnaire and results are indicated in table 4.5 below:
Table 4.5 Influence of Orientation and Mobility Training on Community Participation

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>I am active in community groups</td>
<td>79</td>
<td>39.5</td>
<td>38</td>
<td>19</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>My peers value my contributions to group settings</td>
<td>61</td>
<td>30.5</td>
<td>50</td>
<td>25</td>
<td>19</td>
<td>9.5</td>
</tr>
<tr>
<td>I have made new friends as a result of participation in community groups</td>
<td>105</td>
<td>52.5</td>
<td>24</td>
<td>12</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>I have a leadership role in a community organization</td>
<td>46</td>
<td>23</td>
<td>35</td>
<td>17.5</td>
<td>31</td>
<td>15.5</td>
</tr>
<tr>
<td>I voluntarily spend 5 hours a week at meetings of civic or social organizations</td>
<td>43</td>
<td>21.5</td>
<td>55</td>
<td>27.5</td>
<td>22</td>
<td>11</td>
</tr>
</tbody>
</table>

The results in Table 4.5 show that half of the respondents (58.5%) strongly agreed that they were active in community groups while only 38% of the respondents disagreed with the statement.

Also, more than half of the respondents (55.5%) strongly agreed that peers value their contributions to the group settings while (20.5%) disagreed with the statement.
The analysis also shows that, majority of the respondents (64.5%) strongly agreed and that they had made new friends as a result of participation in community groups while (31.5%) disagreed with the statement.

Many respondents expressed strong disagreement or that they had a leadership role in a community organization, but a roughly equal number many strongly agree or agreed. Some were neutral and one respondent did not answer the question.

Also, almost half (49%) of the respondents strongly agreed that they voluntarily spend 5 hours a week at meetings of civic or social organisations.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have mentored someone.</td>
<td>71</td>
<td>35.5</td>
<td>33</td>
<td>16.5</td>
<td>57</td>
<td>1</td>
</tr>
<tr>
<td>I have gained skills from my extracurricular participation.</td>
<td>84</td>
<td>42</td>
<td>51</td>
<td>25.5</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>Enjoy working with others.</td>
<td>28</td>
<td>14</td>
<td>95</td>
<td>47.5</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>I am a member of a team.</td>
<td>25</td>
<td>12.5</td>
<td>109</td>
<td>54.5</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Someone has mentored me.</td>
<td>66</td>
<td>33</td>
<td>39</td>
<td>19.5</td>
<td>20</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 4.6 shows that, half the respondents strongly agreed that they had mentored someone while many of the respondents strongly disagreed with the statement.

In addition, majority of the respondents strongly agreed that they had gained skills from their participation in an extracurricular activity.

Additionally, majority of the respondents strongly agreed or agreed that they enjoy working with others, some strongly disagree or disagreed, few were neutral and very few failed to respond to the question.

More than half of the respondents (52.5%) strongly agreed that they had been mentored by someone while 25% of the respondents strongly disagreed with the statement.

There was a strong agreement articulated by the respondents on being a member of a team, while many of them however strongly disagreed or disagreed and few were neutral.

The results generally show that orientation and mobility training have a positive influence on community participation. The respondents seem to be more integrated into community groups and social organisations. A lot need to be done though, in ensuring they have leadership roles in the community organizations.

The study by Schur and Adya (2013) about Sidelined or Mainstreamed, Political Participation and Attitudes of People with Disabilities in the United States was in
dispute with the current study. The former indicated that the people with disability were sideline in political participation while the letter confirmed the general participation of Adults with visual impairment in all social activities.

The result of the current study confirms the finding of the study conducted by Lawson (2014) who described Monitoring Political Participation Rights of Blind and Partially-Sighted People in Europe: The researcher concluded that blind and partially sighted people are not legally prevented from participating in relevant organizations on an equal basis with others. The database also indicates that blind and partially sighted people have been elected into political positions and the database indicates that blind and partially sighted people are able to hold such office in all the countries apart from Serbia and possibly Russia. The present result also discovered that adults with visual impairment are fully participated in all form of social activities as a result of orientation and mobility training received. In contrast, the study conducted by Lifshitz, Hen and Weisse (2007) entitled Self-concept, Adjustment to Blindness, and Quality of Friendship among Adolescents with Visual Impairments. The finding indicated that sighted adolescents scored significantly higher on spending leisure time together and on confrontation and betrayal than did those who were visually impaired. The result was in dispute with the current finding which confirmed the full participation of adults with visual impairment in community activities. Moreover, this study was not in line with the finding of Alma (2012) entitled “Participation of the visually impaired elderly: determinants and intervention” The results of the cross-sectional study underscore the prevalence of restrictions in participation among the visually impaired elderly.
And emphasize that they participate less in society compared to peers and the results showed, in addition, that the visually impaired elderly are at risk for loneliness. While the present study underscore the influence of orientation and mobility training on social integration of persons with visual impairment which discovered that adults with visual impairment do participate in almost all social activities. The finding of the present study confirmed the Report on the Observations and Recommendations Made by Voters with Disabilities in Tanzania's 2010 General Election, by (Comprehensive Community Based Rehabilitation in Tanzania, 2010) which stated that among the key results, it was found that 63% of people with disabilities surveyed participated directly in the election campaign while 37% did not. Moreover, most people with disabilities (also 63%) accessed information on the general election through print and electronic media (newspapers, radio and television). The same with current finding which traced the high level of participation of adults with visual impairment in all community activities as a result of orientation and mobility training received.

“……..Orientation & Mobility has helped me very much. I can now do many things with the assistance of my collapsible white cane. Like in the area of community participation, I now engaged fully in it. There are some sighted and visually impaired individuals’ associations that I am a member of. I gave a lot of contributions physically, morally and even financially toward running the associations. This is because of the training I received in O&M.”

Community participation yes I participated in community activities been it political or otherwise I get involved in it. Sometimes I am given position to hold and dispose my own duty as best as I could as a member of the community.
Above were the focus group discussions by the two persons with visual impairments. The findings indicate how orientation and mobility training influences them to engage in community activities. They were telling the interviewer that they were active in community groups Enjoy working with others. Some have even hold a responsibility in the association that they were members in. the result also shows that the participants gained skills from the participation in an extracurricular activity, made new friends as a result of participation in community groups and they were mentored by someone and someone was mentored by them.

“……Yes, I have many people with visual impairment. They work under my office, welfare office, Kano Municipal. Some are men some are women. Some are below 25 years, while some are 25 years and some above 25 years old. Yes, O&M helps the visually impaired to interact and associate with others. They are friendly with other employees. They do all tasks assigned to them. They make us laugh and they are not angry with anybody.

“Yes of course, I have adults with visual impairment under my office. They are both male and female. Their ages were between twenty to twenty five years old. Yes orientation and mobility improves social integration of persons with visual impairment. There are so many differences in terms of relationship with the people. They are so different compared with other persons with visual impairment who did not attend that training.”

These were the response by Social welfare officers from one of the selected local government describing the relationship of adults with visual impairment with sighted employees. The response shows that Adults with visual impairment participate actively in their place of work. They are friendly and hardworking. Therefore orientation and mobility training has positive influence on community participation of adults with visual impairment.
“She associate and interacts with her female friends during weeding and naming ceremonies. Recently, her friend got married she accompanied the bride to Zamfara. Truly, this training has a lot of positive influence to people with visual impairment. Therefore, I call on people to embrace these people and stop discriminating against them.”

“Yes, he participates in family activities. No he doesn’t have any leadership role in the community. He plays with his siblings, unlike when he did not receive this training. But is still needs to improve his community participation and economic participation”

These were the Interviews by the parents explaining his/her child ability to participate in social activities. The finding shows that the parents’ children are very active within their families and neighbors. They participate in social ceremonies like wedding and naming ceremonies. Therefore, the result indicated that adults with visual impairment enjoy orientation and mobility training by enhancing their participation in community activities.

4.6 Influence of Orientation and Mobility Training on the Economic Participation of Adults with Visual Impairment

The fourth objective of the study sought to investigate Influence of orientation and mobility training on the economic participation of adults with visual impairment. Participants were asked to respond to a ten-item questionnaire. Then the results are indicated in table 4.7 below:
Table 4.7 Orientation and Mobility Training on the Economic Participation

<table>
<thead>
<tr>
<th>Statement</th>
<th>Better</th>
<th>No Change</th>
<th>Worse</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Time management</td>
<td>141</td>
<td>70.5</td>
<td>53</td>
<td>26.5</td>
</tr>
<tr>
<td>Access to place of work</td>
<td>111</td>
<td>55.5</td>
<td>64</td>
<td>32</td>
</tr>
<tr>
<td>Work readiness</td>
<td>150</td>
<td>75</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td>Acceptance by employer</td>
<td>135</td>
<td>67.5</td>
<td>59</td>
<td>29.5</td>
</tr>
<tr>
<td>Interaction with other employees</td>
<td>169</td>
<td>84.5</td>
<td>28</td>
<td>14</td>
</tr>
</tbody>
</table>

The Table 4.7 indicates that majority of the respondents (70.5%) were better time managers while only (26.5%) of the respondents were no.

Also access to place of work became better for half of the respondents, there was no change for many of the respondents and it became worse for very small number of them.

Besides, in terms of work readiness, majority said they were better, some had no change and very few became worse after the training.

In addition, a lot of the respondents were better accepted by their employers after the training, some experienced no change and the acceptance by the employer became worse for two point five percent of the respondents.

Moreover, More than three quarter of the respondents became better in their interactions with other employees, few did not change and one percent became worse.
Table 4.8 Positive/Negative Responses about Commitments to Economic Independence

<table>
<thead>
<tr>
<th>Statement</th>
<th>Better</th>
<th></th>
<th>No Change</th>
<th></th>
<th>Worse</th>
<th></th>
<th>Missing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Ability to obtain clothes</td>
<td>124</td>
<td>62</td>
<td>70</td>
<td>35</td>
<td>5</td>
<td>2.5</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Ability to get food</td>
<td>136</td>
<td>68</td>
<td>59</td>
<td>29.5</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Ability to maintain house</td>
<td>141</td>
<td>70.5</td>
<td>58</td>
<td>29</td>
<td>1</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Source of income</td>
<td>107</td>
<td>53.5</td>
<td>58</td>
<td>29</td>
<td>34</td>
<td>17</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Obtaining a job</td>
<td>123</td>
<td>61.5</td>
<td>52</td>
<td>26</td>
<td>25</td>
<td>12.5</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Majority of the respondents improved in the ability to obtain clothes and were better, many had no change and smaller number of the participants became worse.

As well, the ability to obtain food was better for a lot of the respondents; many had not changed and had worsened for very of them.

Many respondents said they were better in maintaining house, some felt they had not changed and small number felt they had worsened in their ability to maintain house.

Additionally, half of the respondents agreed that their source of income had become better after the training, while some did not see any change and insignificant number of the participants became worse.
The responses show that their ability to obtain a job became better after the training for many of the respondents. Some had experienced no change and few became worse.

In all the items the respondents established that they had experienced some kind of improvement and most of them were much better than they were before the training. Orientation and mobility training therefore had a positive influence on the economic participation of the respondents.

The finding of the current study confirmed the influence of one of the training (orientation and mobility) in economic empowerment of persons with visual impairment. The finding also confirmed with finding by Turcotte (2014). Who came up with the results that hundreds of thousands of individuals are limited in their daily activities because of a physical or mental disability, in contrast participate actively in the labour market and often hold jobs that match their qualifications.

This study was in argument with the finding by Barbra and Mutswanga (2014). The Attitudes of Employers and Co-Workers towards the Employment of Persons with Disabilities in Zimbabwe was a systemic enquiry. The major findings in this study were that employees with disabilities were discriminated in the workplace. Co-workers perceived PWDs as generally incompetent as they would need the assistance of fellow workers to accomplish tasks while employers were of the view that some of these PWDS scare away customers while some are dependent on
fellow workers for the accomplishment of tasks. The finding of this study confirmed that there was no discrimination in workplace for persons with visual impairment. The researcher discovered that most of the workers who are persons with visual impairment were independent and were socially integrated.

Nevertheless, current study sported the finding by Emuang, (2014), who identified variables in the administrative records of the federal Rehabilitation Service Agency that impact self-employment outcomes and earnings among blind or visually-impaired consumers. The researcher believed that those who received assessments, diagnosis and treatment, technical assistance, and rehabilitation services were more likely to be self-employed at closure. And this finding discovered that orientation and mobility training has influence on economic participation among adults with visual impairment. However, the finding is in dispute with the fact that persons with disabilities are excluded from economic opportunities and when they are included, they earn much less than those without disabilities Banks and Polack (2014).

The current finding believes that when person with visual impairment acquainted with orientation and mobility training is very easy to get employed as soon as he meets the employer’s criteria. Additionally, this study disagrees with the report by O’Donnell (2014) which revealed that employment rates amongst blind people are at negative side. In this study most of the persons with visual impairment who received orientation and mobility training were employed. Teskeredžić, Alibegović and Salkić (2016) carried out a study titled “The Level of Social Distance towards
Visually Impaired Persons Regarding to Occupation in Bosnia and Herzegovina.”

All results of the study were obtained at a significance level of 0.05. The results indicate that there is no opinion and level of social distance in relation to the occupation of respondents and no statistically significant difference.

The result of the current study confirmed the above finding that persons are employed especially those who had and they do not face any social barriers from the sighted person in their place of work. Chana, The study conducted by Chao-Chien (2012) investigated the impact of a 10-week baseball training camp on visually impaired players. The results indicated how such training has a direct beneficial outcome towards orientation and mobility development for the visually impaired. This study was in line with the above study. The result confirmed that, the more persons with visual impairment trained the more opportunities will come. Orientation and mobility training improves economic participation that enhances social integration of persons with visual impairment.

Murugami, (2010) explored career information learners with visual impairment acquire from school to enable them develop vocational self-concept and career decision-making self-efficacy. The major finding indicated a linear relationship between aspects implying that learners experienced increased development as they progressed in education. The findings affirmed need for comprehensive career guidance and counseling for learners with disabilities, culminating to suggested vocational development model. The current finding was supporting the above
because the finding indicated the influence of orientation and mobility training on economic participation.

This study also goes hand in hand with the finding by Omede and Tenimu (2013) which stated the significant of Counseling Persons with Visual Impairment for Effective Career Choice Career choice is an important issue in every man’s life. The paper concluded that in counseling persons with visual impairment on career choices, counselors should among other things assess the strength of available resources, the interest of the visually impaired person, the intellectual capacity of the student, the excellent of the handicapping condition and the nature of the economy. The finding of this study indicated that orientation and mobility training could help in carrier choice at it helps in economic participation of Adults with visual impairment.

“……..Yes, I have good access to job but only disappointed me is that from my residence to my place of work is very far away so I have to track to the bus stop getting a bus or a taxi that will take me to my place of work then tracking from where I dropped to the school. You know it is very embracing. One of United Nations Convention on the Right of Persons with Disabilities says that a place of work for a person with visual impairment should be close to, very close to where he lives to accord him the right to track from where he is staying to his place of work. So, this is denied in Nigeria.”

“……..It helps to improve my material wellbeing, as I can now independently take care of myself and other and other people under my custody. I can go to my workplace alone. I can go to Sabon Gari market to buy things and come back alone I use my white collapsible cane and sometimes using sighted guide in most of unfamiliar places but in a familiar place I can go around without a white collapsible cane independently. All this is possible because of this training.”
The responses written were from FGD. The respondents described how they access job and place of work. The result shows that orientation and mobility training has great influence in enhancing economic independence of Adults with visual impairment in Kano, Nigeria.

“They came to the work place early even before the eight o’clock. They are feeling confidence working with others. They may have other responsibilities outside the office but in their place of work they don’t have.”

“They are punctual and always available. They do the tasks assigned to them on time. The moment they are asking to do something, they do it instantly and without any hesitation. They do not have any other responsibilities in this office”.

Welfare officer responses about what the observed while working with visually impaired in the place of work. The result of the above interview shows that orientation and mobility pays for the economic participation of persons with visual impairment.

“…….The older one now sells bags they sew…….”

It was an interview with a parent telling about the source of income of her son. This shows that the person is not dependents because he is able to sew bags and sold it.
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
The purpose of the study was to determine the influence of orientation and mobility training on social integration of adults with visual impairment in Kano state of Nigeria. The study comprised four objectives stated as follows: To describe the influence of orientation and mobility training on self-esteem of adults with visual impairment; To describe the influence of orientation and mobility training on self-reliance of adults with visual impairment; To investigate the influence of orientation and mobility training on community participation of adults with visual impairment and to determine the influence of orientation and mobility training on the economic participation of adults with visual impairment. Summary of the findings, conclusions and recommendations on how the result of the research could be useful are presented in this chapter. Suggestions for future research marked the final phase of this chapter.

5.2 Summary of the Findings
This summary is based on the four objectives formulated for the study. The study findings clearly indicate that most of respondents believed that orientation and mobility training has influence on Social integration of adults with visual impairment. The findings were presented as follows:

Objective one aimed at describing self-esteem skill developed by adults with visual impairment, as a result of orientation and mobility training, received in one of the rehabilitation centers of Kano state. While achieving this objective, State Self-
Esteem Scale questionnaire was adopted and at the same time interview and Focus Group Discussions were posed. The results indicated that orientation and mobility training has a positive influence on self-esteem of Adults with visual impairment in Kano state. The collected information remarked that majority of the respondents seem to be positive about most of the items (feeling confidence about their abilities, others respect and admire them and so on) except for item 9 (I feel concerned about the impression I am making) that majority of them very much or extremely do not felt concerned about the impression they were making showing that they are kind of not so self-assured.

Objective two sought to determine the self-reliance skill practice as a result of orientation and mobility training. While achieving this objective, Self-Reliance Achievement Scale was the adopted questionnaire; interview and Focus Group Discussion were posed. Findings indicated that all the items (protective techniques, street crossing, identifying presence of objects in travel path and so on) except items six and seven (bladder care and bowel care), more than half of the respondents had experienced some improvement and were better in handling most of the things by themselves, this shows that the training had a positive influence on their mobility and daily living activities and most of them became more self-reliant. The respondents however need more training on bladder and bowel care.

Objective three, sought to describe the integration of adults with visual impairment in the society, due to the skills possessed during orientation and mobility training
at Kano state rehabilitation centres. While achieving this objective Likert scale instrument for Measuring Community Involvement; scheduled interview and Focus Group Discussion were used. Items such as enjoying working with others, participation in community groups and leadership role in a community organization and the rest were addressed. The results generally show that majority of the respondents participate in the community activities which signify that orientation and mobility training has a positive influence on community participation of individual with visual impairment. The respondents seem to be more integrated into community groups and social organisations. However, the study also established that majority of the adults with visual impairment did not have leadership role in the community. Therefore a lot need to be done in ensuring they have leadership roles in the community organizations.

Objective four aimed at determining the influence of orientation and mobility training on economic participation of adults with visual impairment. While achieving this objective Self-Reliance Achievement Scale; interview and focus group discussions were the tools used in data collection. The specific items that were discussed were: obtain a job, Also access to place of work interactions with other employees and many more. Findings indicated that, in most of the items the respondents established that they had experienced some kind of improvement and most of them were much better than they were before the training. Orientation and mobility training therefore had a positive influence on the economic participation of Adults with visual impairment in Kano state, Nigeria.
5.3 Conclusions

On the basis of finding of this study, the researcher reached the following conclusion:-

i. Orientation and mobility training has a positive influence on self-esteem since the respondents seem to be positive about most of the items. A very limited number of the respondents were not conscious of their self-esteem.

ii. Orientation and mobility training promote self-reliance among adults with visual impairment as most of the respondents indicated better which means there were changes after the training. The respondents however need more training on toilets and birth rooms.

iii. Orientation and mobility training has positive effect on Integration of adults with visual impairment in the society. The results generally show that majority of visual impairment participate in the community activities.

iv. Orientation and mobility training also has a positive influence on the economic participation of persons with visual impairment since most of them indicated that it improve their participation in economic matters.

5.4 Recommendations

In line with the finding of the study the researcher recommended the following:

5.4.1 Policy Recommendations

1. Since orientation and mobility training has positive influence on self esteem the Government through the Ministry of Education should include orientation and mobility training in regular school’s curriculum. This will burst the self-esteem of persons with visual impairment and a harmonious relationship between them and the society.
2. Realising that orientation and mobility training has positive influence on self-reliance the Government through the ministry of women affairs should provide more gadgets be it a traditional collapsible white canes or the electronic collapsible white canes as well as relevant instructional materials to improve their access to toilets and birth rooms.

3. Taking into account that the orientation and mobility training has positive influence on community participation of adults with visual impairment the Government through the ministry of women affairs should established more rehabilitation centres and keep on providing orientation and mobility training to ensure that the training is adequate. And to adopt expanded core curriculum used in United State of America to replaces the existing one which does not future O&M as a training subject

4. Taking into account that the orientation and mobility training has positive influence on economic participation of adults with visual impairment, Government through the ministry of labor, Nongovernmental organization and the wealthy individuals should provide adequate funds for, professionals to provide training and sheltered workshops to increase employment for adults with visual impairment in the public and private sectors. This will facilitated their fully integration in the society.
5.4.2 Suggestions for Future Studies

Discussions of a few suggestions for future studies are as follow:

1. Nigeria is a country with large number of population, this study was conducted in one state out of thirty six, and the result may not be enough to generalize in the whole country. Therefore, a nationwide version of this study is recommended to confirm the finding.

2. Another recommendation is that one may identify other intervention strategies to social integration of persons with Visual impairment.

3. Relationship between orientation and mobility training and athletics among persons with visual impairment is also recommended.
REFERENCES


Atlantic Province Special Education Authority. (2003). *Short Term Programmes: A Vital Component for Students who are Blind or Visually Impaired*. 5940
South [71] Street: Halifax.


www.dredf.org/international/nig1.html


APPENDIXES

APENDIX 1A

Map of Nigeria

Figure 1. Study locale
APPENDIX 1B: Kano state Map

Source:
http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Kano/Kano_State.html
## APPENDIX II

### WORK PLAN

<table>
<thead>
<tr>
<th>S/NO.</th>
<th>DATE</th>
<th>ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>May, 2016 – October 2016</td>
<td>Proposal development and approval</td>
</tr>
<tr>
<td>2</td>
<td>November 2016</td>
<td>Presentation at the Departmental level</td>
</tr>
<tr>
<td>3</td>
<td>December, 2016</td>
<td>Effecting the corrections</td>
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<td>4</td>
<td>January, 2017 – February, 2016</td>
<td>Pre-testing of research instruments to check validity and reliability</td>
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<td>5</td>
<td>March, 2017 – July, 2017</td>
<td>Data collection</td>
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<tr>
<td>6</td>
<td>August, 2017 – February, 2018</td>
<td>Data analysis, thesis draft writing and correction of the draft thesis</td>
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<tr>
<td>7</td>
<td>March, 2018 - June, 2018</td>
<td>Notice for submission and submission</td>
</tr>
<tr>
<td>8</td>
<td>October, 2018</td>
<td>Presentation of the thesis to graduate school.</td>
</tr>
<tr>
<td>9</td>
<td>December, 2018</td>
<td>Graduation</td>
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</tbody>
</table>

**Source**: Researcher
APENDIX III

INTRODUCTION LETTER TO THE RESPONDENTS

Influence of Orientation and Mobility Training on Social Integration of
Adults with Visual Impairment in Kano State, Nigeria

Department of Special Needs,
Kenyatta University Nairobi County,
Kenya.

Dear Respondent,
I am a postgraduate student of the above named department carrying out a survey study on research titled “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria. I kindly seek for your support and time to fill the questionnaire attached herewith, for the purpose of research. All information provided will be treated confidentially and is purely for academic purpose only.

Thanks
Abubakar Isa Ibrahim
E83F/30852/2015
APPENDIX IV: QUESTIONNAIRE TO THE RESPONDENTS

Instruction: Please tick (    ) the appropriate column of your choice and fill in the space provided.

SECTION “A” Demographic Data of the participants

1. Sex:
   Male   Female

2. Age
   25-34 years   35-45 years

3. Name of rehabilitation centre attended_____________________________________

4. Local Government area______________________________________________________

5. Name of the organization you work with______________________________________
SECTION “B” Information

Influence of Orientation and Mobility Training on Self-esteem

Instruction

KEY: -

1, Not At All 2, A Little Bit 3, Somewhat 4, Very Much 5, Extremely

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I feel confident about my abilities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I feel satisfied with the way my body looks right now.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I feel frustrated about my performance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I feel that others respect and admire me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I feel self-conscious.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I feel good about myself.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I am worried about what other people think of me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I feel unattractive.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I feel concerned about the impression I am making.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I feel like I'm not doing well.</td>
<td></td>
<td></td>
<td></td>
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</table>

Influence of orientation and mobility training on self-reliance

Instruction

KEY: -

1, Better 2, No Change 3, Worse

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<tr>
<td>1</td>
<td>Protective techniques</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Negotiating door and stairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Street crossing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Discrimination of sound sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Identify presence of object in travel path</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bladder care</td>
<td></td>
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<td></td>
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<td>7</td>
<td>Bowel care</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>Bathing</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>Dressing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Preparing meal</td>
<td></td>
<td></td>
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</table>
Influence of orientation and mobility training on community participation

Instruction

KEY: -

1. Represents Strongly agree: 2 Agree; 3 Neutral; 4 Disagree; 5 Strongly Disagree

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<tr>
<th>S/N</th>
<th>ITEMS</th>
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<tbody>
<tr>
<td>1..</td>
<td>I am active in community groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>My peers value my contributions to group settings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Enjoy working with others.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>4</td>
<td>I voluntarily spend 5 hours a week at meetings of civic or social organizations.</td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>I have a leadership role in a community organization.</td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>I am a member of a team.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I have gained skills from my participation in an extracurricular activity.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>8</td>
<td>I have made new friends as a result of participation in community groups.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I have mentored someone.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Someone has mentored me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Influence of orientation and mobility training on Economic participation

Instruction

KEY: -

1, Better 2, No Change 3, Worse

Please tick (✓) in the appropriate box for your response below.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Obtaining a job</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Access to place of work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Work readiness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Acceptance by employer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Interaction with other employees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ability to get food</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Ability to obtain clothes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Ability to maintain house</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Source of income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Time management</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Interview Guide for parents

1. Do you have person with visual impairment in your family?
   - Yes □  No □

   Gender – male □  Female □

   Age- 25-34 □  35-45 □

2. Did he/she attend orientation and mobility training in one of the rehabilitation centers here in Kano state?
   - Yes □  No □

3. Do you consider orientation and mobility training improves social integration of persons with visual impairment?
   - Yes □  No □

   If yes, state the nature……………………………………………………..

4. Does he/she feel frustrated with his performance?

5. Does he/she discriminate different sound sources?

6. Does he/she able to move around independently?

7. Does he/she like participating in family activities?

8. Does he/she have any leadership role in a community?

9. Does he/she able to cater some basic needs such as food, clothes or shelter?

10. Suggest strategies that can enhance social integration of adults with visual impairment in Kano State

   __________________________________________________________
   _________________________________________________________
   _________________________________________________________
Interview Guide for social welfare officers

1. Do you have person with visual impairment under your office?
   Yes [ ] No [ ]

   Gender – male [ ] Female [ ]

   Age- 25-34 [ ] 35-45 [ ]

2. Do you believe that orientation and mobility training improves social integration of persons with visual impairment?
   Yes [ ] No [ ]

   If yes, state the nature…………………………………………………………………………………………

3. Does he/she worry about what other people think about them?
4. How do they behave?
5. Do they enjoy working with others?
6. Do they come late to their place of work?
7. Are they able to accomplish certain task in a defined time?
8. Does he/she feel attractive?
9. Does he/she have any other responsibility outside the primary one?
10. Suggest strategies that can enhance social integration of adults with visual impairment in Kano State

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
APENDIX V:

FOCUS GROUP DISCUSSION SCHEDULE FOR ADULT WITH VISUAL IMPAIRMENT

Guidelines for discussion

1. **Self esteem skills**

   Feeling satisfied with the way my body looks right now.

   Feeling others respect and admire me.

   Feeling worried about what other people think of me.

2. **Self reliance**

   Discrimination of sound sources

   Dressing

   Identify presence of object in travel path

3. **Community participation**

   I am active in community groups

   My peers value my contributions to group settings.

   I have made new friends as a result of participation in community groups.

4. **Economics participation**

   Obtaining a job

   Access to place of work

   Acceptance by employer
KEBANTACCIYAR HIRAR GABA-DA-GABA TARE DA MANYA MASU
LARURAR GANI
JAGORAN TATTAUNAWAR

1. Dabarun yarda da kai:
   Ina jin dadin yadda jikina yake a yanzu.
   Ina jin dadin yadda mutate suke girmamani da karramani.
   Ina jin damuwa/haushin yadda mutate suke tunani a kaina.

2. Dogaro da kai:
   Tantance sautika.
   Kayan sa wa (suturce jiki).
   Fahimtar wani abu a kan hanya.

3. Shiga harkokin al’umma:
   Ina shiga cikin harkokin kungiyoyi.
   ‘Yan kungiya suna girmama ra’ayina.
   Nayi sababbin abokai a sakamakon shiga harkokin kungi/yoyi.

4. Shiga harkokin tattalin arziki
   Samun aikinyi
   Hanyar zuwa wajen aiki.
   Karbuwa a wajen aiki
1. Shin kana da mutum mai matsalar gani a cikin iyalanka?
   Eh  
   A’a  
   Jinsi: Namiji  
   Mace  
   Shekara: 25-34  
   35-45  

2. Shin ya/ta taba halattar taron wayar da kai da zirga-zirga a daya daga cikin cibiyoyin gyaran dabiu (Hali) da ke jihar kano?

3. Shin kana ganin cewa taron wayar da kai da zirga-zirga na inganta rayuwar mutane masu fama da matsalar gani?
   Eh  
   A’a  
   Idan ka yarda, fadi dalili…………………………………………………………………………………………

4. Shin yana/tana damuwa da yanayin kwazonsa?

5. Shin yana/tana tantance wasu tushen samar da sautuka?

6. Shin yana/tana iya yawo shi/ita kadai?

7. Shin yana/tana shiga harkokin iyali?

8. Shin yana/tana da wani matsayi/shugabanci a cikin al’umma?

9. Shin yana/tana iya samarwa da kansa/kanta abubuwan bukatar rayuwa; kamar Abinci, sutura, ko muhalli?

10. Bayyana wasu hanyoyi da za’a iya bi don a inganta rayuwar manya masu matsalar gani a jihar kano

   …………………………………………………………………………………………………………………………………………………
JAGORAN TATTAUNAWA DA OFFISHIN WALWALAR
JAMA’A/ AL’UMMA.

1. Shin kana da mutum mai matsalar gani a cikin iyalanka?

Eh ________  A’α ________
Jinsi: Namiji ________  Mace ________
Shekara: 25-34 ________  35-45 ________

2. Shin ka yarda cewa taron wayar da kai da zirga-zirga na inganta rayuwar mutane masu fama da matsalar gani?

Eh ________  A’α ________
Idan ka yarda , fadi dalili…………………………………………………..

3. Shin yana/tana damuwa da yadda mutane ke yi maka/ki wani kallo?

4. Yaya suke gudanar da ma’amalarsu?

5. Shin yana/tana jin dadin yin aiki dad a abokan aikin su?

6. Shin yana/tana zuwa a makare wajen aikinsu?

7. Suna iya kamala aikinsu akan lokaci?

8. Shin yana/tana jin kwarin gwiwar yin aiki?

9. Shin yana /tana da Karin wani aiki na musamman bayan aikinsa/tan a asali?

10. Bayyana wasu hanyoyi da za’a iya bi don a inganta rayuwar manya masu matsalar gani a jihar kano
WADADDA SUKA FASSARA:

1. Mal. Muhammad Sulaiman Abdullahi
   Department of Nigerian Languages Bayero University Kano.

2. Mal. Yusif Ahmad Gwarzo
   Department of Languages Yusif Maitama Sule University Kano.
APENDIX VI: RESEARCH INSTRUMENTS

- State Self-Esteem Scale developed by Heatherton (1991)
- Self-Reliance Achievement Scale developed by Minnesota Community Action Association (2002)
- Instrument for Measuring Community Involvement developed by Staunton (2001)
- Structured interviews.
- Focus Group Discussion
APPENDIX VII: LETTER REQUESTING FOR PERMISSION TO
CONDUCT RESEARCH IN LOCAL GOVERNMENTS

Department of Special Education,
Bayero University Kano,
Kano State.
2nd August, 2017.

The Higher Commissioner,
Ministry of Women Affairs,
Through:
The Director Welfare Office,
Kano State.

Dear Sir/Madam;

RE: Request for permission to conduct research in Local Government’s welfare offices of Kano State

My name is Abubakar Isa Ibrahim, a lecturer at Bayero University Kano in the department of special education. I am pursuing a PhD in Special Needs Education at Kenyatta University in Nairobi, Kenya. I am conducting a research on Influence of Orientation and Mobility Training on Social integration of Adults with Visual impairment in Kano, Nigeria.

Attached here is an introduction letter from Kenyatta University for your consideration.

In case any complaint related to the research conduct arises from any welfare officer, please feel free to contact me on the following contacts: Cell phone: 07064889325, Email: abubakarisahibrahim0@gmail.com

I look forward to your positive response.

Yours sincerely;

Abubakar Isa Ibrahim
PhD Candidate-Kenyatta University
# APPENDIX VIII: BUDGET ESTIMATES

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature Review (Travelling, photocopying etc)</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Preliminary Visits to the Target Population</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Stationery</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Proposal Writing</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Development of Research Instruments</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Piloting</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Fieldwork</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Communication (Airtime, Security, Service, postage, internet, etc)</td>
<td>10,000.00</td>
</tr>
<tr>
<td>Research Assistants</td>
<td>40,000.00</td>
</tr>
<tr>
<td>Accommodation</td>
<td>20,000.00</td>
</tr>
<tr>
<td>Thesis Writing and Binding</td>
<td>40,000.00</td>
</tr>
<tr>
<td>Contingencies</td>
<td>20,000.00</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>270,000.00</strong></td>
</tr>
</tbody>
</table>
APPENDIX IX A: CONSENT FORM FOR ADULTS WITH VISUAL IMPAIRMENT

Introduction
Dear respondent,
My name is Abubakar Isa Ibrahim, a Ph.D student from Kenyatta University I am conducting a study on “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria.” I am formally demanding for acceptance to involve you in the study. The information may be used to serve as a good advocacy material for propagating the essence and needs for orientation and mobility training among persons with visual impairments; educational policies may be improved by co-opting orientation and mobility services in school curriculum. It may also encourage the society to fully accept those with visual impairment and integrate them in all community activities. The finding may also promote collaborative teamwork in service provision especially in the area of orientation and mobility training etc.

Procedure
The procedure of the data collections requires filling a questionnaire / interview and focus group discussion about the influence of orientation and mobility training on social integration of persons with visual impairment. You are free to ask questions related to the study and you have the right to refuse participation in the study as it’s a voluntary service.

Discomforts and Risk
In case of questions which looks embarrassing or make you uncomfortable you may also stop the interview at any time and additional time will be given if needs arise.

Benefits
If you participate in this study you will help us to learn how to provide effective information that can be used to improve social integration of persons with Visual impairment in Kano State.

Reward
No incentives will be provided. However, cost of transport will be reimbursed after the interview.

Confidentiality
Interview will be conducted at a place chosen by you. Your name will not be recorded on the questionnaire. The questionnaires will be confidentially kept.

Contact information
If you have any questions you may contact Dr. Joel Chomba Wa Munyi on +254 736461988 or Dr. Margaret Muragami on +254720385567 or Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ac.ke secretariat.kuerc@ku.ac.ke

Participant’s statement
I have read/listen to the statement and clearly understood it. I therefore agree to participate in the study.
Name of Participant………………………………………………………………….
Investigators statement
I, the undersigned, have explained to the volunteer in a language s/he understands, the procedures to be followed in the study and the risks and benefits involved.

Name of Interviewer…………………………………………………………………

Signature or Thumbprint……………………………………………………………

Date
APPENDIX IX B: CONSENT FORM FOR WELFARE OFFICERS WITH VISUAL IMPAIRMENT

Introduction
My name is Abubakar Isa Ibrahim, a Ph.D student from Kenyatta University I am conducting a study on “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria.” I am formally demanding for acceptance to involve you in the study. The information may be used to serve as a good advocacy material for propagating the essence and needs for orientation and mobility training among persons with visual impairments; educational policies may be improved by co-opting orientation and mobility services in school curriculum. It may also encourage the society to fully accept those with visual impairment and integrate them in all community activities. The finding may also promote collaborative teamwork in service provision especially in the area of orientation and mobility training etc.

Procedure
The procedure of the data collections requires filling a questionnaire / interview and focus group discussion about the influence of orientation and mobility training on social integration of persons with visual impairment. You are free to ask questions related to the study and you have the right to refuse participation in the study as it’s a voluntary service.

Discomforts and Risk
In case of questions which looks embarrassing or make you uncomfortable you may also stop the interview at any time and additional time will be given if needs arise.

Benefits
If you participate in this study you will help us to learn how to provide effective information that can be used to improve social integration of persons with Visual impairment in Kano State.

Reward
No incentives will be provided. However, cost of transport will be reimbursed after the interview.

Confidentiality
Interview will be conducted at a place chosen by you. Your name will not be recorded on the questionnaire. The questionnaires will be confidentially kept.

Contact information
If you have any questions you may contact Dr. Joel Chomba Wa Munyi on +254 736461988 or Dr. Margaret Muragami on +254720385567 or Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ace.ke secretariat.kuerc@ku.ace.ke

Participant’s statement
I have read/listen to the statement and clearly understood it. I therefore agree to participate in the study.

Name of Participant………………………………………………………………….

Signature or Thumbprint                      Date
Investigators statement

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

Name of Interviewer…………………………………………………………………

Signature or Thumbprint ____________________________________________ Date __________________
APPENDIX IX C: CONSENT FORM FOR PARENTS OF PERSONS WITH VISUAL IMPAIRMENT

Introduction
My name is Abubakar Isa Ibrahim, a Ph.D student from Kenyatta University. I am conducting a study on “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria.” I am formally demanding for acceptance to involve you in the study. The information may be used to serve as a good advocacy material for propagating the essence and needs for orientation and mobility training among persons with visual impairments; educational policies may be improved by co-opting orientation and mobility services in school curriculum. It may also encourage the society to fully accept those with visual impairment and integrate them in all community activities. The finding may also promote collaborative teamwork in service provision especially in the area of orientation and mobility training etc.

Procedure
The procedure of the data collections requires filling a questionnaire / interview and focus group discussion about the influence of orientation and mobility training on social integration of persons with visual impairment. You are free to ask questions related to the study and you have the right to refuse participation in the study as it’s a voluntary service.

Discomforts and Risk
In case of questions which looks embarrassing or make you uncomfortable you may also stop the interview at any time and additional time will be given if needs arise.

Benefits
If you participate in this study you will help us to learn how to provide effective information that can be used to improve social integration of persons with Visual impairment in Kano State.

Reward
No incentives will be provided. However, cost of transport will be reimbursed after the interview.

Confidentiality
Interview will be conducted at a place chosen by you. Your name will not be recorded on the questionnaire. The questionnaires will be confidentially kept.

Contact information
If you have any questions you may contact Dr. Joel Chomba Wa Munyi on +254 736461988 or Dr. Margaret Muragami on +254720385567 or Kenyatta University Ethical Review Committee Secretariat on chairman.kuerc@ku.ac.ke, secretary.kuerc@ku.ace.ke secretariat.kuerc@ku.ace.ke

Participant’s statement
I have read/listen to the statement and clearly understood it. I therefore agree to participate in the study.

Name of Participant………………………………………………………………….
Investigators statement

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

Name of Interviewer……………………………………………………………………………………………

Signature or Thumbprint…………………………………………………………………………………………

Date

Signature or Thumbprint…………………………………………………………………………………………

Date
APPENDIX X: LETTER OF APPROVAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
deant-graduate@ku.ac.ke
Website: www.ku.ac.ke

Internal Memo
FROM: Dean, Graduate School
TO: Mr. Abubakar Isa Ibrahim
C/o Department of Special Needs Education
KENYATTA UNIVERSITY

DATE: 8th June, 2017
REF: ER317/30852/15

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Graduate School Board at its meeting 7th June, 2017 approved your Ph.D. Research Proposal entitled “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria”.

You may now proceed with your Data collection, subject to clearance with Director Ethics Review Committee, Kenyatta University and the Director, Welfare Office, Ministry of Women Affairs, Kano State Nigeria.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed supervision Tracking Forms per semester. The form has been developed to replace the progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

By copy of this letter, the Registrar (Academic) is hereby requested to grant you substantive registration for your Ph.D. studies.

Thank you,

REUBEN MURIUKI
PROVOST, GRADUATE SCHOOL

cc. Registrar (Academic) Atty; Mr. Likam
Chairman, Department of Special Needs Education

Supervisors:

1. Dr. Joel Chomba Wa Munyi
   C/o Department of Special Needs Education
   KENYATTA UNIVERSITY

2. Dr. Margaret Muragami
   C/o Department of Special Needs Education
   KENYATTA UNIVERSITY

RM/coo
APPENDIX XI: LETTER OF INTRODUCTION

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kuhps@yahoo.com
       dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57330

Our Ref: E83F/30852/15
Date: 8th June, 2017

The Director,
Ministry of Women Affairs, Welfare Office,
KANO STATE, NIGERIA

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MR. ABRASAR J. IBRAHIM - REG. NO. E83F/30852/15

I write to introduce Mr. Isa who is a Postgraduate Student of this University. He is registered for a Ph.D. degree programme in the Department of Special Needs Education in the School of Education.

Mr. Isa intends to conduct research for Ph.D. thesis entitled, “Influence of Orientation and Mobility Training on Social Integration of Adults with Visual Impairment in Kano State, Nigeria”.

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/cao
APPENDIX XII: LETTER OF PERMISSION FROM MINISTRY OF
WOMEN AFFAIRS

MINISTRY OF WOMEN AFFAIRS AND SOCIAL DEVELOPMENT
OFFICE: Bank Road, P.M.B. 3280, Kano.
WEBSITE: www.mowa.kn.org

Our Ref: MWASD/OFF/118/V.II Your Ref: ____________________________ Date: ____________________________ 28th July, 2017

The Dean Graduate School,
Kenyatta University,
P.O. Box 43844, 00100
Nairobi, Kenya.

RE: RESEARCH AUTHORIZATION FOR MR. ABUBAKAR IBRAHIM
REG. NO: E83F/30852/15.

Reference to your letter dated 8th June, 2017 on the above subject.
I am directed to inform you that the permission is granted for Mr. Isa to conduct the research.

Best wishes

Hajara Shehu Minjibir
Director Social Welfare
For: Hon Commissioner.
APPENDIX XIII: LETTER OF APPROVAL FROM ETHICS REVIEW COMMITTEE

KENYATTU UNIVERSITY ETHICS REVIEW COMMITTEE

Fax: 8711242/8711575
Email: kuerc.chairman@ku.ac.ke
kuerc.secretary@ku.ac.ke
Website: www.ku.ac.ke

Our Ref: KU/ERC/RE-REVIEW APPROVAL/VOL.1 (65) Date: 18th/10/2017

Abubakar Isa Ibrahim
Kenyatta University
P.O. Box 43844-00100
NAIROBI

Dear Ibrahim,

APPLICATION NUMBER: PKU/04/1775 “INFLUENCE OF ORIENTATION AND MOBILITY TRAINING ON SOCIAL INTEGRATION OF ADULTS WITH VISUAL IMPAIRMENT IN KANO STATE, NIGERIA”

1. IDENTIFICATION OF PROTOCOL
The application before the committee is with a research topic “Influence of Orientation and Mobility Training on Social Integration of Adults With Visual Impairment in Kano State, Nigeria” received on 6th October, 2017 and discussion on 10th October, 2017

2. APPLICANT
Abubakar Isa Ibrahim

3. SITE
Kano State, Nigeria

4. DECISION
The committee has considered the research protocol in accordance with the Kenyatta University Research Policy (section 7.2.1.3) and the Kenyatta University Ethics Review Committee Guidelines and APPROVED that the research may proceed for a period of ONE year from 10th October, 2017.
5. **ADVICE/CONDITIONS**

i. Progress reports are submitted to the KU-ERC every six months and a full report is submitted at the end of the study.

ii. Serious and unexpected adverse events related to the conduct of the study are reported to this committee immediately they occur.

iii. Notify the Kenyatta University Ethics Committee of any amendments to the protocol.

iv. Submit an electronic copy of the protocol to KUERC.

When replying, kindly quote the application number above.

If you accept the decision reached and advice and conditions given please sign in the space provided below and return to KU-ERC a copy of the letter.

**DR. TITUS KAHIGA**

CHAIRMAN ETHICS REVIEW COMMITTEE

I hereby accept the advice given and will fulfill the conditions therein.

Signature: ____________________________ Dated this day of _______________ 2017.

cc: DVC-Research Innovation and Outreach