

## **Factors Hindering the Teaching of Orientation and Mobility to Visually Impaired Students in Thika Primary School for the Visually Impaired in Kenya**

Nasimiyu Lilian Milimu<sup>\*1</sup> (M.Ed) & Michael Njenga Njoroge<sup>2</sup> (Ph.D)

<sup>1</sup>Maasai Mara University, P.O Box 861 – (20500) Narok.

<sup>2</sup>Kenyatta University, P. O. Box 43844 – 00100 Nairobi.

Email: [mcnjoroge@yahoo.com](mailto:mcnjoroge@yahoo.com), \*Email: [nasmilimu@yahoo.com](mailto:nasmilimu@yahoo.com) (corresponding email)

### **Abstract**

*The purpose of the study was to investigate the factors that hinder teaching and learning of orientation and mobility to students who are visually impaired in Thika School for the Visually Impaired. The design employed was a descriptive survey study, which attempts to describe characteristics of subjects, phenomena, opinions, attitudes, preferences and perceptions of persons of interest to the researcher. For the purpose of the study, the target population was the head teacher, 27 teachers and 107 pupils from standard four to eight of Thika Primary School for the Visually Impaired. A purposive sampling technique was applied to identify which among the 4 classes had more challenges on the teaching of orientation and mobility. Data was collected using two instruments, questionnaires and classroom observation schedule. Data was analyzed qualitatively and findings showed that, 59% of the teachers supported the orientation and mobility skill. The provision of mobility canes after class eight were vital in their daily living, this covered 41% of the pupils ; they needed them permanently for use in their daily lives. From the research it was confirmed that the teaching of mobility and orientation was not effective in the school for the visually impaired due to shortage of instructors and enough mobility canes. The following recommendations were made; Teachers are to give orientation and mobility training importance like other academic subjects and students to be encouraged to practice orientation and mobility skills. Ministry of Education should provide more funds to purchase enough white canes.*

**Keywords:** Landmark, legally blind, long cane, mobility, orientation, totally blind, visual impairment.

### **1. Introduction to Concept of orientation and mobility**

The purpose of the study was to analyze the factors that hindered the teaching of orientation and mobility to students who are visually impaired in Thika School for the visually impaired. The research was necessitated by the fact that most of the studies undertaken on persons with disabilities in Kenya concerned academic issues. There has been a study carried out on orientation and mobility. Corn, defined; orientation as 'the process of utilizing the remaining senses in establishing one's position and the relationship to all other significant objects in the environment' where as 'mobility is actual locomotion of the individual from his present field position to his desired position in another part of the environment' (Corn, 1990). Corn

continued to state that orientation and mobility terms have been used to describe that competency, which enables the child to achieve safe, efficient, grateful movement through the environment. Orientation and mobility was an ongoing process in which the individual must not only perceive his present position but must also perceive it as a new with each step taken. This orientation process was acquired by the visually impaired through the use of their auditory, tactual and kinesthetic senses. Corn states that basic mobility skill such as using the forearm a bumper, trailing the fingertips along a vertical surface to maintain directions of movement, and using the edges of things such as pavements as guides need to learned (Corn, 1990). Proper use of the long cane requires formal instructions by a trained orientation and mobility instructor.

According to Corn, any programme for visually handicapped children should emphasize training in orientation and mobility and any educational programme designed to meet the total needs of every visually impaired child should include orientation and mobility (Corn, 1990). The body of knowledge that has been developed in relation to orientation and mobility for the persons visual impairment had also spread to other countries. Blasch, B and Wurzbarger, B., (1971) discussed how this began in the 1960's as a result of interaction between America and British programmes. British specialists visited American programmes and American mobility specialists visited Great Britain for extended periods of time to initiate mobility training programmes for people with visual impairment and to train mobility specialists. Tooze, D, (1981) the convener of mobility working parties, gave a clear description on how orientation and mobility was reviewed and encouraged in schools for the visually impaired in Great Britain. Four meetings of representatives from nearly all schools for the visually impaired were held between 1970 and 1971 to study the practice of mobility training in schools. The first conference was held at Worcester on 15<sup>th</sup> November, 1970. As a result of this conference three workshops on mobility were held. Specialists gave demonstration on methods used in teaching mobility and gave papers outlining their techniques. In each case this led to a very lively discussion where those who were present made further contributions.”

It was also felt by the members attending the working parties that it would be useful if the minutes of these meetings could be put together and printed in the “Teacher of the Blind...” this has now been done.” Some of the areas that were discussed during the conferences were:

- a) Number of periods allocated for mobility on the schools timetable.
- b) The techniques of teaching mobility to school children.
- c) The difficulties that the instructors

experienced in training the children.

More extensive exchange visits were also made to programmes in Australia and shorter programmes were concluded for persons interested in orientation and mobility in Paris, Japan, Brazil, South Africa and many other places. Students from other countries, who studied in the United States and returned, established mobility programmes in their own countries.

Just like in other countries, Education of the persons with visual impairment was realized in Kenya after the Second World War. The initiative was a result of the Second World War veterans, who had been blinded in war, thus requiring rehabilitation and education on how to cope with the impairment. The Salvation Army missionaries took the lead in educating the visually impaired even earlier than the end of the Second World War when Col. Baron in 1942 started teaching one student for trial (Wakoli, 1988) in 1946; the Salvation Army started “the institute for the visually impaired” in Thika. Those who were admitted at this institute were mainly adults who had been blinded during the war. The institute did not last long for in 1952 there was a strike which made the administration admit young children and thus changed the place to a school – Thika School for the visual impairment. Despite these efforts towards education for person with visual impairment, orientation and mobility was not given formal instruction. In order to overcome or cope with the loss of sight, many teachers have highlighted the necessity of systematic training in orientation and mobility for the persons who are visually impaired. For instance, various speakers at the 16<sup>th</sup> International Mobility Conference in Spain, claimed that orientation and mobility is a key factor in facilitating and promoting self confidence in a visually impaired person, (Malki, 1994).

Independent mobility is often a critical factor in determining whether a person

with visual impairment gets a job and keeps it, and maintains a life style of independence and dignity (Uslan, 1990). Others have noted the importance of orientation and mobility training in creating self-confidence to make a person who was visually impaired of whatever age to be self-reliant (Tooze, 1981; Yakura, 1994). According to Blasch, B and Wurzburger, B., (1971) many individuals who have visual impairment, for a variety of reasons were unable to achieve that goal on their own. Formal or systematic mobility services have been developed to guarantee each individual the opportunity to learn how to travel to the fullest extent of his/her abilities. However, a society must take steps to assure that each member will have that opportunity and that the acquisition of this knowledge was not left to chance. According to Blasch, B and Wurzburger, B., (1971) orientation and mobility is a key discipline in the rehabilitation and education of people with visual impairments. At the beginning the authors say that the discipline faced a lot of opposition and misunderstanding. It has endured and finally flourished". Efforts to provide orientation and mobility services to the visually impaired persons sprang from the necessity of meeting their real needs in particular situations. When talking of orientation and mobility as a subject, is teaching the principles required to enable the child be an actively mobile individual capable of fending for himself/herself whenever he/she wants to and be capable of deriving enjoyment in overcoming difficulties in the environment by applying these principles in a wide range of settings. It is not enough for students who are visual impairment to know how to cross a particular landmark. The child should know the principle of crossing streets safely and the principle of ensuring that even a newly described landmark can be encountered. The child should know when to ask for assistance, and when he can do without. He should not only know that he is along the right route, but where he has got and when he has got lost. But at the very beginning,

the child should have knowledge about his body, legs and arms, and head. He should know about the extent to which he can make use of the remaining senses and he should be encouraged to explore the environment rather than shun it.

Our ultimate standard of comparison must be the degree of mobility attainable by the sighted. Anything short of that as an ultimate aim would afford us the excuse of perpetuating past attitudes. We should no longer say to ourselves: "Little Nekesa was walking quite well – considering she is visually impaired." We should acknowledge that, as likely as not, little Nekesa walks about freely as an old lady on a set of cobblestones, that her shins (knees) are frequently bruised, and her nose not infrequently scratched. We should not accept that as good enough, (Wakoli, 1988). Most mobility experts and clients agree that the long cane was the most efficient, convenient and affordable and almost universally available mobility aid so far developed which was said to be one of the only proven and widely accepted primary modes of independent travel (Uslan, 1990). It was also a common observation that a properly trained cane user walks straight, upright and confident, which helped to change the public attitudes of pity towards him to that of admiration. The cane was first designed by Hank Levy, a visually impaired British man in 1872, but it was not accepted in England until 70 years later when Hoover modified Levy's touch technique in America in 1946 (Dodds, 1993). The cane may come in different forms such as the long cane, the folding or collapsible cane, the white wooden cane, the support or orthopedic cane or the laser cane (Dodds, 1993). Each of these types of canes has advantages and disadvantages concerning storage, convenience, and efficiency among others. The basic purpose of using the cane is for protection, information about the basic texture under foot, detection of holes, drop-offs, and other changes in the level of the terrain. It also symbolizes the user as one with visual impairment, thus needing

consideration on the road (Mullen, 1989).

The most commonly used technique in orientation and mobility was the touch technique. It required the user to use the proper skills for gripping the cane, taping the right way from left to right, in step rhythm for foot and cane coordination among others. In Kenya, the percentage of persons who were visually impaired have trained in orientation and mobility was negligible and the same was true for trained mobility trainers from the researcher's observation, though statistics were not available to support this. It however became evident from survey that, the ones trained in the cane skills had a clear mobility advantage over the untrained ones (Ellis, 1991). The orientation and mobility aids are rather expensive for the average Kenyan with visual impairment and therefore need to be provided for in the national or programme budgets. It was observed by a committee setup by the Kenya government in 1976 to draw education objectives and policies in Kenya that the students who were visually impaired required specialized and expensive equipment. However, in the current global and national economic crisis it was not always possible to provide the required aids for meeting the needs of the persons who were visually impaired adequately.

The mobility specialist has to develop a curriculum that has general blue print from which can work with most clients thus it. The particular assessment of the needs of each client would lead to the design of the teaching plan for the individual. However, the development of a general catalogue of skills that made it possible for independent travel and the methods for helping clients to develop these abilities was an essential part of providing effective mobility.

Such a curriculum was usually based upon a logical analysis and was supplemented over time by input from consumers of the services who fed back to the curriculum needs that may have been overlooked or that only emerged in the peculiar circumstances in which certain clients found themselves.

According to Blasch, B and Wurzburger, B, curriculum designers should consult the literature and other professionals for additional ideas about curriculum contents (Blasch, B and Wurzburger, B., 1971). Ideally, the contents of curricula should be submitted for empirical review using a research methodology to test the assumptions concerning the need for particular skills or the analysis of the critical sub skills or prerequisites.

None of the orientation and mobility curricula that were developed had been researched that way. Orientation and mobility specialist had generally relied on the traditional notebook of mobility techniques as the basis for the curricula developed for specific agency or school programmes. Those techniques had included skills in using a sighted guide, indoor protective and orientation techniques, cane skills, techniques for traveling in and out door areas and crossing streets, techniques for travel in business areas and using public transportation, and special techniques for situations such as using elevators, escalators, revolving doors and soliciting aid from sighted pedestrians ((Mullen, 1989). Those techniques had been organized and taught in a sequence that roughly approximated a hierarchy of skills for the person who had not traveled previously without vision. Usually the written techniques had also included suggestions for teaching methodology and for altering the techniques to meet the needs of special clients. The mobility specialist had also to develop lesson plans in a particular agency and nearby neighbours that would offer the opportunity to teach the variety of skills involved in the curriculum. The study sought to analyze the factors that hindered the teaching of orientation and mobility to students who were visual impaired in Thika Primary School for the visually impaired. The study was critical because students with visual impairment were not receiving training in orientation and mobility.

The major objectives of the study were to:



- a) Determine the number of qualified orientation and mobility instructors in the school.
- b) Establish the time allocated to orientation and mobility on the timetable.
- c) Find out the number of mobility canes in the school.
- d) Establish the opinion of Head teacher, teachers and students about orientation and mobility for students who were visually impaired.

**2. Methodology**

The study targeted the head teacher, 27 teachers and 107 students in classes 4 to 8 in Thika School for the Visually Impaired. The total population for the study was therefore 135 persons. In class 4 we had eighteen students, class 5 had twenty-one, class 6 twenty-five, class 7 twenty-one and class 8 had twenty-two and the teachers were 27, making a total of 135 including the head teacher. The teachers were supposed to be teaching orientation and mobility. The head teacher and his deputy were involved in making the timetable for teaching orientation and mobility. The students who were totally blind were the clients to be taught orientation and mobility. The researcher selected the school to focus on purposively since it was the first of its kind to be established in the country. Also being situated near the capital city, it was expected that there were many students compared to other institutions in other provinces within Kenya. Purposive sampling technique was used to select the head teacher, 27 teachers and 42 students who were visually impaired. Mugenda and Mugenda (1999) contend that at other times the target population was so small that selecting a sample would be meaningless and that taking the whole population in such cases was advisable.

The sample size for the study comprised

70 respondents

Types of respondents	Population	Sample
Head teacher	1	1
Teachers in class 4 to 8	27	27
Students	107	(who are totally blind) 42
<b>Total</b>	<b>135</b>	<b>70</b>

The researcher conducted a pilot study at Kibos School for the Visually Impaired in order to validate the research instruments. The researcher selected a school in a different province because the schools for visually impaired were scattered all over the country, (Mertens and Mclaughlin, 1995). The purpose of piloting was to discover any weakness in the instruments, check for clarity of the questions or items and also elicit comments from respondents that would assist in the improvement and modification of the instruments. Piloting was also to enable the researcher to detect any flaws in the administration of the research instruments.

Random sampling technique was used in which teachers and students picked a Yes or a No to select 5 teachers, 10 students and the head teacher was purposively being picked for the pilot study. The procedure that was used in piloting was the same ones that were used in the main study. The population in the pilot school was not to be included in the actual study.

Before going to the field, the researcher was to obtain a research permit from the Ministry of Education authorizing her to carry out the research. The researcher would then visited the selected school to establish rapport, get permission from the school head and to arrange with teachers on the appropriate days and lesson hours when orientation and mobility was to be taught to enable her do live observations. The researcher finally issued questionnaires to head teacher, teachers and standard four to eight sampled students. The researcher went over the questionnaires before asking the participants to complete it. They were

given a period of one day to respond to the items in the questionnaire and thereafter, give them back to the researcher. The head teacher, teachers and students completed the questionnaires within two days and handed them over to the researcher. Some questionnaires from students were filled half way, so the researcher disregarded them.

The data collected was analyzed using both quantitative and qualitative method of analysis in a descriptive approach. According to Semakula, quantitative analysis entails analyzing numbers about a situation by choosing specific aspects of that situation (Semakula, 2000). On the other hand, qualitative analysis entails analyzing in words or figures by collecting data, recording people's experiences not selecting any pre-chosen aspect. The two types of questionnaires (for teachers and students) were to yield quantitative data and interview schedules were to yield qualitative data.

Quantitative data were analyzed and tabulated using descriptive statistics i.e. means, simple tables, frequencies, percentages and ratios. These were chosen because they easily communicated the findings to the majority of the readers. These types of mode of presentation were given a quick visual impression of the quantifiable variables affecting orientation and mobility for students who were visually impaired. The researcher assembled all the questionnaires and classroom observation schedules obtained from the field. The instruments were then serialized numerically. Data was cleaned and coded in a code sheet. The statistical package for social sciences (SPSS) was used to analyze data. The data was presented with the aid of frequency tables, pie charts and percentages. Microsoft excel was used to make the pie charts. From the tables, pie charts and percentages, major findings of the study and discussions were made on the basis of the study; the researcher gave suggestions and recommendations.

### **3. Findings and Discussions**

The findings of the study revealed that 81% of the teachers were not trained as mobility instructors only 19% of the teachers were trained. It showed clearly that most of the teachers in Thika primary school for the visually impaired were not specially trained to offer mobility and orientation instructions, even after the school had been in existence for more than 50 years. The instructors for orientation and mobility have not been given emphasize in Kenya especially in special schools like the visual impaired until 2003 after the enactment of persons with disability Act which covered key areas like rights and privileges of person with disability, offences and penalties for those who contravene the act, and the national council for person with disabilities. The Act was meant to provide for the rights and rehabilitation of person with disability to achieve equal opportunities for services like employment, health and education. That is why after findings found in Thika primary school the 81% teachers were not trained in mobility and orientation. However in sessional paper1, 2005 the government of Kenya emphasized the education for all so that the disabled could access education opportunities in learning institution. Through this it created awareness in various institution of learning which led to training course of special needs and special needs education with the need of orientation and mobility for the visually impaired.

The findings of the study showed that orientation and mobility lessons were not included in the school timetable since 74% of the teachers said NO while only 26% said YES. It showed clearly that orientation and mobility was not taken seriously as a subject to be taught to students who were visually impaired. The findings of the study showed that 56% of the teachers said that the students who are visually impaired did not have enough mobility white canes for training because they were expensive and the school could not afford to purchase or

acquire them. While 44% of the teachers said YES because white canes were donated free. It showed clearly that even if the white canes were not enough to be given to each student permanently the use of white canes in the school compound had been neglected by most students because it stigmatized them. There was need for orientation and mobility skills before leaving standard eight, since some students never continued with secondary education. The findings of the study showed that 59% of the teachers supported the orientation and mobility examinations because it would create awareness and emphasized on the subject. However, some of the teachers represented by 41% were not for the idea since that was a skill they only required for free movement and independence. The head teacher indicated that six lessons were for orientation and mobility. It showed that the attentions must be given to the importance of the subject. He felt that the students who were visually impaired should be trained all round (i.e. classroom, shopping centre, and rural settings) to ensure independence in orientation and mobility.

#### **4. Conclusions**

The research which was done was not meant to criticize any particular school, individual or administrator. Instead, it aimed at suggesting ways of orientation and mobility instruction in schools for the visually impaired. In relating the researchers findings, it was quite clear that there was need for the subject to be taught to students who are visually impaired before leaving primary education because most of them end their education at primary level, hence they end up in communities which had many places to interact. The provision of mobility canes after class eight was vital in their daily living; they needed them permanently for individual use.

The researcher also hypothesized that the teaching of orientation and mobility was not extensive enough to provide the required level of independent mobility. If the teachers were not willing to be identified with orientation and mobility because it was

not an examinable subject, it thus followed that they did not implement effective orientation and mobility programmes. Therefore there must be attention and importance to the subject to raise self-esteem among some of the students who had self-denial concerning their status.

On the other hand, the inspectors of schools should be in a position to monitor and assess the performance of orientation and mobility as a subject in schools for visually impaired after implementation so as to enhance effectiveness of the teaching. The skills involved in orientation and mobility required a lot of time to ensure thorough learning and practice by the pupils, on the timetable 2-3 periods should be allotted to orientation and mobility to make students become competent. In order for that to be effected, orientation and mobility was recommended by the curriculum developers but does not appear on the school timetable of the visually impaired. From the research it had been confirmed that the teaching of orientation and mobility was not effective in the schools for the visually impaired due to shortage of instructors and enough mobility canes.

#### **5. Recommendations**

The study looked at the factors that hindered teaching of orientation and mobility to students who were visually impaired in Thika Primary School for the Visually Impaired. Therefore, the study recommended the following:

- a) Teachers should give importance to training on orientation and mobility and as much attention as to the other academic subjects to instill interest and reduce handicap condition.
- b) Students should be encouraged to practice orientation and mobility skills intensively while at school and in the community to ensure efficiency in independent travel.
- c) Head teachers should ensure that orientation and mobility teachers were assigned fulltime orientation and mobility teaching duties to

- enforce the teaching of orientation and mobility.
- d) The personnel should follow up to ensure that orientation and mobility is taught effectively.
- e) The Ministry of Education should provide more funds for free primary education especially in schools of visual impairment to purchase enough white canes.
- f) The curriculum developers should ensure that orientation and mobility should be included in the syllabus for students who are visually impaired.
- White canes should be manufactured locally even for young ones from nursery to class three. This will enable students have access to white canes that will assist instructors in teaching of orientation and mobility

### References

- Blasch, B and Wurzbarger, B., (1971). *Mobility instructions: A professional challenge*. Long Cane News.
- Corn, A., (1990). *The blind and visually impaired traveler's perspective in Uslan. Access to mass transit for blind and visually impaired travelers*. New York: American foundation for the blind Inc
- Dodds, A. (1993). *Rehabilitating blind and visually impaired: A Psychological approach*: London: Chapman and Hall.
- Ellis, R. (1991) Teaching mobility to young visually impaired children. *Journal of Visual Impairment and Blindness*. March 91, Vol.9. No. 1, Pg 7-13.
- Farmer, L., (1990). *Mobility devices. In Blasch and wash (Eds.) Foundation of orientation and mobility*. New York: American foundation for the blind
- Kane, E., (1995). *Seeing yourself: research handbook for girls education in Africa*. New York: Holt, Rinehart & Winston Inc.
- Malki, G., (1994). *An evaluation of rehabilitation programme fro VIP in Palestine. A Dissertation for M.Ed. in special education university of Manchester*: Center for education and special needs.
- Mertens, D. and Mclaughlin, J. (1995). *Research methods in special education: Applied social research methods series volume 37*. London: Sage Publications.
- Mugenda, O. M. & Mugenda, A. G. (1999). *Research methods. Quantitative and qualitative approach*. Nairobi: ACTS Press.
- Mullen, E. (1989). "Draft orientation and mobility curriculum for Kenyan schools". Nairobi, Unpublished
- Onyango, N., (2000). *A study of factors that influence girls participating in primary schools. A case of Nginyang' and Marigat Divisions of Baringo District*. Unpublished M.Ed. research thesi Nairobi, Kenyatta University.
- Semakula, P.S. (2000). *Guidelines to qualitative research*. Kampala: UNISE.
- Tooze, D., (1981). *Independence training for visually handicapped children*. London: Croomhelm.
- Uslan, M., (1990). *Blind and visually impaired travelers in mass transit: An overview. In Uslan, M. et al. (Eds). Access to mass transit for blind and visually impaired travelers*. New York: American foundation for the blind
- Yakura, C. (1994). *The importance of orientation and mobility training to the development of "Self" in visually impaired and blind impaired children*. *Journal of Special Education* Vol. 18. Vol 2, PP 115-123.