

## TEACHER SKILLS NEEDED FOR TRAINING LEARNERS TO USE LOW VISION DEVICES

Charles Michael Were

Maseno University, P.O Box 333, Maseno, Kenya.

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### ABSTRACT

Scholl, (1986) observed that a competency-based teacher education was established in 1973 by the American Foundation for the Blind (AFB). A specific road map was developed that could be used as a yard stick for training teachers for the visually handicapped. According to the competency based training, a teacher was and is expected to demonstrate knowledge of developmental patterns of visually handicapped learners. Furthermore, teachers are expected to demonstrate the ability to assess visually handicapped learners using a variety of informal and formal procedures. Teachers are expected to demonstrate proficiency in the operation of media and devices necessary for the education of the visually handicapped learner. They are also supposed to utilize instructional strategies to facilitate learning in learners who are visually handicapped. The teachers are expected to utilize instructional materials, media, devices etc. appropriate to individual needs of learners who are visually handicapped. The purpose of this study was to determine teacher skills needed for training learners to use low vision devices. The study was carried out in five primary schools for the visually handicapped in Kenya. The study population included 90 teachers and 80 learners with low vision. 65 teachers and 78 learners were sampled for the study. Survey research design was used to collect data. Research instruments were questionnaires, observation schedule, interview schedule, a reading proficiency test and document analysis. Validity of the instruments was done by the researcher giving the research instruments to three experts on the topic of study who validated the contents of the instruments. Test retest was done to test the reliability of the instruments. Data was analyzed by use of descriptive statistics that included frequency counts, percentages and the mean. Findings of the study were that low vision learners lacked devices that can make them access curriculum content to the full, head borne low vision devices in spectacle frames were used regularly by post cataract learners. Regular print (N12) was most used and large print books were not available. There were few visits to schools by ophthalmic workers. Recommendations of the study were: low vision devices be bought and availed to students. Low vision teams based at each school be reconstituted to provide coordinated learning support, regular case conferencing be held among low vision team members to chart out learning needs of learners with low vision, and more contact time for the schools for the visually handicapped be created. Findings from the research can help curriculum developers at the Kenya Institute of Education to adapt and improve on low vision training curriculum. The Directorate of Quality Assurance and Standards also will glean information that will help in stocking classrooms with optical and non-optical low vision devices.

**KEYWORDS:** Teacher skills; training learners; Low vision devices.

## INTRODUCTION

Spungin and Taylor (cited in Scholl, 1986) observed that a competency-based teacher education was established in 1973 by the American Foundation for the Blind (AFB). A specific road map was developed that can be used as a yard stick for training teachers for the visually handicapped. According to the competency based training, a teacher was and is expected to demonstrate knowledge of developmental patterns in visually handicapped learners. Furthermore, would be teachers are expected to demonstrate the ability to assess visually handicapped learners using a variety of informal and formal procedures. Teachers were expected to demonstrate proficiency in the operation of media and devices necessary for the education of the visually handicapped learner. They were also supposed to utilize instructional strategies to facilitate learning in learners who are visually handicapped. The teachers were expected to utilize instructional materials, media, devices etc. appropriate to individual needs of learners who are visually handicapped.

Finally, teachers were expected to understand the educational implications of eye conditions (Scholl, 1986). In addition to the above competencies, teachers for learners with visual impairments were expected to understand the idiosyncratic behaviours that come with visual impairments. For example, teachers for the visually handicapped should realize that low vision individuals tire quickly because of the extra energy used in looking and interpreting from minimal visual information, Jose (1985). Teachers should expect responses to visual stimuli to be slow. However, the more looking there is the faster visual functioning will develop. It is also significant for teachers to note that vision fluctuates from day to day and performance may vary accordingly. That each learner is different in how and what he/she sees (Barraga, 2006). The skills cited are bench mark skills that teachers for visually impaired and more so those who work with learners with low vision must develop to be within their repertoire of skills.

The Kenyan situation is appalling because at school level one would find a mixed grill of personnel. One would find volunteers who have no background in teaching, teachers who have had regular training without specialist training. There are also those who have quasi training that lasted for only three months, there are also teachers who have had two years of specialist teacher education. However, getting teachers trained in low vision techniques was and is rare. Most teachers seemed de-motivated due to difficult working conditions. In most schools teachers were working with their bare hands without both professional and materials support. The situation may be wanting because KISE trains teachers at a distance, but they get limited skills, because they are not trained with hands-on experiences. Trainees are hardly exposed to real learning situations of learners with special needs. It was found out that each school for the visually handicapped had only two teachers trained extra to work with learners with low vision. The said number of teachers is hardly enough to work with learners across the curriculum in all the classes.

## Objectives of the Study

The current research was based on evaluation of the following objective:

- i) Determine teacher skills needed for training learners to use low vision devices.

## Research Questions

The study was guided by the following question:

- i) What perceptions do teachers have about skills required to work with learners with low vision?

## Scope of the Study

The evaluation was based on selected objectives that were set by the Ministry of Education in respect of the training of teachers for the visually handicapped. The study involved teachers who teach children with low vision in schools for the visually handicapped and was delimited to learners with low vision who use optical and non-optical low vision devices in special schools and integrated programmes. The research targeted teachers skills of those teachers working with low vision learners in grade seven and eight in schools for the visually handicapped because the two classes had trained their vision and were learning through the sense of vision.

## Assumptions of the Study

The following were the assumptions of the study:

- All learners in the study use low vision devices when performing curriculum tasks.
- All teachers who took part in the study had trained in low vision techniques.
- All teachers who worked with learners with low vision were sighted.

## Limitations of the Study

The researcher faced several limitations that hindered proper observation and documentation of challenges learners with low vision experienced. Some of the limitations were:

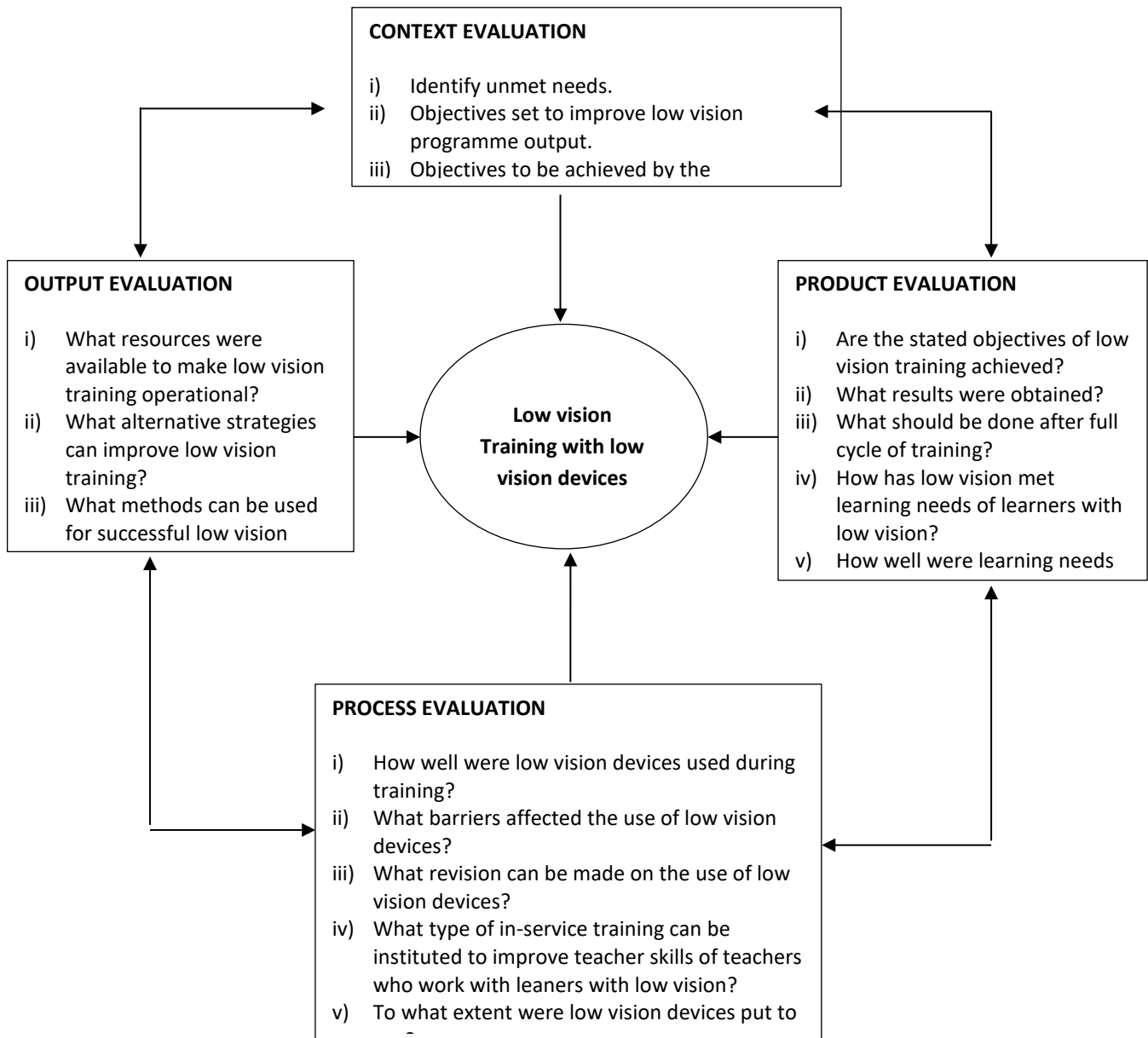
- Professionally, some teachers who were blind tended to discourage learners from using low vision devices because the teachers could neither read nor mark the learners work in print.
- Limited low vision devices available for learners to perform various tasks during curriculum intercourse constrained the researcher from finding out the actual visual efficiency of learners with low vision.

## Conceptual Framework

The study was based on management-oriented evaluation approach as propounded by Stufflebeam's Context, Input, and Process Product (CIPP) evaluation model.

Stufflebeam et al. (2000), and Guba and Lincoln (1981) developed an evaluation framework to serve managers and administrators facing four different kinds of educational decisions named context, input,

process and product. He proposes that evaluation should be done in order to establish the programme’s actual position in relation to the four components. He has suggested various questions to be answered in each of the four components during an evaluation as shown in Figure 1.



**Figure 1: Context, Input, Process, Product Evaluation (C.I.P.P) of the Low Vision Training Programme**

## **Significance of the Study**

The findings from this study may contribute to the existing body of knowledge on low vision functioning and influence practice and sourcing for low vision devices and other related equipment that can be effectively used by low vision learners. It is also hoped that curriculum developers may glean information that will help in adapting the curriculum for low vision learners. The findings may dissuade policy makers and specialist teachers for the visually handicapped from treating the low vision learners as if they were blind by encouraging the learners to function visually.

## **METHODOLOGY**

### **Research Design**

This research was a cross-sectional survey. A cross-sectional survey collects information from a sample that has been drawn from a predetermined population (Fraenkel & Wallen, 2000). The predetermined population were learners with low vision in grades seven and eight from schools for the visually handicapped in Kenya. The researcher found the survey method appropriate because data collection using questionnaires and observation schedules took a shorter time as compared to interview method. Response rate was high because the researcher personally visited the schools where the questionnaires were administered and any clarity about the questions on the questionnaire forms were immediately responded to. It was also found to be appropriate because the questionnaires were administered in groups thus permitting follow-up questions, and also comparative cost of administering the questionnaire was cost effective (Fraenkel and Wallen, 2000). The main purpose of the survey was to describe characteristics of a population. In this case the researcher set out to find out reading proficiency of learners with low vision when using low vision devices.

### **Study Area**

This study was conducted in five primary schools for the visually handicapped in Kenya. The study was conducted in special schools for the visually handicapped because learners with low vision get admission to such schools. Such schools are also resource centres for special materials for learners with visual impairments.

### **The schools are spread regionally as follows:**

Kibos and St. Oda schools for the visually handicapped are situated in Nyanza province. Thika School for the visually handicapped is situated in Central province in Thika town. Likoni School for the blind is located in the Coast province and St. Lucy school for the visually handicapped in Meru.

### **Study Population**

Learners who participated in the study had low vision and were from grades 7 and 8 from schools for the visually impaired in Kenya. Schools for the visually impaired in Kenya admit both blind and low vision learners to the same school and learn alongside one another. They share education resources such as text books that may be either in Braille or print, teachers, and share same classrooms. The

current research excluded learners who are blind. Saturated sampling was used to select seventy eight learners from the five schools as follows: School A = 14, School B = 13, School C = 15, School D = 17 and School E = 19. The learner participants in the study were confirmed to be with low vision from reports written by ophthalmic workers from Kikuyu and Sabatia hospitals and kept by each school on file. The researcher used mainly special schools for the learners with visual impairment because such schools were considered as centres of excellence where both teaching and learning resources were available and that such schools used specific special methods to teach learners with visual impairments.

### Sample Size and Sampling Procedure

Cluster sampling was used to select classes that took part in the research in this case the unit of sampling was not the individual but rather a naturally occurring group of individuals. Cluster sampling is used when it is feasible to select groups of individuals than it is to select individuals from a defined population Therefore classes seven and eight were used as the cluster sample. Saturated sampling was used to select all learners with low vision in grade 7 and 8 to take part in the study. Seventy eight teachers who teach classes seven and eight in five schools for the visually impaired were selected out of ninety teachers. Saturated sampling was used to select sighted teachers who taught learners in classes seven and eight, however, totally blind teachers did not take part in the study because they had very little information about learners with low vision.

**Table 1: Sampling Frame**

Categories	Total Number	No. selected	Percentage
Schools	6	5	83.33
Classes	12	10	83.33
Teachers	90	65	72.22
Pupils	88	78	88.63

### Research Instruments

The research instruments used in the study were questionnaires, interview and observation schedules.

### Questionnaire

There were two questionnaires, one for teachers and one for pupils. The teacher's questionnaire was structured to have three sections. The first section was aimed at soliciting background information about the school, the number of children on roll, the number of low vision learners taught through the visual modality and the equipment used during curriculum discourse. The second section was aimed at obtaining information about the expertise of teachers working with children with low vision. It also dealt with soliciting information about the availability of low vision devices that learners with low vision used during curriculum discourse. The final section of the questionnaire was aimed at soliciting information about follow-up, the number of teachers trained to work with learners with low vision, and the challenges such learners experienced during curriculum interaction.

A total of 20 items made up the teachers' questionnaire. The teachers' questionnaire is attached as Appendix A. The pupils' questionnaire was made up eleven items that were aimed at gathering data about attitudes of learners with low vision, availability and efficacy of low vision devices.

## **Interview Schedule**

The interview schedule was made up of ten questions that were aimed at eliciting the teachers' expertise as relates to working with learners with low vision.

The interview schedule was also aimed at establishing the number of low vision devices available to learners in class. Specifically, the researcher sought to know the size of print, and the skills teachers acquired during the in-service training that teachers went through in order to work with learners with low vision.

## **Observation Schedule**

The observation schedule was arranged in three distinct sections. The first section solicited information about availability of optical low vision devices. It specifically determined as to whether the devices were adequate or not adequate to the learner's needs.

The second section solicited information about the availability of non-optical low vision devices. It solicited information about environmental modification of the learning environment. The third section solicited information on the actual learners' use of low vision devices during curriculum discourse (

## **Document Analysis**

The following documents were scrutinized to glean information about students' visual functioning:

- i) Term CAT marks
- ii) End of year promotional marks
- iii) End of course KCPE examination results
- iv) Art work done by learners with low vision.

## **Validity of the Instruments**

Validity refers to the degree to which the explanations of a phenomenon or the findings of a study match the realities of the world, or the extent to which a questionnaire actually measures what it is intended to measure (Oso, 2013). Validity of the instruments was evaluated and improved through face validity method. This method was selected because of its ease in computation, understandability, focus on agreement of relevance and provision of both item and scale information (Orodho, 2010). To ensure face and content validity of the research instruments, two supervisors who are experts from the department of Special Needs of Maseno University were requested to make judgment on the Instruments based on their relevance of content in the adapted questionnaires. They made amendments on format of the questionnaires and provided feedback to the researcher who made amendments on the format of the questionnaires and content in general. Their recommendations were incorporated in the

final questionnaires to enable collection of data valid for analysis. However, for the qualitative data, validity was ensured by arranging the items in the interview schedule from simple to complex. The language used was also made clearer and simpler for probing for more details.

## **Reliability of the Instruments**

Reliability is a measure of the consistency with which research participants understand, interpret and respond to the item in an instrument (Oso, 2013). The researcher employed a test-re-test method to determine the reliability of the instruments. Test-re-test method is a statistical technique used to estimate components of measurement error by repeating the measurement process on the same subjects, under conditions as similar as possible, and comparing the observations using a suitable technique (Orodho, 2010). The method was selected because it was the most conservative method for assessing the outcomes of two tests generated in the same way from the same content domain over time (Orodho,2010). This was the simplest way of testing the stability and reliability of an instrument. The researcher conducted an intraclass correlation between the first measurement (test) and a subsequent measurement (retest), which was conducted after two weeks. A test–retest reliability coefficient of 0.75 which was achieved led to the conclusion that the instruments were of adequate reliability, in line with recommendation of Creswell (2013) and Orodho (2009).

## **Data Collection Procedure**

The researcher applied for research authorization permit from National Council for Science and Technology. The investigator telephoned the head teachers of schools of the visually handicapped, and informed them about the intention of carrying out research in their respective schools. Visits were made to schools for data collection. Teachers and learners were informed about the visit and intended research and were requested to cooperate. Thereafter, the researcher administered data collection instruments. The researcher was introduced to the teachers and pupils in grades seven and eight by the head teachers of respective schools. After telling the teachers about the visit to the schools, the researcher requested them to take part in the research by filling in the questionnaire forms and then return them to him. The same was done to learners in grades seven and eight. The questionnaire for learners with low vision was administered by class teachers who were required to distribute them to the learners and then instruct them to respond to the questionnaire items using their low vision devices if possible. Questionnaire for low vision learners was printed using N14 size of print. The size of print was deliberately chosen because it was assumed that the learners were able to read N12 size of print that is used to print course books at primary school level. The size of print was chosen because learners could read it with or without low vision devices (see Appendix C attached). Data was also collected by scrutinizing students during term CAT marks, end of year promotional marks, KCPE results for previous years. The investigator also securitized pupils' Art work from their exercise books. Observation schedule was used to collect data about low vision devices and equipment that support learning from individuals with low vision within the learning environments. The observation was not structured. The researcher used non-participant observation when learners were involved in filling the questionnaires (Cohen and Manion, 1989).



## Data Analysis Procedure

The information gathered from the questionnaires and observation schedule was analyzed using descriptive statistics where frequency counts and percentages were used to evaluate the results of learners who used low vision devices. Percentages were used to evaluate usage of low vision devices. The higher the percentage, the higher the proficiency of low vision uses. Regular and continued use of low vision devices when performing visual tasks was construed that learners had improved visual behaviours and therefore a positive evaluation of low vision devices use.

## DATA PRESENTATION, ANALYSIS AND DISCUSSION

### Teacher Skills that Lacked to Work with Learners with Low Vision

Respondents were asked to indicate skills that teachers working with learners with low vision lacked in order to effectively work with learners. Table 2 summarizes their responses.

**Table 2: Teacher Perceptions of Skills they lacked to Work with Learners with Low Vision  
n=65**

Skill	Frequency	%
Understanding anatomy and physiology of the eye	11	16.92
Ability to know causes of low vision	13	20.00
Identification of Refractive errors and their corrections	18	27.69
Understanding categories of low vision	10	15.38
Educational placement of learners with low vision	14	21.53
Low vision training	18	18.69
Functional visual assessment	17	26.15
Optics and optical low vision devices	18	27.69
Environmental adaptations	12	18.46
Clinical / optical low vision assessment	47	72.30

Majority of the respondents (72.30%) indicated that they had not learnt about clinical optical low vision assessment. A significant number of respondents (18.46%) had not learned about environmental adaptation for learners with low vision. Eighteen (27.46%) of the respondents said that they lacked skills in optics and optical low vision devices. Seventeen (26.15%) of the respondents did not have knowledge in functional visual assessment. Eighteen (27.69%) of the respondents lacked skills to train learners with low vision.

Eighteen (27.69%) did not know how educational placement of learners with low vision is done. Ten respondents (15.38%) did not know about categories of low vision. Eighteen respondents (27.69%) did not have ideas and skills of identifying refractive errors, and did not know how to correct them. Thirteen respondents (20.00%) did not know about causes of low vision, and eleven (16.92%) had no idea about anatomy and physiology of the eye. Bachofer (2007) observes that low vision is personal,

emotional and unpredictable. Low vision is poorly understood by the general public, including school systems, and frequently a family feels left on its own to figure out how to raise a child whose vision is somewhere between blindness and normal sight. Bachofer (2007) further notes that low vision services entail problem solving that is best accomplished with a team approach.

As observed in the data in Table 4.20, it would seem that part of the critical segment of a team that works with school going low vision individuals is inadequately prepared to work with learners with low vision. The number of teachers in schools for the visually handicapped that work with children with low vision is inadequately prepared to deliver meaningful service to the learners. This observation is supported by the observation made by Bachofer (2007) that “The members of a low vision team must understand the subtle and direct influences of various professionals’ perspectives on the success of the students.” She further notes that parents or guardians know the child best while the doctor understands the effects of a condition and educators can describe the impact of visual impairment on learning. Without understanding categories of low vision, the teachers may plan for inappropriate and/or non-task specific curriculum activities that can frustrate learners. Failure to carry out functional visual assessment can lead to poor approaches of intervening for the learner with low vision.

Teachers were asked to indicate teachers who instruct learners with low vision in the use of low vision devices. There was almost a split decision in understanding who actually instruct learners in the use of low vision devices. Out of 78 respondents, thirty six (46%) said that all teachers who are sighted instruct students with low vision in the use of low vision devices. Thirty five (45%) respondents said that vision support teachers and/or low vision therapists instruct learners with low vision in the use of low vision devices. Seven (9%) teachers forwent commenting on the question asked.

Low vision devices must be made use of across the curriculum. This could be the main reason of having near split decision on understanding who actually instructs learners in the use of low vision devices. However, it should be noted as Bachofer (2007), Sacks et al. (2006) said that the three principles when working with learners with low vision are:

- i) Work with a team of people to provide care.
- ii) Listen to the student’s messages, and goals.
- iii) Integrate device use throughout daily routine.

From the above observation, all the teachers that teach specific pupils in classes may be seen as the team of people who provide low vision care, therefore the two vision support teachers act as team leaders, but not the only vision support teachers working with learners with low vision.

The teachers must be in a position to help the learners to incorporate the use of low vision devices into everyday activities by selecting low vision devices that are portable and therefore easily available when needed. It is also important to work with the learners to overcome psychological obstacles to the use of the low vision devices. It is also critical to encourage the learners to use low vision devices

throughout the day for various tasks in various settings so that the learners can get accustomed to using low vision devices as aids to near normal vision.

Where learners are said to lose devices, teachers may need to come up with ways of safely keeping the devices, for example making sure that each device is strung so that it can be kept hanging around the necks of users. In situations that have inadequate print books, the school can organize to order and/or buy books that learners can readily read with the aid of low vision devices.

The process of seeing involves relationships between psychological and physiological functions. The physical status of the eye of an individual has to be considered along with mental ability and those psychological factors that control the eye-brain functions (Barraga, 1983). Barraga (1983) further observed that in any individual, the physiological and psychological elements will interact simultaneously. It therefore calls for the teacher initiated in the area of low vision to be able to understand the complexity or simplicity of visual tasks presented to learners with low vision. For every visual task presented to learners, the teachers have to understand the extent and size of the object to be discriminated and the distinctive features of differentiation. 23.4% of respondents had indicated that they had no skills in low vision training and yet they have learners in their classrooms that they regularly interact with during curriculum content instruction. By inference it can be noted that teachers who do not understand the nature of low vision should not be charged with the duty of working with learners with low vision. This is so because such teachers cannot adapt the environment to meet the learning needs of learners with low vision and that such teachers may not identify the right quality of illumination within the environment. Such teachers may not seat learners within their visual sphere so that they (learners) can be able to control their visual environment with minimum support. Learners who experience photophobia tend to shun bright light. The teachers must have skills of interpreting non-verbal cues of learners when they experience disability glare from the environment.

Jose (1985) and Miller (1994) posited that training the visually impaired learner to use prescribed devices for near tasks involves a unique set of factors. The nature of the visual impairment, the personality and motivation of the learner, the learner's best mode of learning, the advantages and limitations of the device. What Jose (1985) has listed as skills required for a teacher to work with learners with low vision are skills that teachers have to have in order to be able to understand special learning needs of learners and be able to work with learners with low vision. Functional vision assessment is crucial because through such assessment the teacher is able to predict and plan intervention for learners with low vision. Assessment of low vision should be carried out by all teachers so that they can be able to teach the learner how to learn. Without basic skills of low vision assessment, the teacher will not plan age and vision specific tasks that the learners will have to learn from.

Each learner becomes efficient at visual functioning if one is given optical low vision devices that are task specific. Teachers needed to understand each learner's idiosyncratic visual needs in order to tailor low vision devices to visual tasks at hand. For example, teachers must have skills of selecting devices

for near and distance tasks, and must have skills of training low vision learners to use telescopic devices to view the chalkboard or a football game from the television screen and hand held magnifiers for near tasks like reading.

The teachers must have the skill of knowing the categories of low vision learners so that they can be able to know how to minimize glare for photophobic learners (Wilkinson, 1996) or maximize on contrast. If teachers have such skills and are flexible when working with learners with low vision, they make clear learners misconceptions and at the same time reduce visual fatigue among the low vision learners. Barraga (1983) observed that all areas surrounding the learner with low vision needed to have diffused illumination however higher amounts of illumination are usually preferred by learners who have conditions such as optic atrophy, and retinis pigmentosa. The teacher should at the same time have the skills of understanding that learners with albinism and aniridia require reduced amounts of illumination. It should be noted that the intensity of illumination can be regulated by adjusting the distance away from the light source or lowering the foot candle output of the source. This is due to the fact that lighting for individuals with low vision is highly individualized. It is suggested her that teacher skills that make the teacher understand the learning and visual needs of learners with low vision are key to successfully training learners to use their lowered vision capabilities of vision. Without the skills as may have been seen in the table above, learners tend to trudge on with visual skills that make them tire after a brief moment of performing visual tasks. It is critical that learners be afforded opportunities to acquire reading and writing skills in print through reduction restrictions to visual functioning by empowering teachers to have relevant skills and attitudes relevant to working with low vision.

## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **Summary of Findings**

Among the skills required for teachers to work with learners with low vision, (67.0%) of respondents indicated that they had not learned about clinical optical low vision assessment. Although the observation is correct, teachers need to know about functional vision assessment and leave the clinical assessment to the ophthalmologists. However, the teacher must know characteristics of visual behavior that require referral for clinical assessment. (15.6%) of respondents had not learned about environmental adaptation and/or modification to suit the learning needs of learners with low vision. 23.4% of respondents observed that they did not have skills in refractive errors and how to correct them. The same percentage also observed that they lacked skills in optics and optical low vision devices. 23.4% also said that they do not have skills of training learners with low vision. (16.9%) observed that they have no understanding of causes of low vision. Education placement of learners seemed to be hazy for some respondents, as such they need to be taught placement options for learners who are visually impaired.

Every visit made to schools for the visually handicapped must be aimed at monitoring visual health and perceptual development of each learner with low vision. Case conferencing as one way of professionals working with low vision individuals come together to discuss how low vision affects

each learner, and intervention to be put in place to support learning should be encouraged. Regular school visits will improve on inter and intra professional understanding of learners' developmental learning needs, and how they can work for the good of the learners with low vision. Reading accuracy of learners with low vision was aimed at observing good visual functioning. It was noted that accuracy at reading requires regular support for learning and appropriate reading materials and equipment.

It was found out that teachers in schools for the blind were desperately in need of training so that they can be able to support learners to use low vision to the optimum level. It was also observed that learners with low vision need many and varied visual experiences in order to improve on their visual skills.

It was noted that lack of encouragement for learners to use low vision devices and limited support from the teachers, parents, and significant others that are found within their visual environment seemed to preclude low vision functioning among learners with low vision.

The learners with low vision seemed to lack teachers with specialist training in low vision training. There were several inaccuracies in the manner learners perceived and pronounced words from the passage. It would therefore seem not correct to make learners to learn reading in a third language. It was noted that some classes had good word attack skills, scanning and tracking skills which should be encouraged through training and provision of pertinent low vision devices.

## CONCLUSIONS

### Teacher Skills Required to Train Learners to use Low Vision Devices

Teacher skills that make the teacher understand the learning and visual needs of low vision learners are key to successful low vision training so that learners with low vision can make optimal use of their vision. Among skills respondents need to have were optical and clinical low vision assessment, understanding about refractive errors, skills in low vision training, however skills in optical and clinical assessment are in the province of ophthalmic workers. It could also be concluded that the respondents may have heard about the skills and therefore wanted to understand what the skills areas entailed.

### Recommendations

Majority of teachers observed that they had yet to master low vision assessment (see Table 4.2). it is recommended here that school based in-service courses be instituted to equip and empower teachers with skills of working with learners with low vision. More skills exchanges can be gotten from training within the environment where the learning and teaching take place.

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