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Factors Influencing Academic Performance of Learners with Visual Impairment in Inclusive Primary Schools in Uriri Sub-County, Migori County, Kenya

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Abstract:

Learners with Visual Impairment have varied nature of difficulties that require special attention in curriculum implementation if they have to achieve good academic performance. These learners require comprehensive educational programs such as individualized techniques and services, appropriate assessment and instructional adaptation that enable them to complete current and future tasks in the school, home, workplace and community. Academic performance of learners with visual impairment is measured through examination (KCPE) in inclusive primary schools in Uriri sub-county. The poor performance has raised concern and effort has to be made to find out factors leading to this problem. Therefore, the purpose of this study was to find out factors influencing academic performance of learners with visual impairment in inclusive primary schools in Uriri sub-county, Migori County, Kenya. Objectives of the study were to determine the influence of teachers' and parents' attitude on academic performance of learners with visual impairment. The research hypotheses were drawn from the objectives of the study. The study adopted a descriptive survey research design. Saturated and purposive sampling techniques were used to select 3 head teachers, 28 teachers and 23 parents, giving a study population of 54 respondents. Piloting was done in one of the integrated public primary schools in Rongo sub-county to establish the reliability of the instruments where 1 head teacher 4 teachers and 3 parents were used in piloting. Internal consistency reliability coefficient was used to determine reliability of the instruments. Cronbach's reliability coefficient of above 0.70 was obtained for teacher's and parent's questionnaire, hence was considered reliable. Validity was determined by the supervisors and lecturers from the department of Educational Psychology, Rongo University. The analysis of the data was performed using Statistical Package for the Social Sciences (SPSS) version 20. Quantitative data was collected using a questionnaire. Qualitative data was collected using interview schedule. The quantitative data obtained was analyzed using percentages, means, standard deviation, weighted averages, Pearson's correlation, and binary logistics regression while qualitative data was coded, transcribed and organized thematically. Lev. Vygotsky social cultural theory was applied. The theory considers the society and its culture as the main source of child's development. Ethics was observed during both data collection and reporting of findings. The study established that; teacher attitude had a positive moderate significant influence ($r = .537, p < .05$), parent's attitude had a positive weak influence which was not statistically significant ($r = .243, p < .05$) on academic performance of learners with visual impairment. Based on the odds ratio, teachers' attitude had an odds ratio of 3.337, and parental attitude had the least odd ratio of 1.5. This implied that teachers attitude had the greatest influence on the performance of learners with visual impairment. Parental attitude had the least influence which was not statistically significant. The study therefore concluded that teachers' attitude is the key driver of the performance of learners with visual impairment and parents' attitude towards learners with visual impairment should be enhanced as reflected by the ratings. The study is significant to education policy makers, planners and implementers on how to organize seminars and workshops on attitude change, will help teachers and other stakeholders change their attitude towards learners with visual impairment and lastly give baseline to other researchers to carry out further research on the same topic. Based on the study findings it is recommended that teachers and parents of learners with visual impairment be encouraged to be more positive and closer to the children.

Keywords: Factors, academic performance, visually impaired learners

1. Background to the Study

In Kenya today, Inclusive education is still a new concept that is currently growing as compared to the developed world where it is evolving rapidly according to UNESCO report 2009. Many barriers and challenges still exist in the developing countries. In many instances, the challenges will vary depending on the relative differences of the society such as levels of the economy, social, political and technological development. Likewise, inclusive education has been found to have a positive impact on learners with disabilities especially those with visual impairment.

Kisanji (1995) argues that disability is sometimes attributed to witchcraft or curses due to parental violation of traditional norms and conditions that brings the vengeful ancestral spirits. When this happens, most children with disabilities are left without the basic skills that they can only get in schools (Armstrong, 2002; Kisanji, 1995). Most communities still see these children with "Special Needs" as incapable and still have stigma on them (Munyere, 2004). Most of them are abandoned in the forest to die, while others in the homes by their parents who believe they are a curse in the society. Society also does not accept these children and therefore less is done for them. The community has not yet accepted the people with disabilities as people who can be productive.

The concept of Inclusive Education was initially explained in the Jomtien Declaration in Thailand in 1990 where it was described as universal access to education for all children, youth, adults and promoting equity by being proactive in identifying the barriers to access of educational opportunities and identifying the resources needed to overcome those barriers (UNESCO, 2009). Inclusive education is described as the education for all through respect and provision of education for children, youth and adults with special needs within the regular education system according to their needs and difficulties (UNESCO, 1994).

The emphasis of the principles of inclusive education is that all learners should learn together in the same school regardless of the difference or difficulties they may have.

Inclusive Education is an approach to accomplish Education for All (EFA) strategy (UNESCO, 2009). EFA aims at achieving education for all, at every stage of human development. Inclusive education is a continuous process and it involves individual's full participation in education setting (Booth et al. 2006). Inclusive Education is therefore all about welcoming everyone in the system.

In Kenya, like in most parts of Africa, children are normally viewed as an asset, in that they not only carry on the family name, but they are also expected to assist the family especially their parents later in life when they have aged (Mungai, 2002 & Munyere, 2004). In the past, children who were born sick or with a disability, were left to die, because they were seen as a liability and a shame to their families. In Kenya, it was even legal to use euthanasia but this changed in 2001 with the introduction of human rights advocates and education (Munyere, 2004). A learner with visual impairment who gets encouraged by the parents to work hard in school is likely to do better than where the parents are not involved in supporting and encouraging them in their education.

Education in Africa has come a long way from the traditional beliefs in elders and traditional concepts and their teachings to the introduction of reading, mathematics and science and technology to adjust to the great changes brought about by globalized world. However, one area that is still far from keeping pace with rapid world changes is the area of special education. Furthermore, little research has been done about special education services in Africa and developing countries (Kiarie, 2006; Mutua & Dimitrov, 2001).

The effort to provide special needs education was boosted by the African charter (1990) on the rights and responsibilities of parents and children which states that every child has rights and responsibilities towards his/her family, the society, the state and the international community. Access to education is based on how well the learner receiving the education can produce positive economic outcome for the family and the nation in general (Mutua & Dimitrov, 2001). Furthermore, Students who did not perform to a passing level remained in the same grade until they passed the examination, or they dropped out of school due to frustration or were too old to remain in the school system (Abilla, 1988). This examination-based process was especially disadvantageous to learners who have disabilities, as they were not identified and no alternate assessment was put in place for them. Therefore, they were to sit and be assessed using the same entrance examination as their peers in regular education classrooms. There were also no plans put in place for students who fail to make the cut-off points. Teaching these learners with visual impairment can become a challenging task to teachers especially those that are not trained to handle them (Abilla, 1988).

However, since in 1963 Kenya has made a lot of developments towards the disabled. Churches like Salvation Army, Lutheran, Friends and catholic among others have contributed positively towards the areas of disabilities (UNESCO, 1994). Non-Governmental Organization (NGOs) have also provided medical care, food and other facilities (UNESCO, 1994). The Government Policy of Education for All (EFA) and the Millennium Development Goals (MDG) have emphasized on Special Needs Education (MOEST, 2005). The Kenya Institute of Special Needs Education (KISE) has played a major role in teacher and personnel training to improve skills in handling this special group of learners (MOEST, 2000).

Education for individuals with visual impairment, either formal or informal continues to shape the three domains of human development, namely cognitive, affective and the psychomotor. Much then is said that formal education remains the vehicle for social- economic development and social mobilization in any society. Therefore, education to individuals with visual impairment must be of quality that will help them to acquire skills, Knowledge, values and attitudes that will enable them to contribute positively to the social, economic, political and moral development of the society (Kiarie, 2006).

Social- ecological and family parental environment affect academic achievement of the pupils in that parental support, positive attitude of the society and government policies that support special education can motivate the special needs child to put more effort in their education. The negative perception of the community towards the visually impaired affects the learners since they do not feel integrated into the society, they live in. This leads to discrimination of the learners with Visual Impairment in schools, lack of motivation and segregation (Munyere, 2004). A cultural set up that is more aware of disabilities will accept the affected people and will hence motivate the learner with visual impairment since they will feel more welcome in the society (Shaduma, 2004)

The academic performance of learners especially with visual impairment in the country has recently come under scrutiny for some reasons. A number of studies have been carried out to identify causal factors that contribute to the poor academic performance. Most of these studies focused on three elements that intervene, that is parents (family causal

factors), teachers (academic causal factors) and students (personal causal factors) (Diaz, 2003). Teachers' attitude, parents' attitude and the instructional practices can make the performance of learners with visual impairment to go up or go down (Diaz, 2003).

Despite the numerous government initiatives, there still exists a high rate of repetition of classes and dropout among children with visual impairment in primary schools (MOEST, 2000). The results below showed evidence of dissatisfactory and inconsistency performance in Kenya Certificate of Primary Education (K.C.P.E) for six years in Uriri Sub- County.

Year	Enrolment	Mean score
2013	2628	249.29
2014	2721	246.3
2015	3069	241.74
2016	2987	249.06
2017	3185	246.49
2018	3140	246.39

Table 1: K.C.P.E Analysis Since 2013 to 2018 in Uriri Sub-County

Source: Uriri Sub-County Director of Education Office (2018)

There is sufficient evidence that for the last six years, Uriri Sub- County has continued to record low mean score in K.C.P.E Examination during the period of 2013-2018. Uriri Sub-County hardly attained mean score of above 250, thus raising concern. Comparatively, the performance of the three integrated primary schools in Uriri Sub-County showed in Table 2 below show a similar trend.

Year	Enrolment	Mean score	Percentage Score
2013	145	242.08	48.41
2014	168	238.81	47.79
2015	144	210.98	41.53
2016	191	238.79	47.75
2017	136	244.34	48.86
2018	112	243.83	48.76

Table 2: K.C.P.E Analysis Since 2013-2018 for the Three Integrated Primary Schools

Source: Uriri Sub-County Director of Education Office

The performance is considered to be average when the mean score is above 250, and below average when the mean score is less than 250. From the above table 2, overall performance was rated as below average. There is sufficient evidence that for the last 6 years, the three integrated primary schools have continued to record below average mean score in the K.C.P.E. This analysis formed the basis for this study which was to find out how attitude of teachers and parents and instructional practices influence academic performance of learners with visual impairment in inclusive primary schools in Uriri Sub County, Migori County, Kenya.

2. Objectives of the Study

The study was guided by the following specific objectives: -

- To establish the influence of teachers' attitude on academic performance of learners with visual impairments.
- To establish the influence of parents' attitude on academic performance of learners with visual impairment.

3. Research Hypothesis

The study was based on the following null hypothesis;

H₀₁: Teachers' attitude has no statistically significant influence on the performance of learners with visual impairment in Uriri Sub-county.

H₀₂: Parental attitude has no statistically significant influence on the performance of learners with visual impairment in Uriri Sub-county.

4. Literature Review

4.1. Teachers Attitude to Learners with Visual Impairments

A research done by the Institute for Social and Economic Change (ISEC; 2006) indicates that the barriers to effective inclusive learning were attributed to negative attitude, illiteracy, lack of priorities, rigid system, lack of trained personnel, poverty and lack of effective policies. Teachers attitude notably affect the performance of the Special Needs Learners due to the fact that they make the decisions which affect their role and the learner's performance.

Najjingo (2009) carried out a study on challenges of accessing All-Inclusive Education services by children with disabilities in Mijwala Sub-County in Sembabule District. An exploratory study design was used. The study covered 10 primary schools where two teachers were targeted per school. 50 children with and without disability for focus group discussion giving a total of 120 respondents. Non probability sampling procedure was used through purposive and snowball sampling techniques. Interview and questionnaires were also used. Qualitative and Quantitative data analysis

were used. The study revealed that regular classroom teachers lacked the requisite training and skills to meet the educational needs of children with disabilities as well as parents, teachers and peer's negative attitude. The previous study was carried out on challenges of accessing All-Inclusive Education services by children with disabilities in Mijwala Sub-County whereas the current study was carried out on factors influencing academic performance of learners with visual impairment in Uriri Sub-County.

In line with a study carried out by Kamel (2014) on teaching students with visual impairment in inclusive educational setting, a case from Nepal, Qualitative and quantitative technique was used for data analysis. It was revealed that teachers' years of schooling, teaching experience and using blackboard were positively correlated to teaching style adjustment, whereas negative correlation of their age indicated that younger teachers are more likely to adjust their teaching styles for disabled students. The previous study generalized all the disabled students whereas the current study was done purely on learners with visual impairment.

Jayaprada (2012) carried out a study on teachers' attitudes towards inclusive teaching to visually impaired students in English language teaching settings. The objective of the study was to identify teachers' attitude towards inclusive education in addressing the needs of visually impaired students in three metropolitan cities in Amhara National Regional Estate in Ethiopia. Quantitative research method was used to analyze data. The population included 25 English teachers in inclusive schools. A questionnaire was used in collecting data. Data analysis was through descriptive statistics, T-test and ANOVA. The study revealed that teachers in all variables other than experience of teaching visually impaired students were found to have positive attitudes towards inclusive education. The previous study was based on English teachers whereas the current study was based on the general performance of learners with visual impairment.

Samoah, Ofori - Dua, and Cudjoe (2018) carried out a study on inclusive education; Perception of visually impaired students, students without disability, and teachers in Ghana. Qualitative research approach was employed. This study used a sample of 23 students with visual impairment, 27 students without disability and 19 teachers in inclusive school. Data collection was done through a semi structured interview. The study revealed that visually impaired students and some teachers supported inclusion while a number of students without disability disliked the practice and also most teachers lacked knowledge and skills in promoting inclusive education. This study used a sample of 23 visually impaired students, 27 students without disabilities and 19 teachers in inclusive schools. The current study used a sample of 28 teachers, 3 head-teachers and 23 parents of learners with visual impairment in inclusive set up, and also the previous study was based on the perception while the current study looked at the general factors influencing academic performance of learners with visual impairments.

4.2. Parents Attitude to Learners with Visual Impairments

Parents' attitude on the learners with visual impairment depends on the environment in which they live. Therefore, the attitude should be based on the principle that the attitude can be changed by changing the situation in the environment. Most families expect to give birth to healthy babies. When their expectation fails, they go through a state of shock, denial, depression and acceptance (Shaduma, 2004). Learners with visual impairment if given a chance to learn can be productive members of the society, though some people see them as unable group. In Kenya, like in most parts of Africa, there are still beliefs in witchcraft and causes attributed to disability.

Oliver (1981) believes that the way to deal with disabilities in the society is to change what people do, know and what people think. But ways of thinking influence ways of living and doing. The family plays an important role in the provision of the much-needed support both socially and economically that are significant for the learner's development and academic performance. The amount of schooling of the members of the family has a direct impact on how they structure their home environment and how they interact with their children to promote their academic achievements. Parents who are certain that they are able to make a difference are more probable of planning events and partake in events that entail their active involvement.

Agesa (2014) carried out a study on challenges faced by learners with visual impairment in inclusive setting in Trans-Nzoia County. Descriptive survey design was used to explore the challenges that learners with visual impairment faced. 184 learners with visual impairment, 20 classroom teachers and 6 itinerant teachers were sampled. Both qualitative and quantitative data were used through the use of questionnaires, interviews and documentary analysis. It was observed that most learners with visual impairment performed poorly in academics due to lack of implementation of the visually impaired school which called for a differentiated curriculum as per the laid down policy on special needs education which is attributed to social, economic and partly cultural factors. In the current study only teachers and parents were involved in the study.

Kara and Columa (2013) carried out a study on Parents' perceptions of physical activity for their children with visual impairment. The objective of the study was to find out parents' perceptions of physical activity for their children with visual impairment. Convenience sampling was used to sample 11 parents of learners with visual impairment who participated on one-on-one semi -structured interview and then analyzed through a constant comparative analysis. Descriptive qualitative research design was used. The study revealed that the parents valued and had high expectations of physical activity for their children. However, they believed that, there were multiple barriers to overcome. The previous study used only parents as participants whereas the current study used parents, and teachers as participants.

Augustad and Elmer (2016) carried out a study on self-concept and self-esteem among children and young adults with visual impairment. 24 of the studies had used a cross-sectional design. Questionnaire was used in the collection of data. It was found that independence in mobility, parenting style, social support, and friendship was important for children with visual impairment to enhance their self-concept and self-esteem. The previous study considered the effect of self-

concept and self-esteem on the visually impaired children and young adults whereas the current study focused on three factors influencing academic performance of learners with visual impairment.

Ferial, Abeer and Uchechukwu (2019) carried out a study on influence of parenting style on the Visually Impaired Adolescent and their Self-Esteem Analysis based on A Saudi population in Riyadh Central province of Saudi Arabia. The objective of the study was to investigate the attitude of visually impaired adolescent towards parents and examine the parents' attitude towards the visually impaired adolescent child. 39 children with visual impairments and 119 parents participated in the study. Questionnaire was used to gather information. Analysis was performed using the SPSS Statistical Software version 16.0. It was revealed that parental questionnaire indicated that more than one half of the adolescents perceived parenting as authoritative and the remaining perceived parenting as either authoritarian or permissive, but the difference was not significant and remained unaffected by the serious gender. The previous study considered adolescents which extends up to university as opposed to the current study which considered only class eight candidates.

5. Research Methodology

5.1. Research Design

Research design is the structure that is used to generate answers to research problems by providing a structure that shows how parts of research project work together to address central research questions (Orodho, 2003). This study employed the use of descriptive survey research design to explore and determine factors influencing academic performance of learners with visual impairment in inclusive primary schools in Uriri Sub-county. Survey is defined as a method used in getting information through responses that a sample of individual respondents give to questions presented to them. This design was chosen because it is designed to obtain pertinent and precise information status of the phenomena. It describes data and characteristics about the population or phenomenon being studied (Cohen, Manion and Marrison, 2011). Survey design was appropriate as it assisted the researcher to get data by asking individual head teachers, teachers and parents their opinion on factors influencing academic performance of learners with visual impairment. Descriptive design is used in preliminary and exploratory studies. In this study, this was achieved by collection of both qualitative and quantitative data (interview schedule and questionnaire) which were then integrated in the presentation of study results (Creswell, 2013).

5.2. Sampling Size and Sampling Techniques

According to Bryman (2012) and Fraenkel & Wallen (2009), a sample is used in a study when the researcher is not able to cover the entire population due to cost or time, therefore the researcher or researchers collect information from a sample in such a way that the knowledge gained represents views of the entire population. In this study, saturated and purposive sampling was used. Saturated sampling was used to pick on the entire population for the study. This was done because the participants were few and therefore all of them were considered. Purposive sampling was used to select 3 head teachers, 28 subject teachers and 23 parents of learners with visual impairment for the candidate classes of 2017 and 2018 in the three integrated primary schools, hence, giving a total of 54 respondents. Subject teachers were considered for the study because they have direct influence on learners' academic performance in the respective subjects while parents were important because the child's development first occurs through social interaction with them and as result their attitude could influence academic performance of children. The distribution of the subject teachers for 2017 and 2018 candidate classes in the three integrated primary schools are presented in Table 3.

Integrated School Code	Number of Sampled Subject Teachers for 2017 KCPE	Number of Sampled Subject Teachers for 2018 KCPE	Total Number of Teachers
1	4	5	9
2	5	5	10
3	4	5	9
Total	13	15	28

Table 3: Distribution of Subject Teachers for 2017 and 2018 Candidate Classes

Similarly, the 2017 and 2018 KCPE enrolment statistics of visually impaired learners in the three integrated primary schools were as displayed in Table 4.

Integrated School Code	Number of 2017 KCPE Visually Impaired Candidates	Number of 2018 KCPE Visually Impaired Candidates	Total
1	3	4	7
2	4	2	6
3	5	5	10
Total	12	11	23

Table 4: Distribution of 2017 and 2018 KCPE Visually Impaired Candidates

The 23 visually impaired candidates were the ones whose parents were invited to participate in the study.

5.3. Research Instruments

Data for the study was collected by the use of two different tools. They included questionnaire and interview schedule to capture the objectives of the study which was useful to answering the pertinent questions raised in this study. Questionnaire is easy to use in survey because it is easy to administer, and also allows the respondent good time to answer questions, freedom to air their views and make suggestions (Gay & Airasian, 2000). Orodho (2009) defines interview as the experience of the participants that uncover the world. Collected responses was used to interpret the results and then discussed by comparing with what other studies have found out.

6. Results and Discussion

The findings and discussions were analyzed and organized in accordance with the specific objectives and hypotheses of the study.

6.1. Teachers' Attitude on Academic Performance of Learners with Visual Impairment

The first objective of the study sought to determine the influence of teachers' attitude on academic performance of learners with visual impairment in inclusive primary schools in Uriri Sub-County. To achieve this objective, teachers in inclusive primary schools in Uriri Sub-County were asked to rate their responses on a 5-point Likert scale based on a multiple indicators of teacher attitude. The 5-point rating scale on the aspects of teachers' attitude was as follows;

1—Strongly Disagree

2---Disagree

3---Neutral

4---Agree

5---Strongly Agree

The study used descriptive and inferential statistics to describe and establish the influence of teachers' attitude on academic performance of learners with visual impairment in inclusive primary school. The results in Table 5 present a summary of descriptive statistics on attitude of teachers towards learners with visual impairment in inclusive primary schools.

	SD	D	N	A	SA	MR
	F %	F %	F %	F %	F %	
I like learners with visual impairment	8 28.6	5 17.9	4 14.3	5 17.9	6 21.4	2.86
Teaching learners with visual impairment requires extra effort	0 0	2 7.1	9 32.1	11 39.3	6 21.4	3.75
I find it interesting teaching learners with visual impairment	7 25	11 39.3	7 25	3 10.7	0 0	3.79
Managing learners with visual impairment is tiresome	0 0	0 0	5 17.9	12 33.6	11 39.3	4.21
I would like to make a career in teaching learners with visual impairment	0 0	5 17.9	9 32.1	10 35.7	4 14.3	3.46
I feel comfortable with learners with visual impairment	3 10.7	5 17.9	11 39.3	9 32.1	0 0	2.93
I communicate effectively with learners with visual impairment	4 14.3	7 25	9 32.1	5 17.9	3 10.7	2.86
I am patient with learners with visual impairment	3 10.7	4 14.3	8 28.6	9 32.1	4 14.3	3.25
I dislike learners with visual impairment	12 42.9	7 25	5 17.9	4 14.3	0 0	2.04

Table 5: Teachers' Attitude towards Learners with Visual Impairment

N = 28

Results in Table 5 show that 13 (46.5%) disagreed (score 1 and 2 on the Likert scale) that they like learners with visual impairment as compared to 11 (39.3%) who agreed (score 4 and 5 on the Likert scale) that they like learners with visual impairment. The results suggest that on the average the like for learners with visual impairment as indicated by weighted averages of 2.86 representing neutral on the scale. The results indicate most of the teachers were indifferent on whether they liked learners with visual impairment or not. This implies that there were as many teachers who liked learners with visual impairment as there were those who disliked them. This is also in line with the findings of Anderson (2006) who said that both negative and positive attitudes of teachers have profound influence on the learners'

performance. This shows that teachers' attitude is very important factor to academic performance of learners with visual impairment. This view was also held by all 3(100%) head teachers who say attitude is key in teaching and learning.

During an interview, it was noted that head teachers of primary schools should like learners with visual impairment in order to successfully clarify the path to achievement of educational goals set for the learners on their academic work. In this respect, one head teacher stated:

I have discovered that teachers who like learners with visual impairment, view their primary role as that of providing affection for their school children with visual impairment so that they could put in their best effort to learning and ensuring that the best result is realized from these learners (Head teacher 1)

From the verbatim quote from head teacher 1, it is clearly realized that for a school head teacher to be able to remove obstacles to achievement of learners with visual impairment, head teachers must like learners in order to know when there are obstacles, what to do and how to do it without any problem. Head teachers' like to learners with visual impairment is crucial in ensuring academic performance of these learners.

With regard to the finding on assessment of learners with visual impairment, 5 respondents representing 17.9% disagreed (score 1 and 2 on the Likert scale) meaning they don't find it challenging as compared to 14 representing 50% who agreed (scores 4 and 5 on the Likert scale) meaning that they find it challenging. The results suggest that on the average, assessing learners with visual impairment is challenging as indicated by weighted averages of 3.50 representing agree on the scale. This is supported by Kamel (2014) who indicated that teachers' years of schooling, teaching experience and using blackboard are positively correlated to teaching style adjustment whereas negative correlation of their age indicated that younger teachers are more likely to adjust their teaching styles for the disabled students. All 3(100%) head teachers also agreed that assessing learners with special needs is expensive because it requires specialized equipment. The results suggest that the level of assessment of learners with visual impairment was not adequate and this affect academic performance of learners with visual impairment.

On the other hand, Head teacher 3 stated that:

"In my school, I have realized that the challenges depend on the degree of impairment. Keeness of my teachers is therefore, necessary in order to notice such learners in class" (Head teacher 3)

The response from Head teacher 3 above shows that keeness of head teachers plays a role in the identification of challenges of learners with visual impairment as these have effect on them which in turn leads to improved academic performance.

Failure to do this could be contributing to poor academic performance because teachers may not be adequately evaluating learners.

On whether Teaching learners with visual impairment requires extra effort, 2 respondents representing 7.1% indicated that it did not (score 1 and 2 on the scale). The results suggest that on the average, teaching learners with visual impairment requires extra effort as indicated by weighted averages of 3.75 which represent 'agree' on the scale. While 17 representing 60.7% who agreed that teaching learners with visual impairment requires extra effort (scores 4 and 5 on the scale). The results suggest that on average, teaching learners with visual impairment requires extra effort as indicated by weighted averages of 3.75. This was in concurrence with Ineke, Janssen and Minnaert (2018) who said that teachers need to be aware of their students' individual needs for structure, autonomy support and involvement and should adjust their need. This implies that teachers of such schools have to go an extra mile to enable their learners grasp some knowledge in school as they are always in direct contact with learners. This therefore implies that putting extra effort is necessary in order to improve the academic performance of visually impaired learners.

On whether the teachers find it interesting teaching learners with visual impairment, 3 respondents representing 10.7% disagreed (score 1 and 2 on the Likert scale) meaning they didn't find it interesting as compared to 18 representing 64.3% who agreed (scores 4 and 5 on the Likert scale). The results suggest that on the average, most teachers' teaching learners with visual impairment find it interesting as indicated by weighted averages of 3.95. This implies that given an alternative employment, majority will choose the latter. This is in line with Lomofsky (2005) who supported that teachers of learners with special needs need to be sensitive to the needs of learners and their own attitude and feelings. This will help in eradicating poor academic performance among learners with visual impairment.

On whether management of learners with visual impairment is tiresome, 23 representing 82.1% agreed (scores 4 and 5 on the Likert scale) that management of learners with visual impairment is tiresome. The results suggest that on the average, teachers teaching learners with visual impairment find the programs they partake in trying to enable learning tiresome as indicated by weighted averages of 4.21. This implies that most of the teachers teaching learners with visual impairment were experiencing burn out with the exercise. This implies that they may not be in a position to offer their best in trying to improve the academic performance of VI learners. This implies that most of the teachers teaching learners with visual impairment are tired of the exercise. This may be one of the factors causing poor academic performance. One head teacher remarked "managing learners with visual impairment requires special skills and equipment." This was supported by Luque, Leonidas, Kira and Brandao (2018) who said that most of the educators have limited access to knowledge related to the inclusion of learners with visual impairment and did not have time for them. This was also in agreement with the findings of Hatlen (2004) who said that teachers who do not have time for learners with special needs will not help them to learn. Students with visual impairment need many additional experiences to make up their lack of incidental learning. It is therefore, true to say that tiresome of teachers affect the academic performance of visually impaired learners.

With regard to whether they would like to make a career in teaching learners with visual impairment, 5 (17.9%) disagreed (score 1 and 2) while 14 (50%) agreed (score 4 and 5). The results of the analysis yielded a weighted average of

3.46 which imply that most teachers were willing to become teachers of learners with special needs, an attitude that is likely to improve teaching and learning. This was in agreement with Jayaprada (2012) who said that teachers in all variables other than teaching experience of the learners with visual impairment were found to have positive attitudes towards inclusive education. Teachers need to emphasize on transformative skills as the application will influence academic performance of learners with visual impairment positively. Teachers also needs to be sensitized about children with special needs so as to show correct attitude and behavior towards learners with visual impairment.

As regards whether they were comfortable with learners with visual impairment, 8 (28.6%) disagreed (score 1 and 2) while 9 (32.1%) agreed (score 4 and 5). The results of the analysis yielded a weighted average of 2.93 which imply that most teachers have not disclosed their feelings against learners with special needs. Comfort ability of teachers in this case could not come out clearly as teachers did not disclose it. This was supported by Ineke, Janssen and Minnaert (2018) who said that teachers need to be aware of their student's individual needs for structure, autonomy support and involvement and should adjust their needs. Teachers need to be committed to this goal of inclusion since they are the people who make learning possible.

On the other hand, Head teacher2 stated that:

"In my school, I have realized that teachers are not comfortable with teaching learners with visual impairment., this therefore, needs us to encourage teacher to do their best to help visually impaired learners to excel in their academic performance" (Head teacher 2)

The response from head teacher 2 above shows that comfortability of teachers in teaching visually impaired learners play a role in improving academic performance of learners with visual impairment as this have influence on the learners' make up which in turn leads to their improved academic performance.

As regards whether they communicate effectively with learners with visual impairment, 11 (39.3%) disagreed (score 1 and 2) while 8 (28.6%) agreed (score 4 and 5). The results of the analysis yielded a weighted average of 2.86 which imply that nature of teachers' communication with learners with special needs is not known. This was supported by Penda et al. (2015) and Brown et al. (2013) who found that teachers need complete training and modify their teaching methods and resources for effective communication. Teachers have direct contact with the learners and interact closely with them on daily basis, they need to unite and improve on communication and listening skills as this have great influence on students' academic performance. This therefore, is a clear indication that proper communication by teachers to learners with visual impairment adds to academic improvement of their performance.

With regards to whether they were patient with learners with visual impairment, 7 (25%) disagreed (score 1 and 2) while 13 (46.4%) agreed (score 4 and 5). The results of the analysis yielded a weighted average of 3.25 which imply that teacher's tolerance with learners with special needs is not known. These results contrast the view held by head teachers who indicated that the teachers are comfortable handling learners with visual impairment. Lomofsky (2001) argues that teachers need to be sensitive and critical of the stereotypes and prejudices related to disability. Teachers should be patient with learners with visual impairment to enhance general academic performance.

With regards to whether they dislike learners with visual impairment, 19 (69.9%) disagreed (score 1 and 2) while 9 (14.3%) agreed (score 4 and 5). The results of the analysis yielded a weighted average of 2.04 which imply that most teachers like learners with special needs. These results concur with the view held by the 3(100%) head teachers who say that teachers are comfortable handling learners with visual impairment. Teachers' attitude and interaction could significantly predict students' academic performance. Dupoux (2005) says that teachers play one of the most important roles in implementing and maintaining inclusive education in school. Teachers' attitude, beliefs and feelings with regard to what is happening in the school and in the classroom are of fundamental importance towards the academic improvement of visually impaired learners.

Data on this objective was analyzed under the hypothesis;

- H_{01} : Teacher attitude has no statistical significant influence on the performance of learners with visual impairment in Uriri Sub-County.

In order to establish whether there was any statistically significant influence of teacher attitude on academic performance of learners with visual impairment in inclusive primary schools, a bivariate Pearson's Product-Moment Coefficient of Correlation was used to establish the relationship between teachers' attitude and academic performance of learners with visual impairment. This was computed by correlating 28 aggregate scores on a teacher's attitude scale with 28 teacher's corresponding subject average marks for learners with visual impairment in the 2017 and 2018 KCPE results. The output in Table 6 shows the correlation results.

		Academic	Teacher Attitude
Academic Performance	Pearson Correlation	1	.537**
	Sig. (2-tailed)		.000
	N	28	28
Teacher Attitude	Pearson Correlation	.537**	1
	Sig. (2-tailed)	.000	
	N	28	28

Table 6: Influence of Teacher Attitude on Academic Performance of Learners with VI
 **. Correlation Is Significant at the 0.01 Level (2-Tailed)

From the results in Table 6 it is evident that there was a significant positive and moderate relationship ($r = .537$, $p < 0.05$) between teacher attitude and academic performance of learners with visual impairment in inclusive primary schools. Given that the p-value was less than the chosen level of significance, $\alpha = .05$, the null hypothesis that "Teacher attitude has no statistically significant influence on the performance of learners with visual impairment" was rejected. Consequently, a conclusion was made that there is statistical significant positive and moderate relationship between teacher attitude and performance of learners with visual impairment. This implies that positive teacher attitude moderately influences improved performance of learners with visual impairment and vice-versa.

The study further sought to determine the probability of learners with visual impairment in inclusive primary schools performing above or below average based on the teachers' attitude. To establish the likelihood, a binary logistic regression was used to calculate the Odds ratio, in which case the independent variable (teachers' attitude) and dependent variable (academic performance of learners) were coded as dichotomous variables. Thus; based on Kothari (2005) recommendation on summated Likert scale, teachers' attitude on learners with visual impairment were collapsed and a composite index computed for each teacher to represent the rating of the level of attitude. The indices ranged from 10 to 50 and were used to rate the attitude as being either Negative ≤ 30 points and positive > 30 points. Therefore, for teachers' attitude which was the explanatory variable, 0 was assigned if the teachers' attitude was rated as negative while 1 was assigned if the teachers' attitude was rated positive

$$\text{Attitude} = \begin{cases} 0, & \text{if attitude rating was negative} \\ 1, & \text{if attitude rating was positive} \end{cases}$$

The summary of the Indices grouped in terms of whether the teachers had positive or negative attitudes as shown in the Table 7.

	Teacher' Attitude Index		
	≤ 30 points(Negative)	> 30 points(Positive)	Total
Number of Teachers	11	17	28
Percent	39.3%	60.7%	100

Table 7: Teachers' Attitude on Learners with Visual Impairment as a Composite Index

The results of the analysis show that 11 teachers representing 39.3% were rated to have a negative attitude towards teaching learners with visual impairment compared to 17 teachers representing 60.7% who were established to have a positive attitude. This means that majority of teachers have positive attitude which is likely to improve academic performance. This is further supported by 3 (100%) of the head teachers who reiterated that the teachers in their schools had positive attitude for their job. Encouragement and positive attitude from the teachers are important in determining the attitude of learners towards their education.

Academic performance which was the response variable, was measured based on 2017 and 2018 KCPE subject's average marks for candidates with visual impairment and zero (0) was assigned to performance of less than or equal to 50 marks while 1 was assigned to performance of above 50 marks but less than or equal to 100 marks:

$$\text{Performance} = \begin{cases} 0 & \text{if performance was average or below average} (\leq 50 \text{marks}) \\ 1 & \text{if performance was above average} (> 50 \text{marks but} \leq 100 \text{marks}) \end{cases}$$

The results of teacher's attitude aggregate scores and subject average scores for learners with visual impairment were analyzed using binary logistic regression and the Odds Ratio presented in Tables 4.7 obtained.

Performance	Odd Ratio.	Std. Err.	Z	P> z	[95% Conf. Interval]	
Teacher Attitude	3.337	1.202	3.35	0.001	1.647	6.759
Constant	.365	.082	4.48	0.000	.235	.567

Table 8: Binary Logistic Regression Odds Ratio

The results in Table 8 above show that an odds ratio of 3.337 significant at 0.05 level of significance ($z=3.35$, $p < .05$) was obtained for teachers' attitude and this means that the likelihood of those teachers who had positive attitudes towards learners with visual impairment obtaining high performance is 3.337 times higher than those who had negative attitude towards the learners. The results show that teachers' attitude towards learners with visual impairment influenced the academic performance of the learners hence teachers with a positive attitude towards learners with visual impairment positively impact on the academic performance of the learners with visual impairment while those with negative attitude negatively impact on the performance of the learners with visual impairment. The study findings are similar to findings by Mwaura and Wanyera (2002) who asserted that teachers should show positive attitude to these learners to encourage them to be active and to explore their surroundings hence improve their academic performance. The study findings also supported findings by the Institute for Social and Economic Change (ISEC, 2006) which identified negative attitude of teachers as a key barrier to academic performance of learners with visual impairment.

6.2. Parental Attitude on Academic Performance of Learners with Visual Impairment

The second objective of the study sought to determine influence of parents' attitude on academic performance of learners with visual impairment. To achieve the objective, the attitude of 23 parents who had learners with visual impairment in the three schools was determined using a 5-point Likert scale in which they were asked to indicate their

level of agreement with the various statements given. Their responses were used to measure parental attitude towards children with visual impairment. Parent's attitude was measured on 5-point Likert scale as follows;

1---Strongly Disagree

2---Disagree

3---Neutral

4---Agree

5---Strongly Agree

The results are given in Table 9 below.

Statement	SD		D		N		A		SA		MR
	F	%	F	%	F	%	F	%	F	%	
I like my child with visual impairment	0	0	0	0	6	26.1	8	34.8	9	39.1	4.13
Managing my child with visual impairment is exhausting	7	30.4	6	26.1	3	13	5	21.7	2	8.7	2.52
I feel comfortable living with my child with visual impairment	0	4	4	17.4	4	17.4	11	47.8	4	17.4	3.65
It is fun playing with my child with visual impairment	0	0	1	4.3	8	34.8	9	39.1	5	21.7	3.78
I do like assisting my child with visual impairment	0	0	0	0	6	26.1	11	47.8	6	26.1	4.00
Maintaining my child with visual impairment is not costly	12	52.2	3	13	1	4.3	7	30.4	0	0	2.13
It is Joyous caring for my child with visual impairment	9	39.1	4	17.4	2	8.7	8	34.8	0	0	2.39
Having a child with visual impairment is not stressing	12	52.2	6	26.1	3	13	1	4.3	1	4.3	1.83
My child with visual impairment is of much assistance	2	8.7	5	21.7	12	52.2	4	17.4	0	0	2.78
I fear for my child with visual impairment	0	0	0	0	3	13	12	52.2	8	34.8	4.22
I am proud of my child with visual impairment	0	0	0	0	7	30.4	16	69.6	0	0	3.70

Table 9: Parental Attitude on Learners with Visual Impairment (N=23)

To answer the question on whether the parents like their children with visual impairment, 0 respondents representing 0% disagreed - (score 1 and 2 on the scale) while 17 representing 73.9% agreed (score 4 and 5 on the scale). With a weighted mean of 4.13 which represent 'agree', the results indicate that the parents like their children with visual impairment. This is important because parents will support and take their children to school. This was also supported by Hussein (2006) who said that learners supported by parents perform well in examinations. This is a clear indication that parental attention in their children's education is a strong indicator of academic achievement.

In response to the assertion that managing learners with visual impairment is exhausting, 13 respondents representing 56.5% disagreed (score 1 and 2 on the scale) while 7 representing 30.4% agreed (score 4 and 5 on the scale). With a weighted mean of 2.52 which represents 'neutral'. The results indicate that the parents were not seeing managing the children with visual impairment as exhausting, meaning they have accepted the children despite the disability. This was supported by Lupon, Armayones and Cardona (2016) who said that the experience of caring for a child with visual impairment is mainly influenced by psychosocial factors. This therefore, calls for all parents to be free with their disabled children and offer any necessary help in order to allow them excel in their academic performance.

With regard to whether they felt comfortable living with children with visual impairment, 4 respondents representing 17.4% disagreed (score 1 and 2 on the scale) With a weighted mean of 3.65 which represent 'agree', majority of the parents were at ease living with their children who were visually impaired. While 15 representing 65.2% agreed (score 4 and 5 on the scale). With a weighted mean of 3.65 which represent 'agree', the results indicate that the parents were comfortable living with their children with visual impairment. The same view was supported by the findings of Georgiou (2007) who says that parents who involve themselves in the education of their children have strong beliefs in

them. Parental involvement in their children begins at home with the parent providing a safe and healthy environment, appropriate learning experiences support. This will enhance the general performance of their children with visual impairment.

To whether it is fun playing with their children with visual impairment, 1 respondent representing 4.3% disagreed (score 1 and 2 on the scale) while 14 representing 60.9% agreed (score 4 and 5 on the scale). With a weighted mean of 3.78 which represent 'agree', the results indicate that the parents had fun playing with their children with visual impairment. Parents in this respect are not ashamed of having children with visual impairment. This was in concurrence with the findings of Columna (2013) who supported that parents valued and had high expectations of physical activity for their children; however, they believed that there were multiple barriers to overcome. This response was also echoed by Kara et al. (2013) who supported that parents valued and had high expectations for physical activity for children. Parents play very crucial role in promoting physical growth of their children and they should be part and parcel of their children's life. Parents who are not ashamed with their visually impaired children find it easy to support them towards their academic achievement.

With regard to whether they like assisting their children with visual impairment, 0 respondents representing 0% disagreed - (score 1 and 2 on the scale) while 17 representing 73.9% agreed (score 4 and 5 on the scale). With a weighted mean of 4.00 which represent 'agree', the results indicate that the parents liked assisting their children with visual impairment. This is in line with the findings of Augestad and Elmer (2016) who found that independence in mobility, parenting style, social support and friendship was important to enhance their self-concept and self-esteem. The same view was supported by Hussain, (2006) who found that guidance from parents indirectly affects the performance of learners with visual impairment. This automatically indicates that learners whose parents are more involved in their academic work tend to be better off academically than those whose parents are not directly involved in their education.

To whether maintaining their children with visual impairment was not costly, 15 respondents representing 65.2% disagreed - (score 1 and 2 on the scale), while 7 representing 30.4% agreed - (score 4 and 5 on the scale). With a weighted mean of 2.13 which represent 'disagree', the results indicate that the parents considered the maintenance of their children with visual impairment to be costly. This confirms the findings of Balal and Rehan (2012) who found that family income significantly affects the academic performance and disability affects the entire family in terms of time, finance, physical and emotional demands.

On whether It was Joyous caring for the children with visual impairment, 13 respondents representing 56.5% disagreed (score 1 and 2 on the scale) while 8 representing 34.8% agreed (score 4 and 5 on the scale). With a weighted mean of 2.39 which represent 'disagree', the results indicate that it was not Joyous caring for children with visual impairment because they require special attention and specialized facilities which are normally expensive.

In response to the assertion that having a child with visual impairment is not stressing, 18 respondents representing 78.3% disagreed (score 1 and 2 on the scale) while 2 representing 8.7% agreed (score 4 and 5 on the scale). With a weighted mean of 1.83 which represents 'Disagree' the results indicate that there was some level of stress accompanying having a child with visual impairment. This is also in line with Munyere (2004) findings which indicated that children who gets encouraged by the parents to work hard in school are likely to do better than where the parents are not involved in supporting and encouraging them.

With regard to whether children with visual impairment were of much assistance, 7 respondents representing 30.4% disagreed (score 1 and 2 on the scale) while 4 representing 17.4% agreed (score 4 and 5 on the scale). With a weighted mean of 2.78 which represent 'Neutral' the results indicate that the parents were indifferent as to whether children with visual impairment were of much assistance or not. Mungai and Munyere (2004) say children are an asset that will be expected to assist the family especially in old age.

To whether they fear for their children with visual impairment, 0 respondents representing 0% disagreed (score 1 and 2 on the scale) while 20 representing 87% agreed (score 4 and 5 on the scale). With a weighted mean of 4.22 which represent 'agree', the results indicate that the parents empathized with their children with visual impairment. This is supported by Aduda (2009) who said that Parents take their children to school and are partly responsible to their requirements. This shows that always parent ensure guaranteed security of their children with visual impairment

With regard to whether the parents were proud of their children with visual impairment, 0 respondents representing 0% disagreed (score 1 and 2 on the scale) while 16 representing 69.6% agreed (score 4 and 5 on the scale). With a weighted mean of 3.70 which represent 'agree' the results indicate that the parents were proud of their children with visual impairment. This could make them take their children to school.

The hypothesis tested for objective two was:

- H₀₂: Parents' attitude has no statistically significant influence on the performance of learners with visual impairment in Uriri Sub-county

To test the hypothesis, a bivariate Pearson's Product-Moment Coefficient of Correlation was used to establish the relationship between the two variables. The coefficient of Correlation was used to measure the influence of parents' attitude on academic performance of learners with visual impairment in inclusive schools. This was computed by correlating 23 aggregate scores on parent's attitude scale with 23 corresponding KCPE marks for learners with visual impairment in the 2017 and 2018 KCPE results. The output in Table 10 shows the results.

		Learners Performance	Parents' Attitude
Learners Performance	Pearson Correlation	1	.243**
	Sig. (2-tailed)		.064
	N	23	23
Parents' Attitude	Pearson Correlation	.243**	1
	Sig. (2-tailed)	.064	
	N	23	23

Table 10: Influence of Parents' Attitude on Performance of Learners with VI
 **. Correlation is significant at the 0.01 level (2-tailed)

Table 10 indicates that the positive and weak relationship ($r = .243$; $p > 0.05$) between parents' attitude and performance of learners with visual impairment, was not significant, since the p-value of .064 is greater than the set level of significance, $\alpha = .05$. Therefore, the null hypothesis that "Parent's attitude has no statistically significant influence on the performance of learners with visual impairment" was not rejected. The study concluded that there is no statistical significant influence between parents' attitude and performance of learners with visual impairment.

Further, the study sought to establish the probability of learners with visual impairment performing above or below average given a parent's attitude. To establish the probability, a binary logistic regression was conducted. Table 11 and Table 12 present results for descriptive statistics on parents' attitude and the binary regression Odds Ratio for determining the likelihood of learners' performance respectively.

Based on summated scores, attitude of the parents of learners with visual impairment were categorized into two: Negative attitude (a score of less than or equal to 33) and positive attitude (a score greater than 33). The mean and standard deviation were computed. Table 11 present the results.

	N	MIN.	MAX.	MEAN	Std. Deviation
Parents' Attitude	23	11	55	35.3404	9.2694

Table 11: Descriptive Statistics of Aggregated Variables
 (N=23)

The results presented in Table 11 show that parents' attitude had a mean index of 35.3404 with responses deviating from this mean by a standard margin of 9.26994. The mean was slightly above 33 hence it could be inferred that parents' attitude was rated positive amongst the parents of learners with visual impairment. Based on the composite index parents' attitude was categorized as either being negative if the score index was below 33 and positive if the index was greater than or equal to 33.

$$\text{Parents' attitude} = \begin{cases} 0, & \text{if composite index} < 33 \\ 1, & \text{if composite index} \geq 33 \end{cases}$$

From the analysis, the number of parents who were considered to have a positive attitude was 16 compared to 7 whose attitude towards their children with visual impairment was considered negative.

As regards objective two of the study, academic performance which was the response variable, was measured based on 2017 and 2018 KCPE marks for learners with visual impairment and zero (0) was assigned to performance rating of less than or equal to 250 marks while 1 was assigned to performance rating of above 250 marks but less than or equal to 500 marks:

$$\text{Performance} = \begin{cases} 0 & \text{if performance was average or below average} (\leq 250 \text{ marks}) \\ 1 & \text{if performance was above average} (> 250 \text{ marks but } \leq 500 \text{ marks}) \end{cases}$$

Table 12 displays the binary logistic regression Odds Ratio results obtained after conducting the analysis.

Performance	Odd Ratio.	Std. Err.	Z	P> z	[95% Conf. Interval]	
Parents' Attitude	1.5	1.474788	0.41	0.680	.2183718	10.30353
Constant	.4	.334664	-1.10	0.273	.0776057	2.061704

Table 12: Binary Logistic Regression Odd Ratio

The results in Table 12 above show that an odds ratio of 1.5 was obtained for parents' attitude which implies that the likelihood of those learners with visual impairment whose parents had a positive attitude performing better is 1.5 times more than the likelihood of those whose parents had a negative attitude. The results show that the parents' attitude towards learners with visual impairment influences greatly their academic performance. The study results buttress findings by (Hussain, 2006) which showed that guidance from parents indirectly affect the performance of learners with visual impairment and results by Kernan, Borgat and wheat (2011) who also established that encouragement and a positive attitude from the parents is very important in determining the attitude of the learner towards their education. This is a clear indication that parental attitudes in their children's education is of much importance as it is a stronger indicator to academic achievement.

7. Recommendations

- The Ministry of Education should provide funds to organize seminars and workshops on attitude change for the teachers and parents of learners with visual impairment. This will be useful in ensuring that the teachers and parents have the right attitude towards learners with visual impairment hence promote their academic performance.
- The parents of learners with visual impairment should develop mutual relationship with their children for academic achievement.
- The primary school curriculum and the instructional practices of the primary schools should be adapted to accommodate learners with visual impairment.

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