INFLUENCE OF SCHOOL ENVIRONMENT ON INCLUSION OF LEARNERS WITH VISUAL IMPAIRMENT IN REGULAR PUBLIC PRIMARY SCHOOLS IN NYATIKE SUB-COUNTY, MIGORI COUNTY, KENYA

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Abstract:

Inclusion of learners with disability is necessary for improving their enrolment and ensuring that their academic goals and objectives are met. Consequently, teachers and stakeholders have to identify any barriers that can deter the learners from achieving these goals. Interestingly, in Nyatike Sub-County, enrolment of learners with visual impairment in regular public primary schools has remained low at 10.1 percent compared to 33.6 percent in Suna East Sub-County, 24.8 percent in Suna West Sub-County and 31.5 percent in Uriri Sub-County for the years 2019 to 2023. Besides, the literacy level of learners with visual impairment is lower than the levels of learners with hearing and intellectual impairment in Nyatike Sub-County. Therefore, the study sought to find out the influence of the school environment on the inclusion of visually impaired learners in regular public primary schools in Nyatike Sub-County. Maslow's hierarchy of needs theory was used to explain the roots of inclusion. A sample size of 98 (ninety-eight) respondents comprising 46 head teachers and 52 classroom teachers was selected using saturated and purposive sampling techniques. Pearson's correlation, regression analysis,and ANOVA were used to analyse infferential data while qualitative data was transcribed and analyzed based on emerging themes and used for triangulation. The study established that at a 5 percent level of significance; the school environment significantly influenced the inclusion of learners with visual impairment, and accounted for 18.4% of the variation in inclusion of learners with visual impairment in regular primary schools. From the findings, it was concluded that the school environment (r= .433, p< .05) has a significant positive and moderate influence on the inclusion of visually impaired learners in regular public primary schools in Nyatike Sub-County, Migori County, Kenya. The study recommends that school administration mobilize more teaching and learning resources for learners with visual impairment. The study is significant to policymakers in the educational sector to develop a framework that links

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the inclusion of learners with visual impairment and their success in educational achievement.

Keywords: inclusion of learners, primary schools, regular public schools, school environment, visual impairment

1. Introduction

Globally, it has been argued by most scholars that the inclusion of learners with special needs remains an important element in influencing the performance of learners with visual impairment in a school setup. Similarly, the Kenya Government has underscored the critical role of the inclusion of learners with special needs in regular public primary schools. It is however worth noting that several policies have been formulated in support of this despite very little success being realized. They include the Basic Education Act 2013, Special Needs Education Policy Framework of 2018, Sector policy for learners and Trainers with disabilities all with a view of promoting the inclusion of learners with visual impairment in regular public primary schools.

Most of the studies done as per the reviewed literatures have focused on factors affecting the performance of learners with visual impairment ignoring the inclusion of learners with visual impairment in regular public primary schools. It is because of this that the study sought to investigate the influence of the school environment on the inclusion of learners with visual impairment in regular public primary schools in Nyatike Sub-County, Migori County, Kenya. Records from the Sub-County Education offices show that enrolment of learners with visual impairment in regular public primary schools remains low at 15 (10.1 percent) in Nyatike Sub-County compared to 50 (33.6 percent) in Suna East Sub-County, 37 (24.8 percent) in Suna West Sub-County, and 47 (31.5 percent) in Uriri Sub-County for the year 2017 to 2021. Also, in the same time period, it was noted that the number of visually impaired learners not enrolled was 76 (60.8 percent) in Nyatike compared to 21 (16.8 percent) in Suna East Sub-County, 16 (12.8 percent) in Suna West Sub-County, and 12 (9.6 percent) in Uriri Sub-County. Although other studies have identified several factors to be influencing the inclusion of learners with visual impairment as being professional training, development, and work situational, the rewards that determine the attitudes of the learners with visual impairment and involvement of teachers of visual impairment learners, the current study focused the influence of school environment on the inclusion of learners with visual impairment in regular public primary schools as the variable of study because some previous studies have given this different perspective in influencing inclusion of visual impairment learners. Their inclusion in the current study therefore broadened the range that had been considered influential to the inclusion of visually impaired learners and so farled to even far-reaching implications results-wise.

2. Literature Review

2.1 Influence of School Environment on Inclusion of Visual Impairment Learners

The school environment involves the physical facilities, teaching-learning resources, school stakeholders, and school administration and strategic plan that affect the inclusion process of the learners. A survey study by Olung'a and Okello (2020) on kindergarten through the 12th grade teacher perception of the learning environment in the mid-Atlantic region of the United States of America confirms that success in academics requires an environment where administrators, teachers, and students care for each other. This involves motivation and cooperation in the classroom and teaming up for specific purposes. Inclusion can easily champion teaming up and team-building spirits in the learning environment (Corn, Bina & Sacks, 2009). Therefore teaming up requires the staff members joining together in promoting learning of pupils with visual impairment which aims at improving their academic performance.

2.2 Teaching and Learning Resources

Owoko (2010) defines teaching and learning resources as methods, materials, time available for instruction, and knowledge and skills of teachers from training and experience. Oyugi and Nyaga (2010) looked at the resources as peripatetic services, support staff, community involvement, and regular and special teachers. Bergsma (2000) and Kochung (2011) argue that integration can only succeed when classrooms meet the individual needs of all children and trained teachers are adequate. Anyango and Okello, (2023) established a significant relationship between teachers' attitudes and teaching learning materials and academic performance at p <0.05. Okongo *et al.* (2015) noted that many schools in Nyamira North Sub-County have not succeeded in providing special needs education to many pupils due to inadequate teaching and learning resources. Therefore, the present study viewed teaching and learning resources as important areas that need to be accessed in inclusive classrooms.

Herward (2013) observes that the education system has failed learners with special needs by not equipping them with appropriate teaching and learning materials to exercise their rights and responsibilities as citizens, while the community and special education system have functioned to exclude them from both the education process and wider social life. Adeogun and Osifila (2011) discovered a very strong positive significant relationship between instructional resources and academic performance.

Learners with special disabilities require some specialized education materials at individual and school levels (Loveless, 2019). Learners with visual impairment require a white cane and braille kit, braille papers, adapted computers, tactile diagrams, and maps, and adapted desks and chairs. They also require eyeglasses, magnifying lenses, and large print reading materials (Kirk & Anstasiow, 2003). Learners with visual impairment are likely to benefit massively from the inclusion process which involves the participation of learners in the learning process.

According to Becta (2001), society is likely to achieve the integration process through the provision of learning materials that are essential in the improvement of academic performance as the materials meet the uniqueness of individual needs. Many learners who use brails are likely to come to school less prepared for their experiences with the written medium than the print writers (Mapunda, Omollo & Badi, 2017). Therefore if learners with visual impairment have access to the braille writing and reading materials, they will have similar opportunities as the learners with normal vision.

According to Sorge and Godfrey (2016), Braille resources are a major hindrance to effective teaching and learning of visually impaired learners. Okumu (2019) also notes that visually impaired learners do not learn effectively in braille unless they are provided with the resources to fit their needs. In the context of this study, the learning and teaching digital resources should be accessed by both teachers and learners with visual impairment to be prepared in their experiences for better performance.

Willington and Stuckhouse (2018) stressed that although science is a practical subject, teaching and learning of the subject occurs through the medium of both spoken and written. However, in early childhood education, teaching languages, of the catchment areas of Kiswahili, English, and sign language which are essential at the early stage of learning are vital. Conceptual words in science may present difficulties to the learners and may become more abstract in matters of how easy the sum may be (Hiuhu, 2012). In the case of visually impaired learners, (child depending on the onset of blindness) learning using Braille may prove to be complex and the situation may be worse if the learner is undergoing stress and traumatic experiences brought about by loss of vision.

On the other hand, the attributes of the child can be influenced by certain factors, for example, mythical billings, absenteeism, lack of willingness to the assignment, and passive involvement during science lessons, and can lead to poor development of science process skills. Willington and Stuckhouse (2018) further state that teachers are equally major social agents during the teaching and learning process. Having the general characteristics of the teachers and their roles can negatively or positively impact the understanding of the child (Hair, Tathan, & Black, 2009). Therefore the present study notes that lack of learning materials will mean that the visually impaired child becomes a mere recipient of the information since the learner will have no opportunity to interact with the environment. The insufficient interaction of the learner with the environment will have a negative impact on the child who learns the experience and acquires characteristics such as active interdependence, divisive behavior, long-term perspective, self-awareness, and control.

2.2 Physical Facilities

Akomolafe and Adesua (2016) say that the status of physical facilities especially in our public secondary schools today appears to be of great concern to educators and that the provision of these school facilities has dwindled over the years, due to an increase in school enrolment rate which had led to population explosion in public schools. It has

been observed by this study that school physical facilities are essential tools to facilitate and stimulate learning programmes. Teachers need them in an ideal working environment. Experience shows that if physical facilities are available, students tend to have an interest in learning; this will invariably lead to high performance.

The development and maintenance of physical facilities in educational institutions by communities, parents, and sponsors should continue to be encouraged. This is because the lack of such facilities interferes with the learning process (Republic of Kenya, 1988a). DFID (2007) indicates the importance of school facilities concerning quality education. Differences in school facilities would be seen to account for differences in achievement. Physical facilities include classrooms, lecture theatres, auditoriums, administrative blocks, libraries, laboratories, workshops, playgrounds, assembly halls, and special rooms like clinics, staff quarters, students' hostels, kitchens, cafeterias, and toilets amongst others (Biswas, 2016). However, DFID (2007) further asserts that learning experiences are fruitful when there are adequate quantity and quality of physical resources; and that unattractive school buildings, crowded classrooms, non-availability of playing ground, and surroundings that have no aesthetic beauty can contribute to poor academic performance. Fonseca and Conboy (2006) contribute that the physical conditions and organization of schools facilitate or inhibit the construction of a culture for success. Ministry of Education Science and Technology, MOEST (2005) explains the importance of ensuring that there are adequate and appropriate facilities for teaching and learning so that educational programmescan be implemented effectively.

Physical facilities refer to the school plant, that is, the school buildings, classrooms, library, laboratories, toilet facilities, offices, and other materials and infrastructures that would likely motivate students towards learning (Dote-Kwan, Chen & Hughes, 2009). Physical facilities are germane to effective learning and academic performance of students. In support, Hallak (2019) identifies facilities as the main factor contributing to academic achievement in the school system. They include school buildings, classrooms, libraries, laboratories, and recreational equipment among others. Hallak (2019) further claimed that the quality, appropriateness, and adequacy of these items contribute to performance in the school system.

Recent studies have emphasized the importance of the availability of physical facilities. Summarizing and Ayodele (2021) emphasized that the availability of these resources is quite important to achieving effectiveness in instructional delivery and supervision in the school system. Summarizing Ayodele further stressed the fact that the non-availability of basic facilities such as classrooms, office accommodation, workshops, sporting facilities, laboratories libraries et cetera which are being experienced in schools is a perfect reflection of what is obtained in the university system.

Most learning centers and institutions may not be able to accommodate learners with visual impairment. The problem is that the initial design of such facilities was not meant for children with a disability such as visual impairment (Balal & Rehan, 2012). Many schools are equipped to respond to special needs environmental barriers such as doors passageways, stairs, and recreational areas which are common in inclusive school

settings. Balal and Rehan noted that it is apparent that many buildings in tertiary institutions are not accessible to visually impaired learners because of the presence of high stairs curved stairs and narrow walkways.

The above views are supported by Ogot (2005) and UNESCO (2003) who say that an accessible environment helps to keep children with special needs in school by adapting the environment to suit the diverse learners' needs by organizing the classroom and school compound. MOE-Uganda (2003) and Otiato (2002) pointed out that a conducive learning environment for learners with special needs should have buildings constructed with ramps, adapted latrines, enlarged classroom windows, level playgrounds to ease mobility, and painted walls to improve the lighting.

2.3 School and Education Stakeholders

Visual impairment learners included in education centers usually get support services from vision specialists, the government, and the immediate environment (Herward, 2013).Such topics as learning through other sources, instructions, and curriculum adapters are the domain of the vision specialist. Support services address several challenges such as improving the quality of education, meeting individual needs, and determining the least restrictive environment for each exceptional learner. According to the Ministry of Education in Kenya (MOE) (2013), the government has great significance to education for all children with learning disability. According to the report by Ndurumo (2016), the provision of free primary education took thousands of learners with special needs to regular schools. Due to the unpreparedness of these schools, most of the children were forced to drop out and those who persevered went through difficulties and inhospitable environmental standards.

The school environment is a vital factor that affects the learning pattern of the pupil. Pupils tend to learn better in an environment that they view to be supportive. A supportive environment develops a positive attitude towards learning activities. Ruby (2019) argues that a positive learning environment allows learners to develop a sense of belonging, trust others, feel encouraged to tackle complex activities and take risks in learning new topics of study. It is therefore the concern of the current study that the administration of the school provides sufficient resources that enhance the inclusion of the learners. The administration should install power systems and digital systems that are essential in the inclusion process. On the other hand, the school should also provide enough security for both the learners and the teachers to support the instructional process. The school has to provide enough structures such as the classroom and the learning resources that are crucial in cushioning learners from external disruption while learning.

According to Douglas (2018), inclusion is involving and compression in nature that requires the whole package of teaching. Teaching requires the right environment to enhance learning. The school environment is the most critical determinant in teaching and learning. Douglas agitates that empowering learners should be the first option that the school fraternity should perform. The cooperation between the learners and other

stakeholders in the school should improvise the inclusive learning models that enhance the learning process. However, in the context of this study, the administration should establish and enact rules and guidelines that provide the items that encourage the learners to cultivate the content. Therefore learners in their learning process should also be ready to accept the inclusion process and, at the same time, initiate the process by the teachers.

From the foregoing literature, the knowledge gap was the deficiency in providing information on the extent to which the school environment influences inclusion of the learners with visual impairment in public primary schools. Hence, this study envisaged establishing the extent to which the school environment influencesthe inclusion of learners with visual impairment in public primary schools.

3. Theoretical Framework

Maslow's hierarchy of needs is a theory in psychology that was proposed by Abraham Maslow in 1943.The theory can be used to explain how the inclusion of learners has the foundation of theories of learning. Learners perform better upon practicing and seeing the practical part of the concept. Primarily, the inclusion of learners requires the effort of many stakeholders, with teachers being key curriculum implementers. Various factors motivate or hinder the process of inclusion of learners with visual impairment. The internal or external factors of teachers'attitudes, school environment, and teachers' training influence the positive or negative sides of initiating inclusion during the instructional process. Teachers and learners should have their needs met first before they can engage in the process of inclusion successfully. Therefore, Maslow's hierarchy of needs provides the best theoretical framework for the fulfillment of the needs of teachers and learners (Chapman, 2003).

Teaching requires internal motivation to achieve the goals of education (Hoerr, 2005). The administrators have to find ways of influencing the inclusion of the learning process of visually impaired learners to aid them in achieving their educational goals and objectives. According to Maslow's hierarchy of needs, the needs are classified in a pyramid shape as the size of the needs reduces with the height of the pyramid. The researcher used the pyramidal shape of needs to describe the pattern by which human motives generally ascend. The internal pressure that is the desire to initiate an activity depends on the individual. The attitude that an individual may have against the activity is essential in commencing the activity. The scientist arranges the needs at different levels. The needs scenically range from physiological needs, safety needs, belonging needs, and esteem to self-actualization. Self-actualization as cited in Cherry (2019) and Selvah (2020) is the most important need that human beings should consider since it is the realization of one's potentiality and talents of performing specific duty especially while considering the drive and needs of the activity.

Cherry further records that self-actualization occupies the fifth level of the pyramid. Learners must be able to obtain knowledge and skills that can be applied in the

modern society. Education is the key to success and when an individual does not succeed in education, there is the likelihood that the individual will be a failure. Education provides the basic skills of life that are vital in the development of society. An individual with the inability to do a complex task will obviously fail in most of the activities. Sharma (2015) agrees that education is the key to success in most of the activities. The author argues that education enhances happiness and prosperity in life. Disability should not be a barrier to the achievement of educational goals since disability is not an inability (Momene, 2015). Therefore teachers impart the required knowledge and skills to all learners regardless of their capability. Brandao, Kira, and Luque (2018) say that inclusion should be the key way to aid the enrollment of learners with visual impairment.

Figure 1: Maslow's Hierarchy of Needs

4. Discussions

4.1 Influence of School Environment on Inclusion of Learners with Visual Impairment

The second objective of the study was to examine the effect of the school environment on the inclusion of learners with visual impairment in public primary schools in Nyatike Sub County, Migori County, Kenya.

To realize the objective, the school environment was assessed based on the availability of teaching and learning resources and the suitability of the classroom environment for learners with visual impairment. Therefore, teachers were asked in the questionnaire to score how strongly they agreed with the statements of the school environment. The results are presented in Table 1.

Table 1: Views on the Status of School Environment on Inclusion of Learners with VI

Statement	SD	D	N	A	SA
Braille machines, braillers, and typewriters are available.	3 (5.8)	5 (9.6)	4 (7.7)	8 (15.4)	32 (61.5)
Visual-impaired learners are given white cane devices.	11 (21.1)	20 (38.5)	2 (3.8)	12 (23.1)	7 (13.5)
Visual impairment learners have literacy kits.	7 (13.5)	7 (13.5)	3 (5.8)	15 (28.7)	20 (38.5)
Braille papers are adequate in school.	0 (0.0)	20 (38.5)	0 (0.0)	18 (34.6)	14 (26.9)
Adapted computers are available in school.	13 (25.0)	6 (11.5)	7 (13.5)	14 (26.9)	12 (23.1)
Learners follow lessons on tactile diagrams map.	0 (0.0)	13 (25.0)	0 (0.0)	22 (42.3)	17 (32.7)
Adapted desks and chairs are available.	9 (17.3)	14 (26.9)	0 (0.0)	11 (21.1)	18 (34.7)
Glasses and large print reading materials are used by learners.	5 (9.6)	16 (30.8)	0 (0.0)	16 (30.8)	15 (28.7)
Class care is well-lit.	10 (19.2)	2 (3.9)	3 (5.8)	27 (51.9)	10 (19.2)
Learners with visual impairment are appropriately seated.	4 (7.7)	13 (25.0)	5 (9.6)	21 (40.4)	9 (17.3)
Regular classes are overcrowded.	15 (28.7)	20 (38.5)	4 (7.7)	8 (15.4)	5 (9.6)

Key: SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA =Strongly Agree.
Note: Percentage rounded to 1 decimal place in parenthesis ( ).

The result indicates that 40(76.9%) teachers agreed that braille machines, braillers, and typewriters are available while 8(15.4%) teachers disagreed and 4(7.7%) teachers neither agreed nor disagreed. The availability of braille machines, braillers, and typewriters in regular primary schools might allow visually impaired learners to develop numeracy and language skills for self-expression through writing, hence promotingthe inclusion of learners.

A head teacher during the interview said;

"Inclusion in our school has been successful because of the availability of teaching and learning material for visual impairment learners and regular learners. Without a braille machine and other resources teaching visual impairment learners is very difficult. To create a conducive learning environment in regular schools, learners should be provided with braille, reading, and writing materials." (HT, 17)

This suggests that the success of inclusive education is based on the availability and accessibility of assistive technology for visually impaired learners. It becomes very effective if the teachers have special training on the use of such technologies.

On the construct, 'visual impairment learners are given white cane devices', 31(59.6%) teachers had a contrary opinion to the construct while 19(36.6%) teachers

indicated that visual impairment learners are given white cane devices and 2(3.8%) teachers were undecided. This suggests that not all visually impaired learners have white cane and therefore, subjects visually impaired learners to safety challenges as they navigate the school environment since onlookers might not identify the learner as visually impaired to take appropriate action. White canes are orientation and mobility tools that are critical for the well-being of persons with visual impairment and travel by themselves (Attia &Asomoah, 2020).

When asked about the nature of the school environment and how suitable visual impairment learners find it easy to move around, this is what one teacher had to say;

"Although we teachers try to train our visually impaired learners on how to use white cane, it is important to note that our school environment poses serious orientation challenges since the layouts of school environments do not facilitate easy mobility of pupils. It is therefore common to see sometimes a pupil falling and getting bruises. This instills fear and discourages the free movement of visual impairment learners." (HT, 30)

Another teacher remarked;

"Some of our classes are overcrowded and create barriers to both teachers and pupils within the classrooms."(HT, 09)

The excerpt suggests that visually impaired learners find it difficult to move freely because of barriers and obstacles in the school environment. The finding concurs with Ocloo's (2011) observation that a school environment that cannot facilitate easy mobility of visually impaired learners, does not promote the inclusion of learners.

As regards whether visual impairment learners have literacy kits, 35(67.2%) teachers agreed 14(27.0%) teachers disagreed, and 3(5.8%) teachers neither agreed nor disagreed. The availability of literacy kits suggests that visually impaired learners have a variety of activities to help integrate them into regular primary schools since it motivates learners to actively get involved and communicate during reading and writing.

On whether braille papers are adequate in school, 32(61.5%) teachers agreed while 20(38.5%) teachers disagreed. The result indicates that teachers had mixed opinions on the adequacy of braille papers in their schools. Availability and adequacy of braille papers would facilitate early exposure of visual impairment learners to braille literacy. This inspires learners with greater satisfaction and self-esteem which is necessary for visual impairment learner's cognitive and psychomotor development. Okumu (2019) notes that visually impaired learners do not learn effectively in braille unless they are provided with the resources to fit their needs, such as braille papers.

Regarding the construct, 'adapted computers are available in school', 26(50.0%) teachers affirmed whereas 19 (36.5%) teachers had a contrary opinion, and 7(13.5%) teachers neither agreed nor disagreed. The result shows that an average number of regular schools could have adopted the use of assistive technology to increase learners

with visual impairment access to digital learning which would provide them with a platform to compete with their academic peers effectively. Such a platform provides satisfaction to visually impaired learners thereby promoting the inclusion of learners.

Moreover, 39(75.0%) teachers agreed that visual impairment learners follow lessons on tactile diagram maps whereas 13(25.0%) teachers disagreed. Tactile diagram maps are modes of conveying visual information to visual impairment learners through the use of braillers. The result, therefore, suggests that the majority of schools provide visual impairment learners in regular primary schools in Nyatike Sub-County with a conducive learning environment that promotes the inclusion of learners. According to Holbrook, Kamei-Hannan, and McCarthy (2017), tactile diagram maps for lessonscontribute to academic development as well as the conceptual and psychological development of visually impaired learners. Moreover, Cox and Dykes (2001) report that visual impairment learners use tactile and kinesthetic senses to become familiar with the objects from their use in lessons and to learn about their environment. Therefore, when classrooms are effectively adapted for tactile and kinesthetic learning, it promotes the inclusion of learners with visual impairments.

As well, Table 1 shows that 29(55.8%) teachers agreed that adapted desks and chairs were provided to visually impaired learners while 23(44.2%) teachers indicated a lack of adapted desks and chairs for visually impaired learners. This implies that the inclusion of learners in some regular schools faces challenges inthe provision of adapted desks and chairs. Inappropriate desks and chairs increase fatigue and may negatively affect the concentration and active participation of visually impaired learners in school activities.

Equally, 31(59.7%) teachers agreed that visually impaired learners use glasses and large print reading materials while 21(40.3%) teachers disagreed. Although, a majority of visual impairment learners had the advantage of accessing and using large print reading material, some visually impaired learners still strained to learn because of the unavailability of glasses and large print reading material. Thus, this suggests that the inclusion of visually impaired learners through making reading easier was yet to be realized in some regular public primary schools.

Regarding large print/learning materials used in class; one of the teachers reiterated that:

"In some of our schools, there is a lack of adequate resources, however, we ensure that such learners sit near to the teacher to facilitate assistance for effective teaching and learning and we also ensure that writings on the chalkboard are large and clear. Lack of teaching and learning resources negatively affects learners' academic achievement because, in the absence of assistive materials in the learning process, low performance should be expected." (HT, 42)

From the excerpts, it is evident that in the absence of adequate materials, the inclusion of learners becomes elusive and difficult in most primary schools. The finding

concurs with UNESCO (2001) positing that using large writing on the chalkboardusing of colored chalk or letting the pupils come close to the board are all strategies for handling learners with visual impairment in the classroom.

In addition, 37(71.1%) teachers that classes provided sufficient light by reducing glare and excessive light from windows through the use of curtains whereas 12(23.1%) teachers disagreed and 3(5.8%) teachers were non-committal. The regulation of the amount of light was necessary because different learners might need different levels of lighting to see well. This meant that the teachers understood the needs of visually impaired learners and made an effort to create a conducive classroom environment to help reduce glare and visual discomfort. This is in agreement with Griffin-Shirley, Trusty, and Rickard (2000) who assert that pupils should be positioned to avoid glare, use sunglasses within the classroom and outside, or window covering to help in the management of glare.

Furthermore, regarding the construct, learners with visual impairment are appropriately seated and 30 (57.7%) teachers indicated that seating arrangement in classes was appropriate for learners with visual impairment while 17(32.7%) teachers had a contrary opinion and 5(9.6%) teachers neither agreed nor disagreed. Appropriate seating of learners in the classroom is a proper strategy to promote active participation, provide safety, and induce socialization of visually impaired learners for proper growth and development. The inappropriate seating in some regular primary schools could be a result of congested classes due to the influence of the free-day primary school education policy. Therefore, this suggests the need for expansion of school infrastructure to facilitate the accommodation of more visually impaired learners and provide an attractive school climate that promotes inclusion in regular public primary schools in Nyatike Sub-County, Migori County, Kenya.

Lastly, regarding the construct, 'regular classes are overcrowded', 36(67.3%) teachers affirmed that regular classes were not overcrowded 13(25.0%) teachers indicated that regular classes were overcrowded and 4(7.7%) teachers neither agreed nor disagreed. The finding on overcrowding could be attributed to the influence of free day primary education policy and the inability of the school administration to mobilize funds to support expanding the school infrastructure. However, the result suggests that there is adequate effort from teachers to create a conducive classroom environment to accommodate visually impaired learners.

A headteacher echoed;

"Most of our classes are overcrowded due to free primary education policy, however, in classes where we have special needs, we strive to create more streams so that my special needs pupils feel they are welcome. Overcrowded classrooms pose another of challenge to teachers such as lack of discipline, lack of attention, boredom and obstructions to the visually impaired learners."(HT, 01)

Another head teacher said;

"In overcrowded classrooms, it is impossible to observe and assess the work of individual learners; learners feel tired and do not concentrate in class. For the visual impairment learners, the challenges are even more serious because they cannot freely move around the classroom to interact with their sighted colleagues." (HT, 15)

The views of head teachers point out that they understand the challenges of overcrowding learners in inclusive classrooms and therefore they strive to avoid such conditions in school where possible. Benbow, Mizrachi, Oliver, and Said-Moshiro (2007) affirm the finding while explaining that no individual learner support and proper assessment can take place in overcrowded classrooms since teachers cannot walk freely to assist and assess the work of learners.

To determine the influence of school environment on inclusion the null hypothesis: **H0₂:** *School environment has no significant influence on the inclusion of learners with visual impairment in public primary schools in Nyatike Sub-County, Migori County, Kenya;* a bivariate Pearson's Product-Moment Coefficient of Correlation was computed to establish the nature of the relationship between school environment and inclusion of visual impairment learners. The result is presented in Table 2.

Table 2: School Environment and Inclusion of Visual Impairment Learners

		Correlation with enrolment mean
School Environment	Pearson Correlation	.433
	Sig. (2-tailed)	.002
	N	52

The result reveals that the school environment has a significant moderate and positive relationship with the inclusion of learners with visual impairment(r= .433, p = <.05). This implies that the school environment is a significant factor in fostering inclusive education. The finding is consistent with Wanjohi (2003) who explains that visually impaired learners cannot learn effectively in braille unless they are provided with resource materials that fit their needs for holistic development.

Further, regression analysis was carried out to test and determine the influence of the school environment on the inclusion of learners with visual impairment and the results of the analysis are presented in Table 3.

Table 3: Model Summary of School Environment on Inclusion of VI Learners

Model	R	R Square	Std. Error of the Estimate
1	.433[a]	.187	3.967

It can be observed in Table 4 that the school environment accounted for 18.7 percent of the variation in the inclusion of learners with visual impairment as signified by R square = .187.This means that the status of the school environment affectsthe inclusion of learners with visual impairment in regular public primary schools. Some of these factors could be related to the availability of assistive devices, the availability of adapted desks, the layout

of the school and classrooms, etc. However, 81.3% of the variation in the inclusion of learners with visual impairment was due to other factors that were not the subject of this study.

To establish the significance of the regression model in explaining the influence of school environment in the inclusion of learners with visual impairment, ANOVA was computed and the results are shown in Table 4.

Table 4: ANOVA Output: School Environment on Inclusion of VI Learners

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	180.959	1	180.957	11.450	.003[a]
	Residual	786.734	50	15.736		
	Total	967.693	51			
a. Predictors: (Constant), School Environment						
b. Dependent Variable: Inclusion of Learners with Visual Impairment						

The results in Table 4 indicate that the school environment significantly, $F (1, 50) = 11.45$, $p < .05$, explains variations in the inclusion of learners with visual impairment in regular public primary schools.

To establish the influence of school environment on the inclusion of learners with visual impairment, the coefficient of regression was computed and the result is presented in Table 5.

Table 5: Influence of School Environment on Inclusion of VI Learners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.407	1.291		-1.090	.660
	Environment	2.873	0.847	.435	3.391	.004
a. Dependent Variable: Inclusion of Learners with Visual Impairment						

The result in Table 5 indicates that the school environment has a significant influence on the inclusion of learners with visual impairment in regular public primary schools. Therefore, the null hypothesis, "*School environment has no significant influence on the inclusion of learners with visual impairment in regular public primary schools in Nyatike Sub-County, Migori County, Kenya*" is rejected and the study concluded that at a 5 percent level of significance, school environmental factors significantly influence the inclusion of learners with visual impairment learners in regular public primary schools.

4.1 Summary

4.1.1 Influence of School Environment on Inclusion of Visual Impairment Learners

Pearson's correlation analysis indicates that school environment significantly influences (r= 0.433, p<0.05) the inclusion of visually impaired learners at the 95% level of confidence. The study rejects the null hypothesis that school environments have no statistically significant influence on the inclusion of learners with visual impairment in

regular public primary schools. The findings imply that the school environment in terms of assistive, auditory, and visual resources greatly influencesthe inclusion of learners with visual impairment in regular public primary schools in Nyatike Sub County, Migori County Kenya.

Similarly, the findings of the study indicated that regular public primary schools that create a conducive environment for visually impaired learners 'moderately foster the inclusion of learners with visual impairment.

School environmental factors explained for 18.7% variation in the inclusion of learners with visual impairment hence, school environment is a significant factor influencing the inclusion of learners with visual impairment; with one unit improvement in school environment influencing 3.967 units inclusion of learners with visual impairment.

5. Conclusions

The study also noted that school environment has positive and moderate significant ($r= 0.433$, $p<0.05$) influence on the inclusion of learners with visual impairment since the availability and effective utilization of school physical facilities in inclusive schools play a significant role in improving learners performance in national examinations when utilized well to cater for the need of these learners with visual impairment in inclusion classrooms, which in variably facilitate learners interest in learning and achieve high performance. But if inadequately used then results in poor performance, that is why the null hypothesis that school environment has no significant influence on the inclusion of learners with visual impairment is rejected, hence school environment is a factor that has a significant influence on the inclusion of learners with visual impairment in regular public primary schools in Nyatike Sub-County, Migori County, Kenya.

Conflict of Interest Statement
I wish to confirm that there are no known conflicts of interest associated with this publication whatsoever.

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