

School Infrastructural Preparedness towards Management of Inclusive Education in Primary Schools in Nyamira County, Kenya

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Abstract

The study explored infrastructural factors influencing management of inclusive education in public primary schools in Nyamira County. The study was guided by Classical Liberation theory of equal opportunity. Mixed method research design, mainly sequential explanatory research design was used. The target population for the study was learners with special needs, teachers in special education and school heads from public primary schools in Nyamira County. Stratified and simple random sampling techniques were used to select the sample for the study. A total of 125 respondents comprising of 30 head teachers, 20 special education teachers and 75 pupils from both public and private primary schools were involved in the study. The study used questionnaire, interview schedule, observation schedule and document analysis guide. Both descriptive and inferential statistics were used to analyze data. The study established that pupils' enrolment has hindered implementation in terms of straining of physical facilities, increase in teacher workload which ultimately contribute to decline in standards of education. There was lack of adequate teaching and learning resources, teacher preparedness and curriculum not fully integrated to address special learning has affected enrolment of learners. The schools infrastructure barely supported the implementation of inclusive education and also learning for children with disabilities. The findings showed that even though ramps, paths, and runways are built, they are not adequate and are not well build. The study concluded that infrastructure has an influence on implementation of inclusive education; hence the better the infrastructure, the more the implementation since there was low infrastructural development that leads to low level of implementation of inclusive education. The study recommends that there is need to improve physical structures through construction of ramps, wider classroom doors and adopted toilets. The County Education Department should prioritize its role of supervision and monitoring all inclusive schools during and after construction as provided for under education guidelines.

Key words: Infrastructural preparedness, inclusive education and special education

1. Introduction

The term "inclusion" has become something of international and national vocabulary. It can easily become a cliché, if individuals do not possess in depth understanding of its meaning and examine closely the underlying values it is based on. The making of inclusion into a vocabulary is evident when reading policy documents, newspaper articles or listening to media statements. On the other land, readers can become easily confused when confronted with the multiple definitions of inclusion offered in international literature. Inclusion has come to mean different things to

different people, to such an extent that, authors such as Dyson (2001) Florian (1998) and Meijer (1999) make us aware of the varieties of inclusion that exist in different international contexts (Kruger, 2005:3).

Inclusive education is a global movement that seeks to challenge exclusionary practices. It is the philosophy of ensuring that schools, centers of learning and educational systems are open to all persons irrespective of their status (M'rithi, 2014). It embodies several beliefs and principles, most notably the belief that all learners can learn. This enables the learners to be included in all aspects of school

life. Ainscow (2003) suggested that inclusion rejects the use of special schools or classrooms to separate learners with disabilities from learners without disabilities. Schools should therefore be structured so that all learners including those with special needs learn together.

Evidence from studies around the world has demonstrated that investment in human capital through formal education is a vital engine to economic growth. Education can reduce social and economic inequality since it is a great equalizer if all children have equal opportunities to take advantage of it (Mwangi & Orodho, 2014). Universal Primary Education (UPE) is intended to ensure that all children eligible for primary schooling have an opportunity to enroll and remain in school to learn and acquire quality basic education. Inclusion involves a process of reform and restructuring of the school as a whole to ensure that all pupils have access to a whole range of educational and social opportunities offered by the school.

The readiness for inclusion varies across countries and continents of the world. For instance, most African countries' commitments to Special Needs Education (SNE) began in the 1970s. While countries within the advanced economies have gone beyond categorical provisions to full inclusion, most African countries are still grappling with the problem of making provisions for children with special needs even on mainstreaming basis. SNE in Africa is still a new concept to many of its nations. Although most African countries have shown theoretical interest towards SNE through formulation of policies, effective implementation and management is still a challenge to many.

In South Africa, the policy on inclusive education formally came into effect in 2001 and has been implemented through the international donor funded pilot

projects as well as through field testing. The significance of these initiatives is that they aimed to implement inclusive education in mainstream schools at a time when the policy framework was still under discussion and not yet a declared policy (Da Costa, 2003). Through these projects implementation of inclusive education has been effected especially in pilot schools. However, there were realities and challenges that acted as barriers to the desired outcomes. The progressive report on special needs/inclusive education (Department of education, 2004a:17) outlined some of the barriers. They included: inadequate teacher preparedness to handle special needs children and lack of inclusive infrastructure in schools.

Education authorities in Africa implemented a policy of separate systems of education. Regular schools used to cater for learners who were regarded as "normal" as the term was used then. Special schools accommodated learners with specific learning difficulties, behavioural problems, and physiological, neurological or psychological shortcomings. Recently the appropriateness of having such separate systems has been challenged both from a human rights perspective and from the view of effectiveness (Ainscow, Parrel and Tweddle, 2000:211).

The practice showed discrimination against those with disabilities and those who were previously disadvantaged, as it included the issue of race, gender, class and religion. The term "disability" refers to "the social restrictions and constraints (barriers) imposed on persons with impairments in their pursuit of full and equal participation" (Burden, 2000:29). Disabilities are usually present from birth or they may be caused by illness or an accident. They may have different causes and may assume various forms. According to Sidogi (2001:22) the different types of disabilities are sensory, physical, intellectual and multiple. The most

important thing is that children with disabilities have to be identified as early as possible so that they can get assistance. Furthermore Burden (2000:29) defines disadvantaged people as "Those people who are constrained or restricted by society (barriers) from full and equal participation". These people are said to be disadvantaged by their economic, social or political circumstances.

The Department of education (2002:134) elaborates further explaining that there are some of the learners who are placed at risk of learning breakdown due to the physical, emotional or sexual abuse situations in which they find themselves and the Ministry of Education Policy (2002) through the Child Friendly school manual of 2010 which is referred to as the Toolkit distributed to all schools in Kenya to facilitate its implementation after being Piloted in some schools.

Effective management of inclusive education is seen to play a pivotal role in education system in the country. For instance, (Orodho, 2009) argues that education is a great equalizer and thus through inclusive education learners with special needs will be in a better position to compete with other students who are not physically challenged. As a result, inclusive education will provide equality of economic opportunities where all classes, races and gender could benefit economically from excellent academic performance.

2. Statement of the problem

All children including those with mild special needs are required to learn in mainstream classrooms in Kenya (MoE, 2009). However, a number of primary schools in Nyamira County have not effectively implemented this programme. There are cases of disabled children in Nyamira County who have dropped out of school due to unfriendly learning environment at school. Several studies

have been done with regard to inclusive education in Kenya. However, more emphasis has been on factors influencing implementation of inclusive education (Mwaimba, 2014, Mutembei, 2014). Infrastructural preparedness towards management of inclusive education has not been addressed fully by previous studies This study therefore explored schools' infrastructural preparedness towards management of inclusive education in primary schools in Nyamira County.

3. Research Questions

The study was guided by the following research questions

1. What infrastructural facilities is available in schools to enable effective implementation of inclusive education in primary schools in Nyamira County?
2. Is there a relationship between school infrastructural preparedness and access to school by children with special needs in primary schools in Nyamira County?
3. What interventions that can be put in place to improve school infrastructure for effective management of inclusive education in primary schools in Nyamira County?

Research Hypothesis

1. There is no significant difference between school infrastructural preparedness and management of inclusive education in public and private primary schools in Nyamira County.

4. Theoretical Framework

The study adopted social constructionist theory by Lev Vygotsky of 1930 cited by Katarina (2006). The theory argues that knowledge is socially constructed through language. Vygotsky considered disability as a social abnormality. The theory distinguishes primary disability that is biological disability from secondary disability (socio cultural exclusion). Primary disability like visual and hearing, language

and speech-related impairment lead to child's "exclusion" from the socio-cultural, traditional and educational environment which in turn causes socio-cultural disability- secondary disability (Katarina, 2006). Vygotsky postulates that humans are social creatures and that cognitive development occurs in social setting. If a person is kept in total isolation, it will be torture and of course no learning will occur. Vygotsky advocated for inclusive education where teachers provide remedial programmes to learners with disabilities instead of using special schools or units.

Vygotsky theory (1930) of proximal development discusses learning and teaching of challenged children as a shared or joint process in a responsive social context. It states that children can perform better when they have proper assistance by adults and capable peers. He advocated the process of "scaffolding". In this context, the children with disabilities are given support by professional personnel and capable peers. This can be effectively executed in an institution with adequate facilities as well as teaching and learning resources. In an inclusive class, dynamic assessment of children is crucial to identify the strength and weaknesses of children with disabilities.

This theory is applicable in this study because once challenged learners are included in the general school; they interact and are supported by teachers and peers in the learning process. The improved facilities and appropriate learning resources together with well trained personnel assist challenged learners realize their full potential since disability is not

inability.

5. Methodology

The study adopted mixed method research design mainly sequential explanatory research design. The design was deemed appropriate because the study aims at exploring schools infrastructural preparedness towards management of inclusive education. The researcher gathered systematically factual information about preparedness toward management of inclusive education to develop generalization about the target population. The study used both probability sampling technique and non-probability sampling techniques whereby Stratified random sampling, simple random sampling and snow ball sampling techniques were used. The sample comprised of 20 public primary and 10 private primary schools, 30 head teachers, 15 special needs teachers and 75 pupils, the study used questionnaire, observation schedule, interview schedule and document analysis guide to collect data.

6. Results of the study

Infrastructure Available in Schools to enable Effective Implementation of Inclusive Education

The study sought to establish whether there were adequate infrastructures which have been structured to accommodate learners with disabilities in the schools and for the implementation of inclusive education. Bell and Rhodes (1996) stated that the resources are importance because the school uses them to advance the learning opportunities offered to the pupils. Learners with special needs were asked to provide data on how regularly they attend school. The results were as illustrated in Table 1.

Table 1 School Attendance by Pupils

Response	Frequency	Percent
Regularly	33	44
Irregularly	42	56
Total	75	100.0

The findings in Table 1 revealed that 42(56%) of pupils do not attend school regularly and 33(44%) attend the school regularly. This implies that there are factors that hinder them from attending school regularly. There is therefore need to establish these challenges so that they are dealt with in order to improve on school attendance of learners with special needs. The current study also sought to establish these challenges. The results were summarized and presented in Table 2.

Table 2 Pupils' responses on availability of Inclusive Teaching/Learning Resources

Resources	Adequate(Percent)	Inadequate(Percent)
Availability of computers	13(17.3)	62(82.7)
Availability of Charts	57(76)	18 (24)
Availability of Braille	23 (30.7)	52 (69.3)
Availability of Sign language materials	47 (62.7)	28 (37.3)
Availability of pictures	55 (76.4)	20 (23.6)
Availability of Books	45 (60)	30 (40)
Availability of ramps	30 (40)	45 (60)
Availability of inclusive library	27 (36)	48 (64)
Availability of level play ground	53 (70.7)	22 (29.3)
Availability of inclusive ablution blocks	40 (53.3)	35 (46.7)

Results in Table 2 revealed that charts, sign language materials, pictures, books, level play grounds and ablution blocks are adequate. However, sensitive facilities such as Braille, ramps and inclusive library were found to be inadequate. This implies that most schools are not fully prepared to accommodate learners with special needs in their system. There were constraints noted by resource teachers, which included steep stairs, pit latrines, absence of rails along open drains, lack of special play fields, problems of striking a balance in lighting of classroom, absence of labels on important places, lack of orientation and mobility training and the need to have proper seating arrangement in the classroom. One teacher recommended louvers to replace windows which are swung outward and cause accidents on those who have visual impairments.

The finding of this study is consistent with

the findings of studies conducted by Mukhopadhyay, Nenty & Okechukwu (2012). These researchers found that the majority of the classrooms were inaccessible to learners with physical disabilities; for example, although some schools had ramps, some of the ramps were too steep for students with physical disabilities to move up them independently. Necessary facilities such as toilets were inaccessible. Structural barriers tend to limit independent access to classroom and school activities, and impact negatively on participation and competence in the curricular and co-curricular activities.

Relationship between School Infrastructural Preparedness and Access to School by children with Special Needs in Primary Schools

Study sought to establish the relationship between availability of teaching/learning resources and percentage enrollment of learners with special needs. The study used

Pearson's product moment correlation to establish the nature and magnitude of the relationship between the two variables. The findings were summarized and presented in Table 3

Table 3: Relationship between Availability of teaching/learning resources for inclusive education and enrollment of learners with special needs

Availability of teaching and learning resources	Pearson Correlation Sig. (2-tailed)	1	Percentage of pupils with special needs .932* .021
1Percentage of pupils with special needs	Pearson Correlation Sig. (2-tailed)	.932* .021	1

The findings in Table 3 revealed that there is a very strong positive correlation between availability of teaching/learning resources for special needs (0.932) children and the implementation of inclusive education in primary schools in Nyamira County. This implies that schools that had adequate resources had a higher enrollment of learners with special needs.

School infrastructure plays a critical role in successful implementation of inclusive education. The Ministry of Education's objective is to enhance provision of accessible safe and friendly environment and facilities for learners with special needs. Findings from interviews with teachers show that the learning environment, buildings, amenities, equipment and furniture, pose accessibility challenges to learners with special needs. These are not allowing them to operate and access education with minimal hindrance. The participants identified lack of special toilets for persons with special needs, paths and roads, stairs, pavements, and ramps as some of the infrastructural concerns of the schools. Other areas constraining effective inclusion are the absence of guard rails along the pavements and stairs, uneven and narrow doorways, poor lighting in the classrooms, muddy footpaths and open drains. The type of windows in the schools

is not designed with safety of people with special needs in mind. They are dangerous to people with visual impairments when they are left half-open especially along the corridors. Non-infrastructural concerns touched on lack of labels to assist learners with visual impairments in identifying crucial areas of the school, absence of specialized computer programs, lack of orientation and mobility exercises, poor seating arrangement in class and lack of computers in the resource room. A study by Avramidis and Norwich (2002) suggest that educational environment-related variables, such as the availability of physical and human support, were consistently found to be associated with attitudes to inclusion by teachers.

To determine whether the difference any significant difference between school infrastructural preparedness and management of inclusive education in public and private primary schools in Nyamira County. A t-test was computed and the results are indicated in Table 4.

Table 4: T-test results difference between school infrastructural preparedness and management of inclusive education in public and private primary schools

	T	df	Sig (2tailed)	Mean differences
Equal variance assumed	2.342	74	0.026	.0924
Equal variance not assumed	2.312	72.321	0.023	.0978

The results in table 4 shows that there is a statistically significant difference between infrastructural preparedness and management of inclusion education in public and private primary schools in Nyamira County at 0.05 level of significance. This implied that public primary schools in Nyamira are more prepared in the management of inclusion education than the private schools.

Interventions of improving School Infrastructure for Effective Management of inclusive education in Nyamira county primary school

Pupils with special needs were requested to provide data on interventions to enhance management of inclusive education. Their responses were as summarized and presented in Table 5

Table 5 Pupils' Responses on Interventions

Intervention	Responses	
	Yes	No
Construction of more inclusive facilities to reduce overcrowding	63(84)	12(16)
Increase class sizes to accommodate a large number of students	71(94.7)	5(5.3)
Involve experts in designing inclusive facilities	73(97.3)	2(2.7)
Eradication of negative cultural beliefs and practices that discourage schooling of learners with special needs	73(97.3)	2(2.7)
Sensitization of the community towards inclusive education	67(89.3)	8(10.7)

The pupils with special needs overwhelming suggested all the interventions in Table 5 has enhancing management of inclusive education. Teachers were asked about interventions that can be put in place to improve school infrastructure for effective inclusive education in primary schools. Most teachers agreed that inclusive education requires more resources which are currently inadequate in many schools. They concurred that more funding to these schools as well as employment of more teachers can alleviate the problem.

Majority also agreed that prudent use of available resources is necessary. This can be enhanced by regular in-servicing of teachers to improve their skills, regular auditing of the use of funds to curb on mismanagement and misappropriation. School management involvement as well as consultation of experts in special education can help in improving infrastructure. Lastly, a great proportion agreed that attitude towards inclusive education and children with special needs by parents, teachers and even the larger society affected putting up of infrastructure for inclusive education since it

is negative and should therefore be improved.

Conclusions of the study

The schools infrastructural lay out in primary schools were not adequately designed to promote the implementation of inclusive education. Despite learners with disabilities presences in these learning facilities; the infrastructural lay out down played this initiative. The ramps, paths were not clearly marked for ease of movements. The infrastructures within the schools were developed without consideration to learners with disabilities. Many schools were characterized by inadequate basic facilities such as properly ventilated classrooms, furniture suitable for the disabled and non-disabled learners, kitchen, safe clean water, playground, toilets and play material among others. This limited the enrollment of the disabled learners in the regular schools hence affecting the success of inclusive education.

In most of the schools, there were no adequate educational facilities. These ranged from lack of adequate reading materials, to desks, classrooms among others. Free primary education has led to an increased number of learners in the learning institutions. This led to a decrease in the available resources in the schools. Shortages of teaching and learning materials had a negative impact on the learners especially those with disabilities. Therefore the absence of physical facilities that support the SNE pupils has led to low implementation of inclusive education in primary schools in Nyamira County.

Strategies that need to be put in place for successful implementation of inclusive education in primary schools are increased funding by government, faith-based organizations, donors, and other well-wishers. Others include parents –teachers co-operation, frequent door to door home-visits of inclusive education in primary by schools teachers to pupils with learning difficulties homes, proper planning in

schools to cater for the special pupils needs adequately and provision of a well-defined curriculum. There is need to adjust the infrastructures layout to conform to disability requirements in all primary schools in to accommodate all learners.

The results indicate that there is high positive significant relationship between infrastructure and implementation of inclusive education and there is a statistically significant difference between infrastructural preparedness and management of inclusion education in public and private primary schools in Nyamira County at 0.05 level of significance.

Recommendation of the study

There is need to improve physical structures through construction of ramps, wider classroom doors, adopted toilets so as make education accessible. The District Education Department should prioritize its role of supervision and monitoring all inclusive schools during and after construction as provided for under education guidelines.

In relation to availability of Teaching/Learning Resources, the researcher recommends that the ministry of education and other educational stakeholders should assist the schools to acquire appropriate resources and other teaching and learning materials for learners with special needs through funding. The schools management boards should consider immediate restructuring of physical environment in schools aiming at making them barrier free and disability friendly. This will ease accessibility to educational opportunities for learners with special needs

The county should mobilize all teachers in primary schools to undergo training, seminars, workshops and symposia. This will constantly offer professional development which will improve the handling skills, instructional methodologies and competence in providing supportive devices to meet the special needs of all learners.

The County should all locate funds to schools to help in procuring special facilities

for special needs education such as talking books, taking calculators, Braille machines and computers for ICT in education.

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