

Influence of Enrolment on Physical Infrastructure in Public Primary Schools in Nandi Central Sub County, Kenya

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ABSTRACT:

The overall objective and central role of Free Primary Education (FPE) in the world is accessibility of universal education and adequacy of physical infrastructures but the same is not replicated in most African countries. This study investigated the influence of enrollment on physical infrastructure in public primary schools in Nandi Central Sub County, Kenya. The study objective was to establish the number of physical infrastructures available in 2003 and thereafter, given the new policy of Free Primary Education in Nandi Central Sub County, Kenya. The theoretical framework was based on Human Capital Theory, by Smith A. S. (1996). Descriptive survey design namely cross-sectional was used. The target population was drawn from three divisions in Nandi Central Sub County, which includes Kapsabet, Kilibwoni and Emgwen with a population of 60,700. Probability sampling using simple random sampling technique was used to sample the population. The sample size consisted of 152 teachers, 20 Head teachers, 20 chairpersons and 176 pupils all drawn from 20 schools giving 388. The instruments for collecting data were questionnaires, document analysis and active observation. The data was organized, interpreted, analyzed using descriptive statistics including frequencies, percentages, tables, means and charts. After the new policy of FPE in all public primary schools, Physical infrastructure had increased thus fairly adequate and is mostly from C.D.F but it does not fully cater for the growing number of pupils. The significance of the study is to benefit the stakeholders in knowing the constraints of inadequate physical infrastructures that need their contribution. Policy makers will identify strategies and re-define the policy framework on provision of physical infrastructure through the initiative of FPE in public primary schools to curb the congestion, add knowledge in the area and identify the gaps that need further research. From the findings it is evident that schools should come up with income generating activities, source for funds for instance from harambees and donors, build and renovate the existing physical infrastructure and come up with shift classes so as to deal with congestion in classes in Nandi Central sub county.

BACKGROUND OF THE STUDY

- In Europe and United States of America, studies give weight to the role of educational system in growth and production. In Netherlands, enrollment increased drastically from 55,000 in 2009 to 75,923 in 2010, which is 20% increase.
- In spite of heavy expenditure in education, South America, Asia and nations of Africa, had great input sacrifices for success, which can hardly be achieved without outside help as stipulated by Holmes and Samantha (2012). Indeed no institution can survive alone without assistance.
- According to Auditor General Report of Swaziland (2011), the implementation of FPE in response to grade one and two in 2010, begins at the age of six under normal progression to seven years. However, access for formal education in Swaziland noted high dropout rate, not affording to pay school fees to buy materials and expand Physical Infrastructure.
- The regional and international commitment on FPE to ensure Swaziland activities are in line with the Ministry of Education is guided by six Educational and Millennium Development Goals (MDG'S) to achieve universal access to primary education by 2015.
- Adopted in constitution Section 29, the European Union assisted governments by introducing Capitation Grant Scheme for primary schools and improved quality of education.
- This provision resulted into considerable increase in enrolment from 203,000 to 245,000 [approximately]. However, education and training sector continues to exercise positive discrimination in favor of rural schools in allocation of resource inputs such as staff housing facilities, classrooms and other learning inputs.

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- In Swaziland, the government spent 70% of the funds under the 9th European Development Fund to construct 58 classrooms, 42 teacher's houses, a teacher resource program, desks and chairs for primary schools, between 2005 and 2012, (MOE & T of Swaziland 2013).
- Accordingly, enrollment increased from 66,000 in 2009 to 77,923 in 2010 that is 15% increase for both grades 1 and 2.
- However, the Ministry allocated a budget of 68 classrooms only instead 78 units provided in 2010. The Ministry is suppose to provide 78 classrooms instead of 68, apart from 167 classrooms required in Umkhondo primary school in Swaziland and 3.5 million for furniture crisis to grade 3 in 2011.
- In Tanzania, implementing Primary Education Development Project (PEDP) in 2002, designed to improve both access and quality. In 2001, efforts to expand access to education led to unprecedented increase of enrollment of 43% in 2002.
- Due to pressure, resulting from high pupils' classroom ratio, and high pupils' desk ratio the government of Tanzania has introduced a number of reforms, (URT, 2010).
- The 2011/ 2012 education sector budget in Tanzania rose to 2,283 billion. The budgets for development of constructing physical infrastructures consume only 10.2%. This compares to 20-24% in Uganda and 14-15% in Kenya, (M.O.E, 2013).
- In the case of Uganda, in 1997, the president pledged to provide FPE until the computers and physical infrastructures were put in place to embrace Universal Primary Education (UPE) for all.
- The availability of infrastructure and FPE emphasized the right to citizens and non-citizen to acquire the Ugandan free education that led to expansion of enrollment in schools. This greatly strained physical facility provided by the Government, (M.O.E & Vocational Training, 2010).
- Studies done in Brazil and Ghana, offer evidence that minimum of basic quality of school facilities matter significantly in achievement. In Ghana schools would lose days of instruction due to leaking roofs (Sifuna and Karungu, 1998). This scenario indicates clearly the states of physical infrastructures and needs to be put into much consideration.
- Okao (2007) observes that the start of UPE posed highest challenges for the government of Uganda. There were hardly enough classrooms and teachers to handle sudden upsurge in pupil numbers, forcing some school administrators to run classes under trees.
- Sifuna and Karungu (1998) notes that buildings and classrooms in relation to achievement shows higher percentage of positive impact if they are of good quality and libraries and laboratories are well equipped. They also noted that to allow facilities to deteriorate or use substandard buildings and classrooms could hold back learning achievements.
- In support of the same, the case study on community schools in Kenya by the assessment of FPE in Kenya reviewed by UNESCO (2009) indicates some barriers created by standard inspection and physical infrastructures prior to introduction of FPE, in 2003.
- Legal notice of 1968 as documented in education act cap 211 of 1968 (revised 2012) subsection 3(1) indicates that no class in any primary school shall exceed 50 pupils. It is true in that, the standard measurement is 25 feet by 22 feet per room that should carry the capacity of 50 learners.
- In January 2003, the estimated enrolment rose in public primary schools from 6,314,726 to 7,614,326 by the end of the year marking 22.3% increase nationally, (MOEST, 2003).
- The government directive is that FPE does not require parents and communities to build new schools, but instead encourage communities to improve, refurbish and use existing facilities, (MOEST, 2003).
- According to Kenya Enabling Policy Environment for WASH in Schools (2013), and the guidelines of WHO (2009) and M.O.E (2013), recommended pupil latrine ratio is 25:1 (girls) and 30:1 (boys).

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- As a result of this directive, parents and communities had not been willing or able to put up additional classrooms and facilities as sanitary units, thus aligning increase in enrollment rates is unlikely be catered for with existing physical infrastructure in Nandi central sub-county.
- To ensure that all learners of school age level receive basic education with ease, in a conducive learning environment as a human right despite large enrollments, there was need to investigate the number of physical infrastructures available in 2003 and thereafter, given the new policy of Free Primary Education in Nandi Central Sub County, Kenya.

STATEMENT OF THE PROBLEM

- In the year 2003, FPE was declared in Kenya resulting in dramatic increase in enrollment as a major goal of the government’s strategy in attainment of UPE.
- Currently, M.O.E has shown that today, nearly 3 million more students are enrolled in PPS than in 2003, a 46% increase stressing Kenya’s teaching force, PI and the quality of education, (Gebremedhin, USAID 2013). As a result of these rates, classrooms are congested.
- In Embu west Sub County, FPE has led to high enrolment up to 61 pupils per class causing congestion in class Physical infrastructure, (Wachira, 2011).
- According to the MOEST (2010), pupil’s enrollment has reached 8.2 million up from 5.2 million in 2002 nationally.
- In support of the same, according to Nandi central sub county MOEST Circular, (2013), the enrolment rose from 43,570 in 2012 to 58,634 in 2013 there while the vote head for constructing new PI has not been factored in.
- Ochenje (2008), in her study found out the most schools did not have adequate classrooms to accommodate large number of pupils enrolled under FPE.
- M.O.E.S.T (2005) notes that over time a major backlog of infrastructure provision and shortage of permanent classrooms, particularly poor communities, are poor condition due to lack of investment capital, poor construction standards and inadequate maintenance.
- However, irrespective of ideological position exposed by agencies in education sector development, the outcome of their interventions has not significantly differed.
- The pattern noted is that reforms had often been externally driven and yet resource base necessary for success of the interventions has not been given serious considerations, (Eshiwani, 1993).
- Therefore, this study investigated the number of physical infrastructures available in 2003 and thereafter, given the new policy of Free Primary Education in Nandi Central Sub County, Kenya.

RESEARCH DESIGN AND METHODOLOGY

- Ogula (2005) defines research design as procedures used to select a sample, administration of instruments and data analysis by a researcher.
- The researcher adopted a descriptive survey design, mainly cross-sectional to investigate the influence of enrolment on Physical infrastructures in public primary schools in Nandi central sub county.
- Cross-sectional survey was used in the study because it ensured the use of different categories at the same time, (Kasomo, 2007).
- In this study, the researcher gathered systematically factual information about the program of sample population to develop generalizations about the target population.
- Target population was drawn from three divisions in Nandi Central Sub County, Emgwen having 80 schools, Kapsabeth having 56 schools and Kilibwoni having 40 schools.
- The target population was 176 public primary schools having total of 176 head teachers, 176 school management chairpersons, 1538 teachers and 58,634 pupils constituting a target population of 60,700.

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- Probability sampling using simple random sampling technique was used to sample the population.
- The sample size constituted 20 schools, 152 teachers, 20 Head teachers, 20 SMC chairpersons and 176 pupils giving a total sample size of 388.
- The instruments for collecting data were questionnaires, document analysis and active observation.
- The data was organized, interpreted, analyzed using descriptive statistics including frequencies, percentages, tables, means and charts.

THE FINDINGS OF THE STUDY

- The study finding reveals that the funding of physical infrastructures in most schools in Nandi Central Sub County is fairly adequate mostly derived from C.D.F.
- It is said that the free primary education does not facilitate building of new infrastructures but are used for RMI.
- It is evident that average number of classrooms available are 12 and there is an average shortage of 3, average number of libraries, offices and clean water are 2 and the average shortage is 1 while average number of sanitary units are 13 and a shortage of 3.
- The sitting arrangement is fairly appropriate since the enrolment is high.
- The available desks are shared by more than one pupils and also do not easily get access to sanitary units.
- The classrooms are permanent, congested and roofed but do not have windows.
- The desks and blackboards are fairly appropriate, teachers' table's chairs were appropriate but teaching resources were inappropriate.
- Out of 20 schools observed the researcher confirmed that 5 schools had mud walls and smeared floors in all buildings while only two had both permanent and semi permanent buildings.
- The five schools, had rooms without standard measurements in that, despite few desks in class with low enrollment they were still congested and poor ventilations.
- Even though some schools had permanent buildings some lacked doors and windows.
- Four schools had their staffrooms outside in which one was roofed with banana leaves and open walls, one thatched roof and open walls while the two were under the tree.
- Schools that had permanent buildings were 15 of which eight of them experienced various challenges as overcrowding in classes, lack of windows and doors and inadequate sanitary units, libraries water reservoirs and offices.
- One school experienced cracking and falling walls of classrooms despite it had permanent walls and sinking toilets.
- Six schools experienced no much challenges as it made the requirements of conducive learning environments as stated by (W.H.O, 2009).
- The average enrollment of boys was 223 and 235 for girls, which means boys ought to have an average of 7 toilets and 9 for girls, total average of 16 sanitary units but from the findings there is only an average of 13, thus a shortage of 3.

CONCLUSION OF THE STUDY

- Despite the fact that FPE has increased participation in primary education, at the same time it has created considerable problems.
- Since the introduction of FPE, there are some changes in terms of that physical infrastructures in that classrooms had increased in number by at least three in all schools but do not fully cater for the high influx rate of pupils. So as the libraries, offices, clean water and sanitary units.
- The funding for physical infrastructures is fairly adequate and is mostly from C.D.F.

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- The high influx of new pupils in primary schools has led to congestion in classrooms.
- There is a high demand for teachers, stationery, equipment and physical facilities.

Recommendations

- Fundraising drives can be ensured by school administrations especially through school parents, networks of old students associations, education program funding agencies, the Ministry of Education and several external links that may include friends of the schools and corporate institutions.
- The Ministry of Education to conduct regular monitoring and evaluation of school physical infrastructure to ascertain its adequacy.
- The government to increase the funds allocated for FPE in the every financial budget and create a vote head for construction of new physical infrastructures apart from RMI.
- Besides this, the schools should initiate income-generating projects to supplement government funding on FPE and to build more physical infrastructures so as to reduce congestion.

REFERENCES

- Auditor General Report of Swaziland, (2011). *Adjustment government strategy*: Computronics Systems.
- Gebremedhin, (USAID 2013). Standard provision for non U.S non governmental organizations. A Mandatory Reference for Aids: Chapter 303 Partial Revision. Standard Printers. Holmes, W. & Samantha, McD. (2012). *Understanding costs and outcomes on child welfare services*. Comprehensive in Managing Resources (London): Oxford University Press.
- Kasomo, D. (2007). *Research methods in humanities and education (Research statistics, measurement, evaluation and testing)*. Eldoret: Zapf chance Research Consultants and Publishers.
- Kenya Enabling Policy for Environment WASH in Schools (2014). Retrieved from, www.washinschoolsmapping.com/project/kenya.html. 6 March 2014
- Kenyan Bill Education Act, (2012). *Republic of Kenya gazette supplement bills*. Nairobi, Kenya.
- Ministry of Education Science and Technology, (2003). *Journal vol 2 on exploring mobile technology as a sustainable literacy education; Following the implementation of free primary education policy*, Nairobi, Kenya.
- Ministry of Education Science and Technology, (2005). *Challenges of implementing free primary education: Assessment Report*, UNESCO: Nairobi office.
- Ministry of Education Science and Technology (2013). *Nandi County Circular on Education Statistics*. Kenya: Kapsabet Printers.
- Ministry of Education of Swaziland, (2013). *The Implementation of Free Primary Education in Swaziland Cabinet Performance Report*. Government Printers: Swaziland.
- Ministry of Education Science and Technology & Vocation Training (2010). *Tanzanian African nation. Materials to facilitate teaching and learning professional and academic qualification of curriculum*. ISBN 978: Tanzania. Government Printers.
- Ochenje, C. A. (2008). ‘A comparative study of factors influencing academic performance between private and public primary schools in Kitale municipality in Kenya.’ Unpublished M.Phil thesis: Moi University, Eldoret. *Kenya Vision, 2030*. Nairobi: Kenya. Government Printers.
- Ogula, P.A. (2005). *Monitoring and evaluation of educational projects and programs*: CUEA Nairobi : Kermit Publishers.
- Okao, P. (2007). *Review of Ugandan’s strategy and engagement with government agencies*. Government Printers: Uganda. UNESCO, (2009). *Handbook for human resource practices in teaching*. Nairobi: Kenya. UNESCO Publishers.
- Sifuna, D.N. & A.M. Karungu. (1998). *Contemporary issues in education in East Africa*. London: University of London, Institute of Education.
- Wachira, C. W. (2011). *Journal vol. 2 on impact of free primary education on management of primary schools*. Nairobi: Kenya.
- World Health Organization. (2009). *Conditions of education*: Government Printing Office.