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## The Impact of Infrastructure on the Quality of Primary Education in Katsina Zone Katsina State, Nigeria.

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### **Abstract**

*This study investigated the impact of school infrastructural facilities on the quality of primary schools education in Katsina Zone Katsina State, Nigeria. It also addressed the concept of school quality and nature of school infrastructural facilities and their relationships in promoting teaching and learning for quality improvement in the public primary schools education. The purpose is to find out the availability of infrastructural facilities in the public primary schools within the zone and their level of utilization. Interview, records review and observation methods were the main methods of data collection in the qualitative approach in the study. The findings revealed that, the infrastructural facilities were available but not adequate, thus having overcrowded classrooms in some schools, while in other schools most of the infrastructural facilities were dilapidated. The study suggested that local government councils should source fund through federal government Bonds from Nigerian stock exchange market. Other stakeholders should encourage teachers and students to construct their teaching aids.*

Globally, education is considered as a basic human right and as an instrument for socio-economic and political development (Asiyai, & Adelabu, 2012). Education has been regarded as a human right since the adoption of Universal Declaration of Human Rights in 1948 (UDHR). This has been agreed in many global human rights treaties, such as the United Nations Educational Scientific and Cultural Organization (UNESCO) Convention against Discrimination in Education (1960), the International Covenant on Economic, Social and Cultural Rights (1966) and the Convention on the Elimination of All Forms of Discrimination against Women (1981). These treaties established an entitlement to free, compulsory primary education for all children (Hamm, 2001). It is a birth right of every citizen that promotes equality among members of the society, a weapon for eradication of ignorance, poverty and diseases, and instrument for the development of national identity and unity (Hamm, 2001, Fekede – Tuli 2010). Many countries have been trying to provide access to education to its citizens in different ways ( Fekede – Tuli 2010)

Primary education is the formal education, and it is the most important component in the ranking order of Nigeria educational system (Asodike, & Ikpitio 2014). In order to qualify to another level of education, one must pass through primary school because it is where the future educational achievements are built. It prepares the

mind and trains the child for high academic pursuit. It provides pupils with the fundamentals of reading, writing skills acquisition and information for proper adjustment into the society (Asodike, *et, al*, 2014, Alaba 2010, and Fekede- Tuli 2010).

However, studies have shown that no country in the world can develop without placing priority on the quality of primary education (Okeke-Oti, & Adaka, 2012).The quality of primary education dictates the quality of subsequent tertiary education which brings results in the various levels of socio-economic, cultural and political developments of a nation (Yusuf, 2008).

The United Nations Development Programme (UNDP) cited in Fekede –Tuli (2010) considered investment in Basic education as vital because it fosters gender equality, accelerates and sustains economic growth, increase educated human power, greater social justice, reduces regional disparities, reduces poverty and improves social welfare ( Fekede – Tuli 2010).With greater understanding of the functions that education has in the society, the World is striving to deliver primary education to every child o school age. This goal has been in the international agenda since the Declaration of human rights in 1948, that elementary education is to be made available free and compulsory for all the children in the World (Fekede- Tuli 2010).

The World Declaration of Education For All (EFA) 1990, the Dakar Framework for Action (DFA) and Millennium Development Goals (MDG) 2000 identified that quality of public primary education was the most important condition for achieving Education For All ( Fekede – Tuli 2010). Achievement of Education For All (EFA) through Universal Basic Education (UBE) programme in Nigeria, depends on the quality of primary education. This is to say that the best way to improve quality of education is to improve access to education and the best way to improve access is to improve quality by providing school infrastructural facilities in public primary schools which would make pupils to go to school daily ( Fekede-Tuli 2010).

### **The Problem**

The public perceptions on the quality of public primary schools education in Nigerian is low and the standard has dropped (Asodike, *et,al*, 2014) these perceptions are based on lack of adherence to acceptable educational practices including poor quality teaching and inadequate infrastructural facilities like adequate classrooms, desks and chairs, libraries, toilets for staff and students and staff rooms. Moja, 2000 and Anero (2013) asserted that, infrastructural facilities have impact on quality of education in public primary schools. The outcomes and performance of pupils from public primary schools still leaves some members of the public in doubt as to which type of learning has taken place in the course of schooling (Jaiyeoba, 2011). The reading, writing and numeracy skills that are expected to be acquired as bench mark stipulated in the Nigerian National policy on Education (NPE, 2004) at the public primary schools levels are even deteriorating and these have been attributed to inadequate schools infrastructure and other factors (Jaiyeoba, 2011).

The school learning environment is not favorable to promote effective learning; due to shortage of basic facilities, effective teaching and learning materials are generally not adequate and in some cases unavailable. Teacher pupils' ratio is high at 1:

172 against 1: 35 as required in the National Policy on Education (NPE, 2004), general performance is poor and the graduates have low levels of competencies in the work environment (Moja, 2000). This has created a gap that this study intends to fill by examining the impact of infrastructural facilities on the quality of public primary education in Katsina zone, Katsina state, Nigeria

There is no single word that can define quality of education but quality of primary education is a level of education that parents and society aspire schools to impart to students. It is also seen as what has been achieved academically in the school. What new values, attitude and changing behaviors inculcated to the pupils or have been achieved (Katushabe, 2014). This is related to the final assessment or outcomes of pupils. If a primary school is able to achieved quality it needs to be properly equipped with all the necessary school infrastructure such as well-ventilated classrooms, stocked library and computer laboratory, pleasant learning environment, good and motivated teachers (Katushabe, 2014)

Quality in education is the academic achievement which parents want schools to demonstrate in the society, but before school to do that there should be some infrastructural inputs interns of availability adequacy and accessibility such inputs include teachers and classrooms Anero, (2013) suggested that in Nigeria quality primary education can be determined by considering the quality indicators which include availability, adequate and accessible infrastructural facilities. Sumra, & Scholl, (2008) affirmed that quality education as inputs of certain educational facilities such as number of classrooms, libraries, teaching materials, and modern toilet facilities for both staff and students. Quality of primary education could be improved by constructing more schools to ease classrooms congestion and ensuring there is adequate school inputs such as infrastructure number of teachers and classrooms. Children need adequate and relevant text books and sport facilities to improve their cognitive, effective and psychomotor abilities and this can increase their academic performance.

The main purpose of teaching and learning process is to bring desirable changes in the learners' behaviour through critical thinking (Okeke-Oti, *et al*, 2012). This process takes place in a school environment structured with varieties of infrastructure such as all types of buildings for academic and non-academic activities, equipment for academic and non-academic activities, areas for sports and games, landscape, farms and gardens including trees, roads and paths. Others include classrooms, furniture and toilet facilities, security, transportation, computer laboratories, libraries centers / (ICT), cleaning materials, food services, and special facilities for the physically challenged individuals as to facilitate effective learning and teaching, (Asiabaka, 2008)

The concept of school infrastructure refers to the site, building, furniture and equipment that contribute to a positive learning environment and quality education for all students (Ayeni, 2011). The quality of learning facilities available within an educational institution has positive relationship with the quality of teaching and learning activities which in turn leads to the attainment of goals set. The quality of the school buildings and furniture will determine how long such will last while comfortable

classrooms and adequate provision of instructional resources facilitate teachers' instructional task performance and students' learning outcomes (Ayeni 2011)

According to Asiabaka, (2008) Infrastructural facilities are materials designed to serve specific purposes. In the school system, there is multiplicity of infrastructural facilities, which facilitate teaching and learning for high quality of education, particularly in public primary schools. They are used, first to illustrate concepts, second to provide opportunity for information/experience, third is for experimentation and demonstration, the fourth is for scientific investigation and discovery, fifth is to provide diversity of thoughts, sixth is for observation and inquiry, seventh is for development of scientific attitudes and skills, eighth to protect the individual and also provide comfort. School infrastructures are called school facilities and these material resources are provided for staff and pupils for the purpose of effective teaching processes through discovery, explorations and interaction with internal and external environments (Asiabaka 2008, Anero 2013, and Moja 2000).

In the same vein , (Asiyai, 2012) discovered that inadequacy, deterioration and lack of proper maintenance of school infrastructures spell doom for teachers and pupils because they constitute health hazards to teachers and pupils and make teaching difficult. Therefore he maintained that there should be effective supervision by the quality assurance bodies as well as the head of schools and proper utilization of primary schools infrastructure

Despite all efforts made by federal government to enhance education quality through increased teacher training and provision of infrastructural facilities, the problems of quality education continued to persist. It was in response to the increasing declining quality of public primary education, that the Inter Agency Commission (UNDO, UNESCO, UNICEF, and WORLD BANK) organized a World conference on Education For All (EFA) to address among others, the problem of access and quality of public primary schools in a global scale.

### **Theoretical Framework**

The study was guided by the resource input model advanced by Cheong, & Tam 1997). In this theory, education quality was regarded as the natural result of achievement of quality resources and inputs for the institution, because of the pressure of diverse expectations of multiple stakeholders, an education institution may be required to pursue different goals and conform to diverse specifications and standards. The resource-input model assumes that scarce and quality resources are necessary for education institutions to achieve diverse objectives and provide quality services in a short time. Education quality is assumed to be the natural result of achievement of scarce resources and inputs for the institution. The education quality indicators include high quality student intake, more qualified staff recruited, better facilities and equipment, better staff-student ratio, and more financial support procured from the central education authority, alumni, and parents, sponsoring body or any outside agents like NGOs (Paul, 2012).

The resource-input model is useful if the connections between quality of inputs and outputs are clear and the resources are very limited for education institutions to achieve

stated goals or conform to given specifications. In some Asian countries and cities like Hong Kong, quality student input is often seen as an important indicator of an education institution's success. Attraction of high quality student input seems to be a "necessary" condition for some institutions to become successful or achieve high academic performance in examinations (Cheng, and Tam, 1997).

### **Methodology**

This study employed qualitative approach to find out in-depth information or fact from the participants through interview and Focus Group Discussion (FGD) in the field. A case study design was also used in this study using Katsina zone, Katsina state Nigeria. Five public primary schools were selected in the study with total population of 6203 teachers and 431047 pupils within 693 public primary schools in Katsina zone. The sample population of the study is only teachers teaching class 6 and five head of schools through the use of simple sampling technique. Focus Group Discussion (FGD), interview, documentary review and observation methods of data collection were employed. The data analysis was by conversational analysis in order to give more details on the issue under study (Gray, 2004).

This study was conducted in Katsina zone which is within Katsina state in Northern Nigeria. Katsina state is one of the 36 states in the Nigerian federation. It was created out of Kaduna state on 23rd September, 1987. Katsina state is in the extreme North Western Nigeria. It is bounded in the North by Niger Republic, in the East by Kano State, in the South by Kaduna State and Zamfara in the West. Katsina State has an Area of 24,192 Km<sup>2</sup>, 34 local government areas, and among them includes the 11 local governments that comprise the Katsina zone. This include- Batagarawa, Batsari, Charanchi, Danmusa, Dutsinma, Jibia, Kaita, Katsina, Kurfi, Rimi, Safana local government areas with total population of 1,953,203 National population Census 2006. The zone has arable land which is suitable for farming, but the climate is harsh with Harmattan dry sandy wind blowing directly from the Sahara Desert. The tribe is predominately Hausa very humble with Fulani Cattle Pastoralists

### **Findings and Discussions**

This study analysed the state of public primary schools infrastructural facilities and the quality of public primary schools education. The data was gathered through interview, FGD and the observation. The findings of the study indicated that school infrastructural facilities included adequate classrooms, toilets, libraries, computer laboratories, and other teaching materials that facilitated high achievement, better attendance, proper discipline issues, and motivation to excel in school and the entire life activities were available but not adequate.

With regard to the provision of the infrastructural facilities in the schools across the zone, the findings revealed that, government is responsible for the procurement and distribution of primary schools infrastructural facilities. Toilet facilities, clinics or first aid box in every school, tables and chairs and other teaching materials should be provided in adequate with adequate number of teachers required should be available for fostering quality of primary education

The findings on observation and documentary review employed in all the schools visited revealed that some of the schools had some charts showing what they have and what they need. Majority of the schools need more classrooms, furniture and modern toilets (water system) for both staff and students. Text books were not adequate for students at the ratio 1: 4 in three schools, against new average of 1:1 as required by World Bank in 2016 requirement, though there is no literature regard to that.

The observation method was also used to obtain data from five public primary schools in Katsina zone. The observed items from the five public primary schools in Katsina zone are shown in table 1: for the purpose of assessing their availability adequacy and how they affect quality of public primary schools education.

Table 1: school infrastructure

S/ N	Items	Available	Required	Shortage
1.	No of classroom blocks	33	Not available	Not available
2.	No of classes	110	541	431
3	School store	5	10	5
4.	No of toilets	9	76	67
5.	Clinic/first aid box	First aid box	1	Adequate
6.	School play ground	Available	1	Adequate
7.	Nature of food in school	Good	Good	Adequate
8.	Library & computer lab	1	5	4
9.	Pupils ratio of text book	1:4	1:1	1:3
10	Pupils ratio of desk	1:4	1:2	1:2
11.	Teacher pupils interaction	Available	Adequate	Adequate
12	Dress/ cloth codes	Good	Good	Adequate
13.	Use of teaching methods	Lecture method	Variety	Many
14.	Language use	Hausa / Eng	Adequate	Adequate
15.	Use of relevant teaching materials	Available	Many	Many
16.	Teacher pupils ratio	172 average	1:35	5 teacher per class
17.	Portable water	1 Bore hole	3	2
18	Pupils enrolment (in the zone)	431047	Adequate	Adequate
19	Teachers enrolment (in the zone)	6203	12316	6112

**Source:** Shuaibu PhD Thesis unpublished 2016

The above table was constructed by the researcher for the purpose of illustration of the data obtained from the field study in five primary schools in Katsina zone. For instance there were thirty three (33) classrooms blocks in the five public primary schools mentioned above, though the required number is in significance. Total number of classes in the five public primary schools in the zone was one hundred and ten (110). The required number of classes at 35 pupils per class is 130 and the shortage is 20 classes. The number of toilets required is 76, the available number is nine (09) there is shortage of 67 toilets at the average ratio of 80 pupils per toilet. Clinics/ first aids box were available but they were not adequate because there were no enough drugs, only

some few pain relievers in all the schools visited. Portable drinking water, playgrounds were all available but they need urgent attention, library and computer laboratories. In fact there was no computer laboratories, pupils' desks and chairs were part of school infrastructure.

The infrastructures were available but not adequate and this will affect the quality of public primary education. For instance a class of primary school where 172 pupils were sitting under a congested environment, teaching and learning were not effective because. Teachers on the other hand will spend a lot of time trying to judge or solve problems of the children instead of teaching and learning.

Having this manageable class, a teacher cannot be able to communicate with every child and can give assignment according to the individual differences of children. From there a child can make self assessment and trying to do more. This can improve the quality of public primary education. Clinic and playground are important aspects in the child's physical and cognitive development. The moment their conditions remain unhealthy, they become vulnerable to children's health. A child may likely sustain an injury during play with other children that may take him away from the school for some weeks and abandon the school activities and this affects the quality of education of a child.

It was also observed that, proximity to primary school is very important aspect of quality of education. Many children reached school late in most of the schools visited because they come from far distance places and this caused them to missed early morning lessons which consequently led to poor performance in the school activities. This tallied with (Anero. 2013) assertion, that children who walk long distances and arrived in school late are likely to burn their energy for the day's learning. Demolishing and rebuilding the school will not solve the problem of proximity to school therefore he suggested that schools should be established less than a kilometer radius of catchment area for primary school pupils.

When classrooms were constructed with capacity of accommodating 35 pupils per class as contained in the National Policy in Education but now the same classroom accommodating 172 pupils, it shows the extent of over utilization and optimum utilization. This is confirmed by (Olagboye, 2004)

Olagboye, (2004) brought the fact that utilization of school infrastructure and learning environment means the extent of usage of school buildings, laboratories, library, chairs, desks, chalkboard, and so on. However, too much pressure on their use could result in over utilization, a situation that could lead to rapid deterioration and breakdown. For instance, when a classroom built to accommodate 40 students is constantly being used for 60 students then the returns from these facilities may not be maximized in terms of teaching and learning process. Comfortable learning facilities will not only boost the morale of teachers and students but will also ensure the realization of quality of public primary schools education.

The findings also observed that, in some schools there were classrooms without doors and windows and children sitting on the ground floor which was dilapidated, the playground was tore in many spots as result of gully erosion during raining season. When the researcher confronted the head of affected schools, the findings revealed that

there was no fund for the Maintenance of such infrastructural facilities but their main duty was to observed and write. This also coincide with (Emetarom, 2004) findings which revealed that most schools visited, the school compound was bushy, have dilapidated buildings with leaking roofs, broken chairs and desks, rough floors and windows without louvers. In some of the schools, the buildings were dirty, no lightning while some have blown off roofs. The roads leading to the sports field in some schools were weedy. It appears adequate management and maintenance is not provided on the available school facilities. School facilities are supposed to be kept in good condition in near their original state as much as possible by school administrators. But from causal observation and complaints, it appears that school administrators are neglecting their role of school facilities management and maintenance and this affected the quality of public primary schools education.

### **Conclusion and Recommendations**

In conclusion all the necessary primary schools infrastructural facilities were available but not adequate, particularly the setting space of pupils due to shortage of classroom. The average teacher students' ratio was at 1: 172 within the zone. For these reasons, the study recommends that the following:

First, Local Education Authority (LEA) should construct more schools to ease the problems of classrooms congestion in public primary schools. This can be done by sourcing funds from the federal government CBN/ Bonds through the Nigerian Stock Exchange Market. These soft loans are called "financial windows" and the Bonds were there already for the development of social infrastructures. The repayment schedule should be negotiable for a very long time for a period of 10-25 years with 2-5 % interest.

Secondly, the School Management Committee (SMC) and Parents Teachers Associations (PTA) in collaboration with Alumni should give maximum financial and material supports to teachers and students to undertake projects on local improvisation of teaching materials for quality improvement in public primary schools education. Annual competition can be organized within a local government in order to develop creativity among teachers and students.

Thirdly, UNICEF and Common Wealth of Learning (COL) are well known as philanthropies and generous bodies in education particularly at lower level, Therefore SUBEB should contact these bodies and make a genuine request for donations of computer sets and construction computer/ ICT centers in public primary schools throughout the state and to organize national and international training workshops for teachers.

Fourthly, the local commercial banks operating in the state must contribute at least 1% of their total profit before tax annually to the development of quality school infrastructure. The state legislative council should make law on that to any bank wants operate in the state shall comply.



### References

- Alaba, S. O. (2010). Improving the standard and quality of primary education in Nigeria: A case study of Oyo and Osun states. *International Journal for cross Disciplinary subjects in education (IJCDSE)* Vol 1, No, 3 September.
- Anero, N. (2013). Quality primary education and its 3-aconcept indicators among public schools in River state, Nigeria, *Academic research international* Vol 4, No. 6 [www.savap.org.kp](http://www.savap.org.kp), [www.journals.savap.prg.kp](http://www.journals.savap.prg.kp)
- Asiabaka, I. P. (2008). The need for effective facility management in schools in Nigeria. *New York Science Journal*, 1(2), 10-21
- Asiyai, I. R. (2012) Assessing School Facilities in Public Secondary Schools in Delta State, Nigeria *African Research Review, An International Multidisciplinary Journal*, Ethiopia Vol. 6 (2), Serial No. 25
- Asodike, J. D., & Ikpitibo, C. L. (2014). BASIC ISSUES IN PRIMARY EDUCATION DELIVERY IN NIGERIA. *European Scientific Journal*, *ESJ*, 8(1).
- Ayeni, A. J., & Adelabu, M. A. (2012) Improving learning infrastructure and environment for sustainable quality assurance practice in secondary schools in Ondo State, South-West, Nigeria, *International Journal of Research Studies in Education*, 1(1).
- Cheong C. Y., & Tam, M. W. (1997). Multi-models of quality in education. *Quality assurance in Education*, 5(1), 22-1. 3
- Emetarom, U.C. (2004) Provision and Management of Facilities in Primary Schools in Nigeria: Implication for Policy Formulation. In E.O. fagbemiye, J.B. Babalola *et al*, Management of Primary and Secondary Education in Nigeria NAEAP publication
- Fekede- tuli massimiliano fiorucci (2010) Examining quality issues in primary schools in Ethiopia. [www.ledonline.it/index.php/ECPS-Journal/article/download/501/479](http://www.ledonline.it/index.php/ECPS-Journal/article/download/501/479)
- Gray, D. E. (2004) Doing research in the real world: Qualitative and quantitative approaches, SAGA Publishers London
- Hamm, B. I. (2001) A human rights approach to development, *human rights quarterly*, 23(4), 1005-1031.

- Katushabe, A.M. (2014). Impact of Universal Secondary Education Programme on Quality of Education in Mbarara District Uganda, PhD (Education), Thesis University of Dar es salaam Tanzania
- Moja, T. (2000). Nigeria education sector analysis: An analytical synthesis of performance and main issues *World Bank Report*.
- National Policy on Education (2004) Federal government of Nigeria, printing press, Lagos
- Okeke-Oti, B.A.& Adaka, T.A. (2012).Teachers quality for the effectiveness of children's primary school education in Nigeria. *Global Voice of education*, 1, (1), June
- Olagboye, A. A. (2004). Introduction to educational administration planning and supervision Ikeja: Joja Educational Research and Publishers Ltd.
- Paul, M. (2012). *Quality assurance in the teaching and learning of hiv and aids in primary schools in zimbabwe* (Doctoral dissertation, Zimbabwe Open University).
- Sumra, S. & Scholl, L. (2008). What is Quality Education A Research Report on Citizens' Perspectives and Children's Basic Skills HakiElimu..
- Yusuf, N. (2008). Education and development in a globalized environment: The case of Northern Nigeria. *African Research Review*, 2(3), 130-145.