

INFRASTRUCTURAL INNOVATIONS AND EFFECTIVE TEACHING AND LEARNING OF SECONDARY SCHOOLS SUBJECTS IN OGUN STATE, NIGERIA

***Onasote, A. O.**

****Adeniyi, M. A.**

Librarians, Olabisi Onabanjo University Library, Ago-Iwoye, Ogun State, Nigeria

**E-mail: ayoolaonasote@yahoo.com*

***E-mail: samad2ps@yahoo.com*

Aderibigbe, N. A.

Librarian, Nimbe Adedipe Library

University of Agriculture, Abeokuta, Ogun State, Nigeria

E-mail: rabshittu@yahoo.com

ABSTRACT

This study compared infrastructural innovations in Junior and Senior Secondary Schools as a panacea for effective teaching in Ogun State. It investigated the type of infrastructure that was available in Ogun State Secondary Schools in the past and the current innovations so far made. Equally, it examined the activities of the State and the Local Government in the provision of infrastructure. Descriptive survey method and questionnaire were adopted for the purpose of the study. The analysis of the result using simple percentage showed among others that there was no record pertaining to infrastructural provision to secondary schools in Ogun State prior 2003. However, from 2003 up to 2009, records revealed that appreciable infrastructural facilities were provided to both junior and senior secondary schools in the State. This notwithstanding, it was concluded that the infrastructural and institutional materials available for teaching and learning in post primary schools in the study area were grossly inadequate and where they were available, may not convey standard and quality message. It is plausible therefore for the State government through the Ministry of Education to make adequate provision of infrastructural facilities to enhance effective teaching and learning.

Keywords: *Infrastructure, innovation, learning, teaching, facilities*

INTRODUCTION

Ogun State is one of the three States created from the defunct Western State of Nigeria in 1976, at the time, 19 States were created by the Federal Military Government with the State Capital at Abeokuta (Ogun State Local and Regional Perspectives, 2000). Ogun State at present has 20 Local Government Councils with almost three hundred and ninety six secondary schools, 6 Polytechnics and 2 State owned universities, Federal University and 6 Private Universities (Ogun State Educational Handbook, 2007). However, this is evident that Ogun State is the first among others to have the influence of Western Education in Nigeria. The provision of educational infrastructure has always remained a problem because the demands

are always on the increase as a result of the growing population and continuous demand for standard education in Ogun State. Captain Olukayode Olofinmoyin the then Military Administrator in one of his maiden broadcast to the people of Ogun State on Tuesday 25 August, 1998 said that apart from the challenge of environmental decay of the state other challenges included those of basic infrastructure and social amenities such as educational facilities and water. In his concluding speech he said: I do not deceive myself that I can do everything..; anything I do is what I can pay for.

Presently, the clamour for more standard classrooms, standard library and library equipment, books, science laboratories among others in the face of very limited funds is a serious challenge to the government (Ogun State Educational Handbook, 2007). Under a Federal System of government, it is an acceptable norm that every state in a federating unit shall derive its policy from the National Policy. Ogun State to a large extent is therefore not an exemption. Consequently, the Ogun State Education Policy is derived from: (i) National Policy on Education; (ii) Ogun State Educational Law; and (iii) Ogun State Education Policy.

With 100% transition being expected from primary schools into Junior Secondary School One (JSS 1) classes and neighbourhood schools advocated under the Universal Basic Education (UBE) the State Government between 2003 and 2007 increased the number of secondary schools from 265 to over 396. Also to provide access from all primary school graduates as provided for in the UBE Act, Junior Secondary School with separate management, administration and infrastructure (Universal Basic Education Act, 2004). Though this is a welcome development, yet, does the government provide Library building and its infrastructural facilities in secondary schools in Ogun State? Does the government provide the entire necessary infrastructure needed for both Junior and Senior Secondary Schools in Ogun State?

Does government play any significant role in the provision of infrastructural facilities in both Junior and Senior Secondary Schools in Ogun State? Does the government provide adequate infrastructures to both Junior and Secondary School in Ogun State? Do the infrastructural innovations enhance teaching and learning effectiveness in secondary schools? These are real salient issues that should not be taken for granted if the UBE Act implementation exercise is to be a success. It is in the light of the above that the study set out to determine: the types of infrastructure available in the past and the present; the role of Ogun State Ministry of Education, the Local Government and the Parents Teacher Association (PTA) in the provision of infrastructure; the adequacy and inadequacy of infrastructures provided to secondary school, and their effects on teaching and learning. The following research questions were generated to guide the study.

- (i) What impact does the government play in the provision of library and its infrastructures?
- (ii) What are the types of infrastructure provided by the government?
- (iii) Does government play any significant role in the provision of infrastructural facilities in both Junior and Secondary Schools in Ogun State?

- (iv) How adequate are those infrastructures provided by the government to junior and senior secondary schools in Ogun State.
- (v) Does these infrastructure provisions enhance teaching and learning effectiveness in both junior and senior secondary schools in Ogun State?

After the National curriculum of 1969, it is evident that educational system which had hitherto existed needed a drastic change. It is worth mentioning that the outcome of the National Seminars in the curriculum conference of 1973 gave birth to the document in 1977 popularly referred to as the National Policy on Education. The policy however has since undergone three consecutive reviews in 1981, 1998 and 2004 respectively. The 2004 edition which is the latest was necessitated by some policy innovations and changes. Prominent among them are: Introduction of information and communication Technology (ICT) in the school system; Prescription of minimum number of subject to be taken by Senior Secondary Certificate candidate.

Also, under Section U tagged 'Educational services' No. 102 (sub-section(d), it was categorically stated that government shall provide facilities and necessary infrastructures for the building of sustainable educational transformation (National Policy on Education, 2004). However, responsibilities for the administration of the two vital systems are shared among the Federal, State and Local governments. Each one carries out its responsibilities through certain accredited agencies. Those of the Federal Government are Federal Ministry of Education and the Universal Basic Education. The State uses the State Ministry of Education, Board and the Post-Primary Teaching Service Commission. With respect to the Local Government Council, the organ uses the Local Government Education Authority (Oni, 2006). The major interest of this study, however, is to look at the extent to which these various organs have performed in terms of infrastructure innovations that has taken place in secondary schools in Ogun State.

Innovations on the establishment of school: The establishment of private secondary schools in Ogun state has taken a new dimension from the olden days where you just establish and run a school curricular different from what was stated in the National Policy on Education without carrying along the Ministry of Education Officials. At present, while the State Government is encouraging private participation in the delivery of secondary education; the private individuals and corporate bodies are allowed to establish private secondary schools after fulfilling certain conditions specified by the Ministry of Education, Science and Technology. All prospective private proprietors will be required to complete the form titled Proprietor's Clearance Form (PCF) which should be submitted to the Zonal Education Office in his/her area for due clearance before the procurement of the application from for establishment of a private school. Space specifications are also given which should be strictly adhere to. Example, Library room should be 7.2m x 16 x 3m high with capacity to seat $\frac{1}{3}$ of the school population (Ogun State Education Hand Book, 2007).

Infrastructure: The development of Infrastructure is basic to the growth of educational development. The basic facilities, equipment, service and installations needed for the educational operation to function effectively (The Cambridge Encyclopedia 1999). Infrastructure refers to such basic requirements or facilities needed to support structure without which the functioning and growth of education especially at a fast pace is not possible. Kaira (2006) sees infrastructure as social economic overheads which require huge capital as well as advanced technology that are largely developed by the state. This implies that for the government to develop or raise educational status of the state to a standardized level, one good device is for the government, first to develop the infrastructure.

Infrastructure has always remained a constraint, because the demands are always on the increase because of the growing population and demands for quality education. The clamour for standard classrooms, science laboratories, technical workshops, administrative offices, libraries among others in the face of very limited funds is a challenge (Odule, 2007). Much has been written about the need for strong, visionary leaders particularly in the corporate world. Senge (2001) identifies 5 conditions that contribute to an innovation being sustained. They are: (i) support within the school, (ii) support from outside, (iii) having an innovation change; (iv) funding, and (v) supportive policy and planning conditions. These conditions are important because of their contributing factors and there was evidence that they facilitate sustainable innovations thought. Support and participation are a contributing factor to the continuation of innovational project. A particular impressive case in this regard was the Project Pinelink at lower secondary schools in the United States. The goal of the project was to establish a community Intranet that would provide courseware to students but access to parents, community members and others. Non governmental recognition and support came from sources outside the secondary schools. The project was founded by a federal challenge grant that was successful because it involved many partners including companies such as Microsoft Corporation, Cox communication and other local cable provider as well as city, country and state agencies, and post secondary institutions (Goggle Books Result International, 2003).

Honell and Higgins (2008) said that many schools innovation have champions' individuals who pioneer, advocate, defend and advance the innovation in their schools and beyond. They are frequently charismatic individuals and risk takers who throw their efforts behind the innovation to overcome obstacles and resistance. These individuals according to them are often key to the sustainability of their infrastructural innovations. However, it is worthy of note to say that if the innovation is totally bound up in one individual to the extent that no one has the capability to offer it, the innovation will quickly fail if that individual leaves the school, the chances that the infrastructural innovation will continue are excellent because of the person's dedication and commitment.

Ogun Parent Teachers' Association (PTA): The Ogun State Parent Teachers'

Association (PTA) (1994) ensures a harmonious relationship between the heads of the schools, Principals and the P.T.A. Chairmen and members of the P.T.A. Executives. The P.T.A. recognizes the fact that school development can only take place in the atmosphere of peace, hence the healthy cooperation between the P.T.A. Chairmen and Heads of schools in Ogun State. Each of the schools in the local government has a Parent Teachers' Association to cater for the school. Most of the schools in Ogun State have witnessed financial and materials support from the P.T.A.

The main area of the Association in assisting the state government to successfully execute its educational programme includes the provision of: school transport; sports equipment musical sets; borehole and water tank; renovation of existing classrooms; and payment for what is popularly called (Part-time Teachers) in some schools to supplement government effort. Among the beneficiaries are Ago Iwoye Secondary School, Methodist Comprehensive High School, Ago Iwoye, Girls School, Ijebu Igbo, Obanta Comprehensive High School, Awa, Remo Secondary School, Sagamu, Iganmode Grammar School, Ota, Abeokuta Grammar School and host of others.

Activities of Government Officials and Contractors: The Universal Basic Education commission was created by the compulsory, Free, Universal Basic Education Act (2004) and other Related Matters among other things to: (i) Formulate policy guidelines for the successful operation of the Universal Basic Education Programme in the Federation; (ii) Prescribe minimum standards for the basic education throughout Nigeria in line with the National Policy on Education and the directive of the National Council on Education and ensure the effective monitoring of the standards; and (iii) Most importantly, the provision of adequate basic education facilities in Nigeria (Universal Basic Education Act 2004).

The commission soon after inauguration became a comfortable ground for politicians, government officials and fraudulent local and foreign contractors. Enya (2008) confirms in one of his write up on Thursday 11 December 2008 the atrocious behavior of some government officials and fraudulent contractors. He said that some incompetent staff of Universal Basic Education Commission (UBEC) have been posted to the commission to serve that fraudulent mission thereby awarding contract to Intermarket, USA APP, a foreign contractor for the production and supply of plastic desks and chairs for Junior Secondary schools in Nigeria despite the ban on importation of plastic materials into the country in 2005 by the Federal government. The application of due process to any contract was ignored. However, it is hoped that the inauguration of new management into the commission in 2007 will cleanse the corrupt practices being one of the cardinal point of the late Yar'Adua administration-fight against corruption in Nigeria.

METHODOLOGY

Descriptive survey research design was adopted for the study. The target population for this study includes all the junior and senior secondary schools in Ogun State.

However, the total number of secondary schools in the state was taken to be four hundred and sixty seven. From this population, only one hundred and ninety eight each was chosen as equal sample for both junior and senior secondary schools respectively making a total of schools. The main instrument used for data collection in the study was only primary source-questionnaires and personal interview. For the data analysis and discussion of finding, out of three hundred and ninety-six questionnaires carefully administered to the respondents in junior and senior secondary schools in Ogun state.100% response rate was gotten from the questionnaire distributed.

RESULTS AND DISCUSSION

Table 1: Impacts of the government's provision of library and its infrastructure

Infrastructure	Public Junior Sec. School		Public Senior Sec. School		Total
	NA	A	NA	A	
Availability of school library	42 (21)	156 (79)	120 (61)	78 (39)	396
Adequate space to accommodate $\frac{1}{3}$ of school population	20 (10)	178 (90)	73 (37)	125 (63)	396
Motivating students to use library	160 (81)	38 (19)	108 (55)	90 (43)	396
Adequate books in the library	28 (14)	170 (86)	76 (38)	122 (62)	396
Standard library furniture	22 (11)	176 (89)	42 (21)	156 (79)	396
Adequate professional library staff	12 (6)	186 (94)	61 (31)	137 (69)	396
School library: a separate building & easily accessible	10 (5)	166 (84)	108 (55)	90 (45)	396
School library well ventilated and free from noise	32 (12)	162 (82)	94 (47)	104 (53)	398
Learning materials' organized according to topic & relevance	36 (12)	162 (82)	94 (47)	104 (53)	396
Library staff ready to render assistance and services	40 (20)	158 (80)	112 (57)	86 (43)	396

Source: Field Survey, 2009

NA = Not Adequate, A = Adequate; Figures in parentheses are percentage

Table 1 shows the findings on the provision of library and its infrastructures by the government. It reveals that government commitment to the provision of library and necessary infrastructures are not encouraging viewing the categories of lower percentages scored at various levels; notwithstanding the finding reveals the commitment of teachers in motivating students to use the library in both junior and senior secondary schools.

The position of the library in terms of ventilation and free from noise is at a better stage in senior secondary school level than junior secondary school level. Also, the organization of learning materials and its relevance received a pass mark at senior level than junior secondary schools. The services of library staff to the users are more encouraging at senior secondary schools than junior level. However, it is glaring that the teaching staff and the library staff could have done better if the government provides necessary library infrastructures to secondary schools in Ogun State and the reading culture of students could have been improved.

Table 2: Types of infrastructure provided by the government

Infrastructure	Public Junior Sec. Sch.				Public Senior Sec. Sch.				Total
	NA		A		NA		A		
Construction of classrooms	122	62	76	38	198	100	-	-	396
Rehabilitation of building	84	42	114	58	78	39	120	61	396
Student furniture	56	28	142	72	86	43	112	57	396
Toilet	152	77	46	23	118	60	80	40	396
Teachers furniture	142	72	56	28	104	53	94	47	396
Science Equipment	170	86	28	14	116	59	82	41	396

Source: Field Survey, 2009

Table 2 above shows the type of infrastructure provided by the government in both junior and senior secondary schools in Ogun State. The result reveals that in all 396 schools, only 76 classrooms are available in junior secondary schools and in senior secondary schools none was recorded. This shows that the provision of enough classrooms for senior secondary was very poor. There was rehabilitation of buildings in both categories of schools in the State. Student furniture's however as revealed by the above table are provided but may not be enough considering the population on students in each of the secondary schools in the State. It was also revealed from the study that the provision of toilet facilities and other conveniences at both levels of the secondary schools was not encouraging. Teachers' furniture recorded very low percentage in both junior and senior secondary. Subsequently, science equipment also recorded low percentage in both junior and senior level. Hence, there is evidence of increase in infrastructural innovations in senior secondary schools than junior secondary schools between 2003 and 2007.

Table 3: Government role in provision of infrastructural innovations in secondary schools in Ogun State

Respondent's View	Junior School		Senior School		Total
	Freq.	%	Freq.	%	
Yes	60	30.4	101	51.1	40.9
No	138	69.6	97	48.9	59.1
Total	198	100	198	100	100

Source: Field Survey, 2009

Table 3 above reveals the government's role in the provision of infrastructure has been so, much significant in senior secondary schools then junior secondary schools in Ogun State. However, the finding is strongly correlated with the findings on table 2 as shown by the various percentages of each item considered in both categories of schools.

Table 4: Adequacy of the Infrastructures provided by the government to junior and senior secondary schools in Ogun State

Respondent's View	Junior School		Senior School		Total
	Freq.	%	Freq.	%	
Adequate	10	5.1	20	10.1	7.6
Fairly Adequate	70	35.5	68	34.3	34.8
Very Inadequate	118	59.5	110	55.6	57.6
Total	198	100	198	100	100

Source: Field Survey, 2009

Table 4 shows the findings on the adequacy of infrastructure provided to schools by government. It is however revealed that government provision of infrastructural innovations in both junior and senior secondary schools are highly inadequate and therefore need serious improvement in terms of government supplies of necessary and adequate infrastructures in both junior and senior schools. However, both junior and senior schools agreed that the provision of infrastructure is fairly adequate with records. Whereas, only junior and senior secondary schools agreed that the facilities are adequate and this is as a result of those schools located in the government residential areas of the state. Hence they are self sufficient in terms of infrastructures provision as at the moment of this research study.

Table 5: Infrastructural Innovations enhance teaching effectiveness of teaching and learning effectiveness in both junior and secondary schools in Ogun State

Respondent's View	Junior School		Senior School		Total
	Freq.	%	Freq.	%	
Yes	80	40.4	88	44.4	42.4
No	118	59.6	110	55.6	57.6
Total	198	100	198	100	100

Source: Field Survey, 2009

Table 5 shows the analysis of the enhancement of infrastructural innovations on teaching effectiveness in both junior and secondary schools in Ogun State. The findings reveal that the quantity of infrastructures available in both junior and senior secondary schools, as affirmed by the respondent does not actually enhance teaching effectiveness in Ogun State. Whereas the respondents in junior and senior secondary schools respectively agreed that the provisions moderately enhanced teaching and learning effectiveness since there are located in Government Residential Areas (GRA) and are exposed to government grants and aids on a regular basis.

CONCLUSION AND RECOMMENDATIONS

The infrastructural and instructional materials available for teaching and learning in schools are grossly inadequate and where they are available, they may not convey standard and quality message. Moreover; the findings gathered that infrastructure has always remained a constraint, its demands are always on the increase especially in the Junior and senior secondary schools because of the growing population and demands for qualitative education in Ogun State. The clamour for more standard classrooms, students and teachers' furniture, libraries and its facilities, toilets, science laboratories and equipment, administrative offices among others in the face of very limited funds is a challenge.

Furthermore, the findings indicate that although government role in the provision of infrastructure has been so much significant, but still require further improvements and consistency. However, infrastructural innovations will enhance teaching and learning effectiveness in schools for without, the school cannot hold.

More so, greater investment is needed at all levels of education especially secondary schools if we are to reach the Millennium Development Goals (MDGs). Based on the above, the following propositions were proffered.

- Government and/or ministry of Education in the state should make adequate provisions for infrastructural facilities and innovations in our secondary schools - Junior and Senior to enhance an effective teaching and learning skills in Ogun State.
- With a constant increase in infrastructures, teaching effectiveness will improve and therefore boost the education status in Ogun State; promotes government image and an applauding efforts of the Ministry of Education may be maintained.
- Improvement of existing infrastructures, provision of new ones and ensuring that the school environment is more conducive for teaching and learning
- The government should be encouraged to play a more active role by using its own funds from the oil dividend for the provision of suitable infrastructures for both junior and senior secondary schools in Ogun State
- All stake holders in the educational sector should be encouraged to fund secondary education.
- Old students, PTA and philanthropists should continue to assist in the provision of laboratory equipment, workshops, sport materials, computers and any other necessary items as may be required from time to time and released regularly.

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