



## **Influence of Poor Infrastructure on Vocational Teacher Education in Rivers State Universities**

**\*Amadi, N. S. & \*Ohaka, A.O.**

**\*Department of Vocational/ Technology Education  
Faculty of Technical and Science Education  
Rivers State University, Nkpolu-Oroworukwo,  
Port Harcourt, Nigeria.**

**\*Corresponding author's Email: [ndubisi\\_amadi@yahoo.com](mailto:ndubisi_amadi@yahoo.com) and Phone: 07030228478**

### **ABSTRACT**

This study examined the influence of poor infrastructure on vocational teacher education in Rivers State Universities. Specifically, the objectives of the study were to: ascertain the state of infrastructures; determine the benefits of infrastructure to vocational teacher education; determine the effects of poor infrastructural facilities on vocational teacher education; determine the strategies to improve poor infrastructure of vocational teacher education. The sample size for the study was 60 students and 20 vocational education teachers which were randomly selected from Rivers state universities. Structured questionnaire was used to collect data from respondents. Data were analyzed using mean and standard deviation. The study revealed that majority of the infrastructure used vocational education in Rivers State universities are in poor state. The study also showed the benefit of infrastructure in vocational teacher education, it was found that infrastructure facilitate practical instruction, arouses students' learning interest, enhance skill acquisition among others. Moreover, it was discovered in the study that poor infrastructure arouses apathy among vocational education students and lecturers, it affects effective delivery of vocational curriculum content, it creates boredom on student when learning among others. Provision of adequate power supply, proper maintenance and reinstatement of dilapidated infrastructure among others are the remedies to poor state of infrastructure in Rivers State Universities. The study therefore recommends that government should provide adequate infrastructural facilities for vocational education departments in higher institutions of learning. This is because only a well taught teacher will produce a productive learner.

**Keywords:** Role, Agricultural Education, Entrepreneurship, Skills, and Development

### **INTRODUCTION**

The quality of education in any nation is major key to political, technological and scientific development. Education is an effective tool used by the society to transform and equip its human resources so as to become a contributing member of the society. Unfortunately, there is a decline in the quality of education in Nigeria due to the poor state of infrastructure in educational institutions. Poor state of education infrastructure in Nigerian has systematically led to alarming enrolment of Nigerian students. Foreign institutions are consistently catching the interest of Nigerian student because of the ultimate promising standard education. Therefore, towards the search for greener educational pastures, the United Kingdom has long been the favourite destination for Nigerian students oversees with number booming in recent years. According to world education news (2017), 17,973 Nigeria students studied in United Kingdom in 2015. Unesco institute of statistics (UIS) also has it that Ghana is regarded as the second most popular destination country attracting 13,919 Nigeria students in 2015. Moreover institute of international education in world education news (2017) also discovered that Nigeria enrolment in U.S institution have been increasing slowly but steadily over the past 15 years from 3,820 in 2000/2001 to 10, 674 in

2015/2016. It was further documented that Nigeria student are currently the 14<sup>th</sup> largest group among foreign students in United States and contributed an estimated USD \$324 million to the U.S economy in 2015/ 2016. The poor state of infrastructural facilities in Nigeria education system amounted to the reason why most Nigerian students directed their attention towards foreign institution for better learning environment. Poor infrastructure is one of the major problem bedeviling the process of development in Nigeria. Its effect is reflected in almost all the sectors of the Nigeria economy and its directly and indirectly affecting global economy.

Collins dictionary defines infrastructure as a substructure and underlying facilities especially the basic installation and facilities on which the continuance and growth of a community, state et cetera. According to Rabi (2017), infrastructure is regarded as a wide array of physical assets required to support both private economic activities and social services. Basically, infrastructure does not only contains economic infrastructure but also encompasses social infrastructure that is essential for a society to function. Social infrastructure includes schools, universities, hospitals, courts, prisons, parks and recreational facilities, libraries, community housing, public safety building and facilities, city halls and facilities, and the like. Bishir (2017) posited that Infrastructures are the basic facilities, services and installations that are needed for the functioning of a system.

Jonathan and Kayode, (2010) opined that one imperative infrastructural aspect that needs to be vigorously developed is the educational infrastructure. In this context, educational infrastructure could be defined as the assets required to support and improve educational activities. These are facilities that enhance the achievement of educational goals. Infrastructure as a significant aspect of the school holds a much in the teachers and students performances in teaching and learning process most especially in vocational teacher education. Vocational education does not exist in isolation, it goes along with learning by doing. Vocational teacher education focuses on equipping teachers who will impact the future generation with skills in specialized areas of study. As stated by university of Nigeria (UNN), one of the priorities of the Vocational and Teacher Education programme is skill acquisition. The skills acquired by the students in their course of studies are utilized in such a way that no graduate of this Department will be jobless. Since vocational teacher education requires a whole lot of practical exercises so as to effectively achieve its sole aim of skill acquisition, the role of infrastructure in achieving this, therefore come into play.

Janssen (2017) opined that Buildings, classrooms, laboratories, and equipment- education infrastructure - are crucial elements of learning environments in schools and universities. There is a strong evidence that high-quality infrastructure facilitates better instruction, improves student outcomes, and reduces dropout rates, among other benefits. Infrastructural facilities in vocational teacher education facilitate the transference of knowledge and skills from the teacher to the learner. Based on various researches conducted over the years, the impact of infrastructural facilities is widely noticed in the educational achievement of learners. In the research conducted by Katrien, Weerd, Dupont, Mols and Nuytten (2011), it was discovered that there was a significant contrast in satisfaction levels between students attending schools with good quality infrastructure as compared to those in schools with poor infrastructures.

Despite the importance of infrastructure to education, it's worthy to conclude that the state of infrastructure in Nigerian schools is generally adjudged to be in deplorable and decaying state. Oyebode (2008) noted that no society is capable of rising above the level of its universities. He further stated that the life and times of these our all-important universities have been somewhat chequered and they have been denied favourable resource allocation which has led to fall in standard. According to Alec Ian (2014), poor and insufficient school infrastructure negatively impact student learning and schooling outcomes. The poor state of infrastructure assumed a central reason why Nigerian Universities has failed to produce trail blazers in the scientific and technological race. The effect is widely felt in vocational teacher education that serves the responsibility of equipping teachers who will transfer their technical know-how to younger generation.

Adedipe (2007) asserted that inadequacy of physical resources in education like classrooms , laboratories, ICT and other academic resources which translates to poor results can be addressed by adequate funding of tertiary institution. Bamiro (2012) also noted that general improvement of the teaching and learning

environment ranging from lecture theaters, classrooms, laboratories, workshops and so on will help to shrink the negative impact of poor infrastructure on students schooling outcomes. However, this study will examine the influence of poor infrastructure on vocational teacher education in Rivers State Universities.

### **Purpose of the Study**

The main purpose of the study is to determine influence of poor infrastructure on vocational teacher education in Rivers State

Specific Objectives: The study specifically sought to;

1. Ascertain the state of available infrastructure for vocational teacher education in Rivers State Universities.
2. Determine the benefits of infrastructure to vocational teacher education in Rivers State Universities.
3. Determine the implication of poor infrastructure on vocational teacher education in Rivers State Universities.
4. To determine the strategies to improve the poor state of infrastructure of vocational teacher education in Rivers State Universities.

### **Research Questions**

Based on the aforementioned purpose of the study the following research questions were asked;

1. What are the state available infrastructures for vocational teacher education in Rivers State Universities?
2. What are the benefits of infrastructure to vocational teacher education in Rivers State Universities?
3. What are the implications of poor infrastructures on vocational teacher education in Rivers State Universities?
4. What are the strategies to improve the poor state of infrastructure of vocational teacher education in Rivers State Universities?

### **Hypotheses**

The following null hypotheses were tested at 0.05 level of significance

- H<sub>01</sub>. There is no significant difference between the mean response of vocational education lecturers and students on the state infrastructure available for vocational teacher education in Rivers State Universities.
- H<sub>02</sub>. There is no significant difference between the mean response of vocational education lecturers and students on benefits of infrastructure to vocational teacher education Rivers State Universities.
- H<sub>03</sub>. There is no significant difference between the mean response of vocational education lecturers and students on the implications of poor infrastructures on vocational teacher education Rivers State Universities.
- H<sub>04</sub>. There is no significant difference between the mean response of vocational education lecturers and students on the strategies to improve the poor state of infrastructure of vocational teacher education Rivers State Universities.

### **METHODOLOGY**

The study adopted a survey research design. The sample size of the study was 60 students and 20 lecturers selected from vocation education department in Rivers State University and Ignatius Ajuru University of Education. The instrument used in the study was a survey questionnaire tagged "IPIVTE" Influence of Poor Infrastructure on Vocational Teacher Education in Rivers State universities. The instrument was partitioned into three sections that were structured in four-point rating scale. It was validated by two experts in the department of vocational and technology education department in Rivers State University, Port-Harcourt. To ascertain the reliability of the instrument, Cronbach Alpha reliability co-efficient method was used to measure the internal consistency of the instrument. The reliability co-efficient was 0.77. Copies of the instrument were administered and retrieved by the researchers. Mean and standard deviation were used to answer the research questions while z-test was used to test the hypotheses at 0.05 level of significance. Mean scores < 2.50 were categorized as poor and mean scores  $\geq 2.50$  were

good in research question one. While Mean scores < 2.50 were disagreed and mean scores  $\geq$  2.50 were agreed in other research questions

## RESULT AND DISCUSSION

Research question 1: *What is the state of available infrastructures for vocational teacher education in Rivers State Universities?*

**Table 1: Mean and Standard deviation computation on the state of available infrastructural facilities in Rivers state universities**

s/n	Items	Students =60			Lecturers =20		
		$\bar{x}$	S.D	Remark	$\bar{x}$	S.D	Remark
1.	Classrooms	2.87	0.97	Good	2.51	0.84	Good
2.	Instructional materials	2.34	1.10	Poor	2.12	1.09	Poor
3.	Electricity Supply	2.99	0.86	Good	2.73	0.91	Good
4.	Teaching facilities	2.11	1.12	Poor	2.05	0.87	Poor
5.	Practical Laboratories	2.27	1.00	Poor	2.39	1.03	Poor
6.	Computer and ICT resources for instruction	2.10	1.21	Poor	2.23	1.01	Poor
7.	Use of projecting machines	2.33	1.08	Poor	2.01	1.02	Poor
8.	Voice amplifiers in classrooms	1.98	1.12	Poor	1.64	1.11	Poor
9.	Mechanized farms	2.41	1.09	Poor	2.35	0.99	Poor
	<b>Grand mean and S.D</b>	<b>2.38</b>	<b>1.06</b>		<b>2.23</b>	<b>0.99</b>	

Field survey 2017  $\bar{x}$ =mean, S.D= standard deviation

The table 1 presents students and lecturers responses on state of infrastructures in vocational teacher education in Rivers State universities. The analyzed data shows that classroom (2.87 & 2.51) and electricity supply (2.99 & 2.73) were at good state. Whereas instructional materials (2.34 & 2.12), teaching facilities (2.11 & 2.05), practical laboratories (2.27 & 2.39), computer for instruction (2.10 & 2.23), use of projecting machines (2.33 & 2.01), voice amplifiers in classrooms (1.98 & 2.01), mechanized farms (2.41 & 2.35) were at poor state in Rivers State universities. The result is buttressed with the finding Oladipo (2014) who observed that sizeable portion of the infrastructures in the schools are in state of disrepair and there is high need for resolving them

**Research question 2:** *What are the benefits of infrastructural facilities to vocational teacher education?*

**Table 2: Mean and standard computation on the benefits of infrastructural facilities to vocational teacher education**

S/N	ITEMS	Students =60			Lecturers =20		
		$\bar{x}$	S.D	REMARK	$\bar{x}$	S.D	REMARK
1.	Arousing students' learning interest	3.26	0.74	Agreed	3.31	0.69	Agreed
2.	Improve students skills on handling certain facilities	3.09	0.87	Agreed	3.00	0.76	Agreed
3.	Enhance better explanation of certain concepts in vocational education	3.38	0.69	Agreed	3.42	0.91	Agreed
4.	Motivating students to educational activities	3.47	0.61	Agreed	2.98	1.04	Agreed
5.	It creates a better learning environment	3.11	0.85	Agreed	3.21	0.71	Agreed
6.	It facilitates practical instruction	3.08	1.01	Agreed	2.81	1.09	Agreed
7.	It enhance the acquisition of vocational skills	3.19	0.88	Agreed	3.02	1.04	Agreed
	<b>Grand Mean &amp; S.D</b>	<b>3.23</b>	<b>0.81</b>		<b>3.11</b>	<b>0.89</b>	

Table 2 presents the summary of mean and standard deviation computation of the responses of students and lecturers on the benefit of infrastructures on vocational teacher education in Rivers State. The result revealed that infrastructures arouses students' learning interest (3.26 & 3.31), Improve students skills on handling certain facilities (3.09 & 3.00), enhance better explanation of certain concepts in vocational education (3.38 & 3.42), motivate students to educational activities (3.47 & 2.98), create a better learning environment (3.11 & 3.21 ), facilitates practical instruction (3.08 & 2.81), and also enhances the acquisition of vocational skills (3.19 & 3.02). This finding is equivalent to the assertion of Nwokoma in Ujunwa (2015) who challenged the federal government to invest heavily in universities infrastructure so as to improve quality in Nigeria institution as well as improve the quality of Nigerian graduates. This implies that provision of adequate infrastructural facilities in education system enhances effective achievement of educational objectives.

**Research question 3:** *What are the implications of poor infrastructural facilities on vocational teacher education?*

Table 3: Mean and standard computation on the implications of poor infrastructural facilities on vocational teacher education?

S/N	ITEMS	Students =60			Lecturers =20		
		$\bar{x}$	S.D	REMARK	$\bar{x}$	S.D	REMARK
1.	It reduces teachers performance in teaching	3.11	1.02	Agreed	3.18	0.70	Agreed
2.	It limits the level of students' understanding	3.34	0.69	Agreed	2.75	1.11	Agreed
3.	Arouses apathy in students.	3.17	0.89	Agreed	3.01	0.91	Agreed
4.	It creates boredom on students when learning.	3.48	0.61	Agreed	3.09	0.74	Agreed
5.	It affects the effective delivery of vocational curriculum contents	2.67	0.99	Agreed	3.30	0.69	Agreed
6.	Decadence in educational motivation for students	3.48	0.81	Agreed	2.87	0.97	Agreed
<b>Grand mean &amp; S.D</b>		<b>3.21</b>	<b>0.83</b>		<b>3.03</b>	<b>0.85</b>	

Result in Table 3 shows the students and lecturers responses on the implication of poor infrastructure on vocational teacher education. With the mean responses of students and lecturers in parenthesis, the findings revealed that poor infrastructure reduces teachers performance in teaching (3.11 & 3.18), limits the level of students' understanding (3.34 & 2.75), arouses apathy in students. (3.17 & 3.01), creates boredom on students when learning (3.48 & 3.09), it affects the effective delivery of vocational curriculum contents (2.67 & 3.30), and Decadence in educational motivation for students (3.48 & 2.87). This implies that poor infrastructure has a negative implication on vocational teacher education. The findings is in conformity with Ejiro (2011) who noted that the national goal of developing the educational system in such a way as to provide a satisfactory flow of men and women capable of acquiring skills necessary to exploit to the fullest the natural resources of the country makes it imperative for facilities to be abundantly available in the schools. Unfortunately, the reverse is the case when needed educational facilities are at poor state or/of inadequacy. He further stated that poor infrastructure leads to the production of half-baked students, apathy among teachers and students and little and no motivation for learning.

**Research question 4:** *What are the strategies to improve poor infrastructure of vocational teacher education in Rivers State universities?*

**Table 4: Mean and standard computation on the strategies to improve poor infrastructure of vocational teacher education in Rivers State universities.**

S/N	ITEMS	Students =60			Lecturers =15		
		$\bar{x}$	S.D	REMARK	$\bar{x}$	S.D	REMARK
1.	Creating awareness to the government on the negative impact of the poor infrastructure on vocational teacher education.	3.29	0.70	Agreed	3.05	0.82	Agreed
2.	Provision of technician to maintain and reinstate the dilapidated infrastructure	2.98	1.02	Agreed	3.06	0.81	Agreed
3	Upgrading the old infrastructural facilities in schools & colleges	3.01	0.91	Agreed	2.91	0.97	Agreed
4.	Provision of classroom building & offices	2.97	1.09	Agreed	2.86	1.03	Agreed
5.	Provision of instructional aids as demanded in the curriculum content	3.07	0.83	Agreed	3.33	0.79	Agreed
6.	Provision facilities such as voice amplifiers, projecting machines and others ICT resources in classrooms	3.37	0.63	Agreed	3.27	0.72	Agreed
7.	Provision of adequate supply power	3.01	0.87	Agreed	2.98	0.81	Agreed
8.	Provision of entrepreneurial/ vocational centre	3.11	0.74	Agreed	3.09	0.97	Agreed
9	Provision of mechanized farms	3.02	0.85	Agreed	3.10	0.89	Agreed
	<b>Grand Mean &amp; S.D</b>	<b>3.09</b>	<b>0.85</b>		<b>3.07</b>	<b>0.87</b>	

Table 4 presents students and lecturers mean scores and standard deviation on the strategies to improve the poor infrastructures in vocational education in Rivers State universities. The table reveals that Creating awareness to the government on the negative impact of the poor infrastructure on vocational teacher education (3.29 & 3.05), Provision of technician and other work men to reinstate the dilapidated infrastructure (2.98 & 3.06), Upgrading the old infrastructural facilities in schools & colleges (3.01 & 2.91), Provision of classroom building & offices (2.97 & 2.86), Provision of instructional aids as demanded in the curriculum content (3.07 & 3.33), Provision facilities such as voice amplifiers, projecting machines and others in the classrooms (3.37 & 3.27) , Provision of adequate supply power (3.01 & 2.98), Provision of entrepreneurial centre (3.11 & 3.09), and Provision of mechanized farms (3.02 & 3.10) are the strategies to improve the poor infrastructural facilities in vocational education in Rivers State universities. This is In line with Umoru (2014) who noted that ministries of education must provide adequate infrastructure such as electricity, pipe borne, classroom blocks/lecture halls in schools; laboratories, workshops and vocational centres should be adequately equipped with necessary modern facilities.

### Hypothesis

**H<sub>01</sub>:** There is no significant difference between the mean response of vocational education lecturers and students on the state of available infrastructures for vocational teacher education

**Table 5. z-test analysis of lecturers and students mean responses on the state of available infrastructures for vocational teacher education**

Groups	Mean	S.D	N	Lev.of sig.	z-cal	z-crit	Decision
<b>Students</b>	2.38	1.06	60	0.05	0.56	1.96	Accepted
<b>Lecturers</b>	2.23	0.99	20				

The result in Table 5 shows that students have mean and standard deviation scores 2.38 and 1.06, while lecturers have mean and standard deviation scores of 2.23 and 0.99 at 0.05 level of significance, z-cal

value of 0.56 and z-crit value of 1.96. The result shows that the z-cal value is less than z-crit value. Since the z-cal value of 0.56 is less than the z-crit value of 1.96, the null hypothesis is thus accepted. This implies that there is no significant difference between the mean response of vocational education lecturers and students on the state infrastructures available for vocational teacher education.

H<sub>02</sub>: There is no significant difference between the mean response of vocational education lecturers and students on benefits of infrastructural facilities to vocational teacher education

**Table 6. z-test analysis of lecturers and students mean responses on benefits of infrastructures to vocational teacher education**

Groups	Mean	S.D	N	Lev.of sig.	z-cal	z-crit	Decision
Students	3.23	0.81	60	0.05	0.53	1.96	Accepted
Lecturers	3.11	0.89	20				

The result in Table 6 shows that students have mean and standard deviation scores 3.23 and 0.81, while lecturers have mean and standard deviation scores of 3.11 and 0.89 at 0.05 level of significance, z-cal value of 0.53 and z-crit value of 1.96. The result shows that the z-cal value is less than z-crit value. Since the z-cal value of 0.58 is less than the z-crit value of 1.96, the null hypothesis is thus accepted. In other words, there is no significant difference between the mean response of vocational education lecturers and students on benefits of infrastructural facilities to vocational teacher education in Rivers State Universities

H<sub>03</sub>: There is no significant difference between the mean response of vocational education lecturers and students on the implication of poor infrastructures on vocational teacher education

**Table 7. z-test analysis of lecturers and students mean responses on the implication of poor infrastructural facilities on vocational teacher education**

Groups	Mean	S.D	N	Lev.of sig.	z-cal	z-crit	Decision
Students	3.21	0.83	60	0.05	0.83	1.96	Accepted
Lecturers	3.03	0.85	20				

The result in Table 7 shows that students have mean and standard deviation scores 3.21 and 0.83, while lecturers have mean and standard deviation scores of 3.03 and 0.85 at 0.05 level of significance, z-cal value of 0.83 and z-crit value of 1.96. The result shows that the z-cal value is less than z-crit value. Since the z-cal value of 0.83 is less than the z-crit value of 1.96, null hypothesis which states that there is no significant difference between the mean responses of vocational education lecturers and students on the implication of poor infrastructures on vocational teacher education in Rivers State Universities is therefore accepted.

H<sub>04</sub>: There is no significant difference between the mean response of vocational education lecturers and students on the strategies to improve poor state of infrastructure in vocational teacher education

**Table 8. z-test analysis of lecturers and students mean responses on the implication of poor infrastructural facilities on vocational teacher education**

Groups	Mean	S.D	N	Lev.of sig.	z-cal	z-crit	Decision
Students	3.09	0.85	60	0.05	0.91	1.96	Accepted
Lecturers	3.07	0.87	20				

The result in Table 5 shows that students have mean and standard deviation scores 3.09 and 0.85, while lecturers have mean and standard deviation scores of 3.07 and 0.87 at 0.05 level of significance, z-cal value of 0.91 and z-crit value of 1.96. The result shows that the z-cal value is less than z-crit value. Since the z-cal value of 0.91 is less than the z-crit value of 1.96. Therefore, the null hypothesis which states that there is no significant difference between the mean response of vocational education lecturers and students on the strategies to improve poor state of infrastructure in vocational teacher education is accepted.

## **CONCLUSION**

Based on the findings of the study, it hereby concluded that most of the infrastructures in teaching vocational education in Rivers State universities are in poor state, classroom and electricity supply exclusive.

Also, the study reveals the benefit of infrastructure in teaching vocational education. It was deduced that infrastructures arouses students' learning interest Improve students skills on handling certain facilities, enhance better explanation of certain concepts in vocational education, motivating students to educational activities, it creates a better learning environment, it facilitates practical instruction and also enhances the acquisition of vocational skills.

Moreso, there are various implications of poor infrastructures which was discovered from the result of the study. Poor infrastructures in vocational teacher education reduce teachers performance in teaching, limit the level of students' understanding, arouse apathy in students, create boredom on students when learning, it affect the effective delivery of vocational curriculum contents and decadence in educational motivation for students.

Finally, the study showed that creating awareness to the government on the negative impact of the poor infrastructure on vocational teacher education, provision of technician and other work men to reinstate the dilapidated infrastructure, upgrading the old infrastructural facilities in schools & colleges, provision of classroom building & offices, provision of instructional aids as demanded in the curriculum content, provision of facilities such as voice amplifiers, projecting machines and others in the classrooms, provision of adequate supply power, provision of entrepreneurial centre, and provision of mechanized farms are the strategies to improve the poor infrastructural facilities in vocational education in Rivers State Universities.

## **RECOMMENDATION**

Based on the findings of the study the following recommendations were made;

- School administrators should not take maintenance of school facilities for granted. As it effectively contribute to the achievement of educational goals and objectives.
- Technicians should be made available in Universities for rapid invention of flawed facilities in the institution
- Government should provide adequate infrastructures for vocational education departments in higher institutions of learning. This is because only a well taught teacher will produce a productive learner.
- Provision of Voice amplifiers, projecting machines, instructional aids and other information and communication technology as the curriculum and situation demands is important for effective delivery curriculum contents.

## **REFERENCES**

- Adedipe N.O (2007). University quality assurance funding strategy and task allocation. Paper presented at the workshop on tertiary education financing.
- Alec Ian. G. (2014). Educational Infrastructure, School Construction, & Decentralization in Developing Countries: Key Issues for an Understudied Area. International Center for Public Policy Working Paper 14-12

- Bamiro O.A (2012). Tertiary education in Nigeria and the challenges of corporate governance. Strategic planning workshop NUC Abuja
- Bishir. U (2014) Infrastructural Challenges To The Study Of Physics In Tertiary Institutions. *JORIND 12 (1) June, 2014. ISSN 1596-8308.* [www.transcampus.org/journals](http://www.transcampus.org/journals); [www.ajol.info/journals/jorind](http://www.ajol.info/journals/jorind)
- Bishir.U (2014). Infrastructure challenges to the study of physics in Tertiary institution. *JORIND 12 (1).* [www.ajol.info/journal](http://www.ajol.info/journal)
- Ejiro T.A (2011). Effect of inadequate infrastructure facilities on academic performance of students of Oredo Local Government Area of Edo State. *The Nigeria Academic Forum vol. 20 (1) pg 1-6*
- Janssen.T (2017). Why education infrastructure matters for learning. Education for global development. The world bank
- Jonathan, O.O and Kayode, A.A (2010) – An Assessment of Spatial Distribution of Government Secondary Schools in the Zaria Area of Kaduna State in Ogidolu,
- Katrien C.,Weerd G.D,Dupont.S, Mols.S, Nuytte C (2011). Well being at school . does infrastructure matters?. CELE exchange 2011/10.OCED2011 pg 2-7
- Oladipo A.D (2014).infrastructure conditions in public secondary schools, Ogun state Nigeria. *International journal of civil, structural, environmental and infrastructure engineering research and development . vol. 4, issue 5 pg 17-23*
- Ujunwa A. 'poor infrastructure responsible for poor quality graduates. The guardian
- Umoru A.I (2014) .Ways to improve quality of education in Nigeria. The Nation Newspaper.