



Evaluation of Effects of Infrastructural Facilities on Students' Academic Performance in Boarding and Non-Boarding Secondary Schools in Rivers State

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Abstract: This study evaluates the effect of poor infrastructural facilities on students' academic performance in Boarding and non-Boarding secondary schools in Rivers State. The study adopted correlation research design. The population of the study consisted of 922 respondents with a sample size of 277 respondents randomly selected from boarding and non-boarding secondary schools in Rivers State. A self-structured research instrument known as infrastructure and student academic performance inventory (I.S.A.P.I) was used for data collection. Mean and standard deviation scores were used to answer the research questions while Pearson's product moment correlation co-efficient (r) statistics was employed to test the hypothesis at 0.05 alpha level. It was concluded that poor state of infrastructural facilities affect students academic performance in Boarding and Non-Boarding Secondary Schools in Rivers State and there was significant relationship between poor state of infrastructural facilities and students academic performance. It was recommended that Government should support Boarding and Non-Boarding Secondary Schools by providing modern, relevant and adequate teaching and learning facilities.

Keywords: *Evaluation, Infrastructural Facilities, Academic Performance, Boarding, Non-Boarding, Secondary School.*

Introduction

Infrastructure facilities are simple the resources used for effective development and implementation of any educational programme of which the secondary education is not exception. These include equipments, physical facilities, which are laboratory/clinic/studio, classroom facilities and equipment, laboratories size (area per student), safety and environmental sanitation as well as financing of the programme. Infrastructure in secondary school are those basic requirements for the attainment of the objectives of the secondary education programme (Abayomi, 2009). They are employed to enhance teaching and learning process in secondary school education. Carl (2008) and Obhuvbu (2009) categorized resources in secondary education as human and material resources. Resources in education can also include any piece of information, a piece of evidence, an activity, an idea, or a series of combination of these that a learner can be directed or turned to in the development of his ability to learn, be it anything within the environment whether they are artefacts, a person or an experience, an account or an explanation that may be of value that can assist the learner to think, understand and learn. According to Oyeniya (2010), infrastructure are composed of all the instructional facilities and equipment needed in the workshops and laboratories. These include spaces, building and other instructional facilities, real life situations or objects from the community, abridge or representation of real objects such as pictures, models, audio recorders, video recording or using them, different types of projectors, tape recorders, television and the computer (Yadar, 2007).



Furthermore, Whereka (2005) disclosed that due to the present Nigeria's economic predicaments, many secondary schools lack adequate facilities for proper implementation of their applauded curriculum programmes. As a result, Uwheraka added that these curriculum have been implemented at the pseudo level, a situation that negated some of the basic practical aspects of the curriculum. In order to effectively develop and run any education programme to meet up the required minimum academic standards of the nation, physical facilities seem to be among the several resources required. If secondary education must maintain its position as an effective outfit for human resources development, the training process must involve the use of the right and proper machines, tools, equipments and environment that is replica of the world of work (Ihimekpen, 2013). Teaching facilities are very important for many reasons. According to Uwheraka (2005), one is for effective classroom instructions, which the facilities offer in secondary education, and the other is their use of practical orientation and training of the individuals for their adoption in occupational jobs for self-reliant. Shehu (2003) pointed out that teaching facilities help learners substantiate their career choice before moving into their world of work and motivate learners towards self-reliance in teaching learning process and for Oyeniyi (2010), they help to stimulate learners' interest whenever these facilities and equipment are utilized, they generate greater students interest in the learning system and also enhance retention of ideas. Learning will therefore be less meaningful without the use of teaching and learning facilities (Babalola, 2003) and students would grope in the dark for long before they could get a grasp of what the teacher says (Tsang & Ding, 2005). As such, this will affect students academic performance negatively.

Academic performance has been described as the scholastic standing of a student at a given moment (Ige, 2016). This scholastic standing could be explained in terms of the grades obtained in a course or group of courses (Ijaiye, 2009). Oke (2008) commented on this scholastic standing and argued that performance is a measure of output, and that the main output in education are expressed in terms of learning, that is, changes in knowledge, skills and attitudes, of individuals as a result of their experience within the school's system. Egbule (2014), viewed academic performance as participants' examination grades (grades point average at the end of a particular semester or programme). It refers to the score attained by an examinee in an administered standardized test. It could also be seen as the level of performance in a particular field of study. Higher scores indicates better academic performance (Yator, 2003). However, the concept of performance is general to all fields of human endeavour. Man's potential is related to his actual performance through learning and motivation, although other tasks and variables are also determinants of performance level. For Mizala (2009), academic performance is defined as quality of performance interms of test and class exercise with academic content. It is a level of attainment of a given standard for excellence or in other words, a qualified academic achievement. Achievement measurement focuses on the past performance, but for student, its level can be measured based on the test scores of the subject concern.



Also, academic performance denotes the ability of students to study, remember facts and be able to communicate their knowledge verbally or through writing. The Cambridge university report of 2003 as cited in Fridah (2012), noted that academic performance involves the performance of students in test and examinations. On the contrary, the ability of students to obtain good grade demands an availability of school resources, adequate student's study habits, adequate teacher's characteristics and qualifications, adequate package of parent's income and good school environment (Orodho, 2008). Supporting this fact, Adeyemi (2011), stated that a major setback in effective implementation of secondary school curriculum is the problem of inadequate/unavailability of school resources. However, several research studies have shown that relationship exist between adequate school resources, parents income, study habit, teachers qualifications and students academic performance. (Mortimore, 2012). Adeyemi stated further that without adequate study habits and teachers qualification, the school curriculum will not be effectively implemented in Nigeria, and youths would lack the ability to carry out some meaningful work due to lack of acquisition of basic skills, thus, performed poorly in their internal and external examinations. There is need for a regular and timely evaluation of student's academic performance. Evaluation is the process of delineating, obtaining, and providing useful information for judging decision alternatives (Amesi, Akpomi & Okwuanaso, 2014). Evaluation is the process of making value judgment about the worth of a thing. It is defined as a systematic process of data collection for making a valid decision about an individual, programme, materials or method (Ugodulunwa, 2014). These definitions imply that evaluation is the appraisal of the worth or value of anything or action and the making of appropriate decisions on the basis of such appraisal. Therefore, evaluation is expected to lead to increased self-awareness and inspire boarding and non-boarding students to inculcate a positive study habit to enhance their academic performance.

Statement of the Problem

There is considerable concern by parents, teachers and the general society that the objectives of secondary school education in Rivers State are not being satisfactorily achieved. This has been largely attributed to the poor academic performance of secondary school students over the years in the internal and external examination (Barasi, 2014). Kurmar (2015) claimed that boarding and non-boarding secondary schools are faced with the problem of infrastructural facilities as such, adequate knowledge, skills, attitude and competencies needed to perform effectively in the internal and external examination (G.C.E. & S.S.C.E) may not have been acquired. Under these circumstances, it would appear that secondary schools may not be meeting the needs, aspirations and expectations of the society as if there are physical barriers impossible to cross. Yet, the expectation is that secondary schools should provide students with adequate knowledge, skills and competencies needed to perform excellently in their internal and external G.C.E. and



S.S.C.E. examinations. A gap in knowledge is created in which this study needs to fill empirically.

Purpose of the Study

The main purpose of the study was to investigate the influence of deficit in infrastructural facilities on student's academic performance in boarding and non-boarding secondary schools in Rivers State. Specifically, the study sought to:

1. Determine the extent to which poor state of infrastructural facilities affect students' academic performance in boarding and non-boarding secondary schools in Rivers State.

Research Question

The following research question guided the study

1. To what extent does poor state of infrastructural facilities affect student's academic performance in Boarding and Non-Boarding Secondary Schools in Rivers State?

Hypothesis

The study was guided by the null hypothesis formulated and tested at 0.05 level of significance

1. There is no significant relationship between poor state of infrastructural facilities and student academic performance in boarding and non-boarding secondary schools in Rivers State.

Method

This study employed the correlational design. The population for this study consist of 922 respondents (that is, 245 principals, 245 vice principals and 432 teachers of boarding and non-boarding secondary schools in Rivers State). The sample size used in this study comprised of 277 respondents (that is, 26 principals, 34 vice principals, 217 boarding and non-boarding secondary school teachers). The sample size is a representation of 30% of the target population. A self-structured research instruments was used to collect data for this study. It is titled: infrastructure and student academic performance inventory (I.S.AP.I.). The instrument is compose of six (6) items used in generating data on the extent to which poor infrastructural facilities influence students academic performance in boarding and non-boarding secondary schools. The research instrument was designed on a 4 point likert rating scale of Very High Extent (VHE-4point), High Extent (HE-3point), Low Extent (LE-2points) and Very Low Extent (VLE-1point). The data generated were analyzed with the use of mean and standard deviation scores to answer the research question, while Pearson's product moment correlation (r) was employed to test the null hypothesis at 0.05 alpha level.



Results

Research Question 1

To what extent does poor state of infrastructural facilities affect student's academic performance in Boarding and Non-Boarding Secondary Schools in Rivers State?

Table 1: Mean and Standard Deviation Computations of the Effect of Infrastructural Facilities on Students Academic Performance in Boarding and Non-Boarding Secondary Schools.

(N=277)

Variable	Total Response	Mean Score	Std Dev. Score	Remarks
Infrastructural facilities	614.99	2.22	0.21	Inadequate
Student Academic Performance	1033.21	3.73	0.34	Effective

Table 1 showed the calculated mean and standard deviation scores from the boarding and non-boarding secondary schools principals, vice principals and teachers regarding the extent to which infrastructural facilities affects student academic performance in Rivers State. In the table, the calculated scores about the influence of infrastructure are 2.22 and 0.21 respectively. Since the calculated mean score is smaller than the average point of 2.5, it means that the extent to which infrastructure affects student academic performance is inadequate. The table further indicates that the calculated mean and standard deviation scores about student's academic performance in boarding and non-boarding secondary schools are 3.73 and 0.34 respectively. Since the calculated mean score is less than the average point of 2.5, it shows that students' academic performance in boarding and non-boarding secondary schools is effective. Consequently, the researchers therefore concludes that inadequate infrastructural facilities affects student academic performance in boarding and non-boarding secondary schools in Rivers State.

Hypothesis 1

There is no significant relationship between poor state of infrastructural facilities and student academic performance in boarding and non-boarding secondary schools in Rivers State

Table 2: Calculated (r) between Infrastructural Facilities and Student Academic Performance in Boarding and Non-Boarding Secondary Schools.

Variables	Mean	Std Dev.	$\sum xy$	r-cal	r-crit
Infrastructural facilities	2.22	0.21			
Student Academic Performance	3.73	0.34	2118.77	0.1994	± 0.1946

N= 277

df = 275

p>0.05

not significance



The means and standard deviation of boarding and non-boarding secondary school principals, vice principal and teachers regarding the extent to which infrastructural facilities can influence student academic performance in Rivers State are presented in Table 2. With $N=277$, $df=275$ and $P=0.05$, the calculated (r) between the influence of infrastructural facilities and student academic performance in boarding and non-boarding secondary schools was 0.1994 and the critical value of r was ± 0.1946 . That being so, the calculated r was statistically significant at $\alpha < 0.05$ level of significance since it is greater than the given critical value of r . The hypothesis (H_{01}) is thus rejected and the conclusion was that there was significant relationship between infrastructural facilities and student academic performance in boarding and non-boarding secondary schools. This implies that significant relationship existed between infrastructural facilities and student academic performance in boarding and non-boarding secondary schools in Rivers State.

Discussion

The study discovered that the extent to which infrastructural facilities affect student academic performance in boarding and non-boarding secondary schools was inadequate. It was also discovered that there was significant relationship between infrastructural facilities and student academic performance in boarding and non-boarding secondary schools in Rivers state. The results of this study support the finding of Carl (2008), Yadar (2007) and Orodh (2008).

Conclusion

The researchers therefore noted that poor/inadequate infrastructure affect student's effective academic performance in the internal and external examinations in boarding and non-boarding secondary schools in Rivers State. It is also the conclusion of this study that significant relationship existed between infrastructural facilities and student academic performance in boarding and non-boarding secondary schools in Rivers State.

Recommendations

Based on the findings of this study, the following recommendations

1. Government at all levels should support boarding and non-boarding secondary schools by providing modern, relevant and adequate teaching and learning facilities.
2. Government should provide adequate funding to enhance the smooth and effective running secondary school education.
3. Teachers at the secondary school levels should adopt a more practical skill approach as well as learner centered method for instructional delivery.

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