

A Comparative Study of Facilities and Students Performances in Biology in Urban and Rural Schools: A Case Study of Adavi Local Government Area of Kogi State.

Ovansa Jimoh Umar
Biology Department,
Federal College of Education, Okene
Ovansa2014@gmail.com

Abstract

This study compared facilities and students performance in biology in urban and rural schools in adavi local government of kogi state. Correlational and ex-post facto research design were used in the study. The population of the study consisted of all biology teachers in the public schools used in this study and their principal. Questionnaires were used to collect information on availability of biology teaching resources and students' academic performance in biology for the period of 2011 to 2015. The data collected were analyzed using t-statistic. The outcome of the study indicated that most rural schools lack adequate facilities for teaching and learning of biology and there by brings about disparity in the academic performance of students in West African Examination Council. The following suggestions were made amongst others: Government should ensure equal distribution of biology teaching resources to urban and rural schools, social amenities should be provided to rural areas and parent teacher association should compliment government effort in the provision of biology teaching resources.

Introduction

In the Nigeria educational policy, one of the paramount goals is to provide equal educational opportunity for all citizenry. However, in practice, this is rarely accomplished because of inequality in supply of facilities to schools and differences in quality and quantity of education given to students by their teachers. Even when the equal opportunity is given, they rarely result in equal academic achievement which leads to the belief that it is impossible to ensure both equality and quality education in real situation. In Nigeria, there is a common believe that the standard of education is falling and the education provided in rural area is very poor when compared to the quality of education received in urban area due to the environment in the rural area that is not conducive for learning. Our rural areas are laden with poverty, inadequate water supply, poor electricity supply and poor learning environment. It is known that most schools in the rural areas are poorly staffed; it was also asserted by solarin (2001) "that most schools in the rural areas feather their nest including under-privileged schools in the rural areas with no teachers". These factors have direct influence on the teaching and learning of biology. The better performances of urban students when compared to rural students could be as a result of better quality of education given to urban schools and availability of infrastructural facilities like mass media and electronic media. Olanipekun and Okunrotifa (2008) also noted that apart from the inadequate academic background of the students and limited resource for teaching, the quality of teaching offered in rural schools is also a major concern due to lack of practical approach in the teaching of biology. In rural schools it is observed that talk-chalk method is majorly used in the teaching of biology. Generally, students' performances in public examination such as West

African Examination Council (WAEC) and National Examination Council (NECO) are a matter of great concern not only to the learners but also to teachers and parents. There is a common observation that the standard of student performance in these Examinations is falling particularly with schools in rural area. Nevertheless, it is disheartening to note that students in rural and urban environments are not performing at the same rate. Abdulkadir (1998) observed that the pre-tertiary educational system which form the root and stem in our educational tree is in disarray and this is largely responsible for the downward trend in the educational standard which is dwindling on daily basis. The high percentage of failure is disturbing but the question is which zone is more affected. According to Elizabeth (2004) “the location that has the most favorable impact on students’ performance is the urban area”. This summarize the view held by people that rural area is seen as disadvantage centre of academic pursuit which can be attributed to the deficiencies found in rural area like inadequacies of vital resources and materials. However, this pose danger to the future of education in Nigeria, because it is just impossible for everybody to send their children to schools in urban centers, apart from the fact that socio-economic status of parent is not the same. However, some held the view that rural schools should perform better academically as expressed by Isaac (1999) that students from rural area still abide by the normal norms and culture of the society which make them free from the tendencies to commit crime unlike urban students that are fond of drug abuse, drinking of alcohol, involvement in social activities/media etc. that are capable of distracting their attentions from academic works.

Statement of the problem

It has been observed that educational achievements of students varied according to location visa vis; urban and rural environment where student lives and quality and quantity of facilities present in their schools. Therefore it becomes imperative to compare the availability of resources in rural and urban schools which can affect the differences in the academic performance of biology students in there external examination i.e. West African Senior School Certificate examination in Adavi Local Government Area of Kogi State and to proffer possible solution.

Purposes of the study

The purpose of this study is to determine the differences in the;

- i. Availability of biology facilities between urban and rural schools.
- ii Students’ academic performances in WAEC biology examination in urban and rural schools.

Research Hypothesis

The following null hypotheses were generated for the study:

- i. There is no significant difference in the availability of facilities between urban and rural school for the teaching and learning of biology.
- ii. **There is no significant difference in the performance of students in West African Examination Council biology examination in urban and rural schools.**

Significance of the study

This study is of great importance to all stakeholders’ in education and government. Stakeholders in education would know if differences in the availability of biology teaching resources in urban and rural schools could cause disparity in their academic performances in

biology so that effort could be geared toward acquiring facilities by the communities and non-governmental association to argument what government can provide to schools in such environment. While, government would know the need to provide biology teaching resources to various schools and which of these areas that needs urgent attention in the provision of biology teaching resources.

Delimitation and Scope of the Study

This study is delimited to investigation of facilities and students performances in West African Examination Council (WAEC) biology examination in Adavi Local Government Area of Kogi State as a case study. In the process of this research study forty secondary schools were selected out of which twenty were urban schools and twenty were rural schools.

The result of biology West African Examination Council collected for the purpose of this study was collected from the last five years, 2011-2015, so as to arrive at a valid conclusion in respect to students' performances in this area of study.

Methodology

Information and research design, population of the study, sample and sampling technique, instrument used in the collection of data validation of research instrument, procedure for data collection and procedure for data analyses were provided below.

Research design

Correlation research design was used in this study to compare the academic performances of students and availability of facilities in urban and rural schools. Ex-post-facto research design was also used to collect data on student academic performances and biology facilities.

Population of the study

The population of this study comprises of all biology teachers in public secondary schools in Adavi Local Government Area of Kogi State that were used for this study.

Sample and Sampling Technique

The selections of schools were done by using random sampling techniques. Forty schools were selected altogether; twenty schools out of thirty public schools in urban area and twenty schools out of the twenty five public schools in rural areas. Forty principals and biology teachers of the selected schools served as respondents of the study.

Research Instrument

The researcher made use of questionnaires carefully designed to collect data from the biology teachers on the availabilities of facilities while questionnaires for the principals were meant to collect the result of their students in their external examination from 2011 to 2015.

Validation of Research Instrument

The research instrument were drafted by the researcher and later submitted to a senior colleague in biology department for necessary correction and face validity before the administration.

Procedure for Data Collection

The researcher administered the questionnaires to the biology teachers himself and the entire questionnaires administered were returned. The principal also helped in making the record of student results available for the periods under study for collection.

Procedure for Data Analyses

T-test statistics was used to analyzed the data to answer the two hypothesis raised in this study.

Result and Discussion

Hypothesis One: there is no significance difference in the availability of facilities between urban schools and rural schools for teaching and learning biology.

Table1. The t-test analyses for differences in available of facilities in urban and rural schools

| S/N | Variables | N | Mean | S.D | Df | t-cal | t-tab | Decision |
|-----|-----------|----|------|-------|----|-------|-------|----------|
| 1. | Urban | 16 | 17.5 | 4.136 | 30 | 4.261 | 2.042 | Rejected |
| 2. | Rural | 16 | 11.7 | 3.349 | | | | |

From table1 above the mean score and standard deviation of facilities available for teaching and learning biology in urban school was 17.5 and 4.136 respectively while mean score and standard deviation of facilities available for teaching and learning biology in rural school were 11.7 and 3.349 respectively. The t-calculation valid is 4.361 while the t-table valid is 2.042 at 0.05 level of significant with degree of freedom 30.

Since the t-calculated value is greater than the t-value, the null hypothesis which states that there is no significant difference in availability of facilities for teaching and learning biology in urban and rural schools is rejected. This shows that there is significant difference in the facilities available for teaching and learning biology in urban and rural schools.

Hypothesis two: there is no significant difference in the performance of students in West African Examination Council biology examination in urban and rural schools.

Table2: the t-test analysis of differences in performances of students in West African Examination Council biology examination for urban and rural schools between 2011 and 2015.

| S/N | Variables | N | Mean | S.D | Df | t-cal | t-tab | Decision |
|-----|-----------|-----|------|------|-----|--------|-------|----------|
| 1. | Urban | 486 | 1.8 | 0.38 | 847 | 16.667 | 1.960 | Rejected |
| 2. | Rural | 368 | 1.3 | 0.45 | | | | |

From table2 above, it shows that the mean score and standard deviation of urban is 1.8 and 0.38 respectively while the mean score and standard deviation of rural schools is 1.3 and 0.45 respectively. The t-calculated value is 16.667 while the t-table is 1.960 at 0.05 level of significant with degree of freedom 847.

Since the t-calculated value is greater than the t-table, the null hypothesis which states that there is no significant difference in the performance of students in West African Examination Council biology examination in urban and rural schools was rejected. This shows

that there is a significant difference in the performance of students in West African Examination Council biology examination in urban and rural schools.

Discussion of Results

In this research it was found that schools in urban areas had more facilities for teaching and learning of biology, also there was greater concentration of human resources in urban areas than those schools in rural areas. These show that schools in urban areas enjoyed adequate supply of both material and human resources at the detriments of schools in the rural areas. Odebiyi (2001) agreed that the performance of students of any schools is largely the reflection of numbers and qualities of teaching staffs of that school. Since urban schools were better staffed than the rural schools, there is tendency that the curriculum will be better implemented in urban schools than the rural schools. According to Olanipekun and Okunnotifa (2008) “Apart from the inadequacy academic background of the students , the limited resources for teaching and the quality of teaching offered in our schools is also a major problem affecting our students performances.”

From this study, it showed that urban schools perform better than rural schools. Elizabeth (2004) agreed that the location that has the most favorable impact on the students’ performance is urban area. The availability of material and resources in the school is as important as the presence of qualified personnel and when there is no qualified personnel and required material resources, there will be no effective teaching and learning and hence it would affect student’s performances. Olanipekun (2004) upholds the view that “the quality of education that our student received bears direct relevance to the overall atmosphere in which they take place. ”However, Ogbonna (1995) disagreed with the point that either location or available resources determines better performances of students, when he noted that the strongest factors affecting students performances in any subject seems to be their interest and attitude to their subjects. Ukaome (1996) observed that the family is also major factor that influence students’ performances, he observed that “socialization experiences and family motivation contributes to the child’s academic success in school, stressing that the parents’ occupation, social status and life style determines the child success and responses to education. Similarly, Ukanu (1999) noted that to large extent, parents’ beliefs, their philosophies of life, social class and political power and prestige all act as sociological factors that always influence students’ academic achievement.

Conclusion and Recommendation

Conclusion

Having investigated the facilities and performances and students in biology using WAEC result between 2011 and 2015, it was discovered that in urban schools performs better than rural schools. Also, location of schools and availability of facilities both human and material resources affect the academic performance of students. Schools that are well equipped with adequate teaching facilities in urban area perform better than rural schools that are lacking in some resources. Teachers preferred to stay in urban area to enjoy social amenities available than staying in rural areas that lack social amenities. Most teachers that are transferred to rural area, work their transfer back to urban area and thereby leading to shortage of teachers in rural schools.

Recommendation

Having identified that there were differences in the facilities and performances of students in urban and rural schools, the following recommendation were made to reduce the imbalance in the students' performances and facilities in urban and rural schools.

- Government should ensure equal distribution of facilities for schools in rural and urban areas.
- Government should provide Social amenities in rural areas so that it can attract teachers posted to their schools.
- Parent teachers association should compliment government effort in providing facilities to rural schools.
- Special incentives can be given to teachers in rural schools by the government.

References

- Abdulkadir H.D (1998): Downward trends in the educational standard in Nigeria. Sunday Vanguard of September 4, page 5.
- Elizabeth N.O (2004): location and students performance. The significance of location on educators and learners. *Journal of school and society 3 (ii) 11-20.*
- Isaac A.K (1999): falling standard of education and curriculum. *Journal of education. 2(i) p 3-11.*
- Odebiyi S.O (2001): management of school human resources. Ado Ekiti, Yemi prints and publishing services .
- Ogbona K.I (1995): obstacle of effective secondary education performance. The challenge of biology educators. *Journal of research development NARD 1 (i) 66-71.*
- Olanipekun A.A (2004): school resources and achievement. A seminar paper presented to principals of schools in Akure Local Government September 12.
- Olanipekun I. O. and Okunrotifa M. I. (2008): the quality of teaching on educational performance. A seminar paper presented at the 5th National Conference on Examination, Imo state
- Ukanu M. A. (1999): influence of social and economic disadvantage in the academic Performance of school students. *Journal of sociology 38. 129-148*