School Location as Correlate of Students’ Achievement in Basic Science

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ABSTRACT
The study investigated school location as correlate of students’ achievement in Basic Science. The study adopted a descriptive survey research design. One research hypothesis was formulated and tested at alpha=0.05. Two hundred and thirty-six (236) Junior Secondary School (JSS III) students formed the sample size. The researchers designed an instrument titled, “Students' Location questionnaire” (SLQ) for this study. The result showed significant difference in Basic Science achievements between urban and rural students. Students in urban schools had better achievement than those at rural settings. It is recommended that educators should fill the urban/rural dichotomy in students’ achievement in Basic Science and parents in rural areas should help their children to maintain interest in Basic Science.

Keyword: Achievement, School location, Basic Science

INTRODUCTION
The importance of school as a citadel of learning in social environment is not an over statement (Denga, 2017). The extent to which school location determines students’ achievement lies with the particular type of school, its size and whether it is near or far away from another school. School location refers to a school’s site, type of buildings, usage, capacity, teachers, students, environment and other parameters for rationalization of both rural and urban school map (World Bank Guidelines, 2014). The location of secondary schools in Nigeria is done haphazardly, without recourse to laid down statutes. The unplanned location of secondary schools has therefore, limited their spatial distribution resulting in their concentration to a few locations (Wong, Shi, Gao, Zheteyeva, Lane, 2014). The implication is that while some students spend little time to reach their schools from their homes, others have to travel long distances (Owoeye and Yara, 2010).

Another impact of rural and urban schools’ location is the preference teachers have for urban schools where social amenities avail, to the detriment of rural schools where population is low and only subsistence livelihood prevails (Ronfield, Kwol and Reinin, 2016).

The resultant effect of these factors on secondary schools is that qualified teachers refuse posting to rural locations, rural dwellers refuse sending their children to schools because they rely on them for subsistence living and help, where parents hesitate to entrust their daughters to male teachers, fearing promiscuity (Mhiliwa, 2015; Tumwebaze, 2016).

Researchers (Graham and Lauren 2013; Ayula, 2017; Alokan, 2013) have shown significant difference in achievements between rural and urban located schools. Such achievements in favour of urban schools, for
instance, must have been borne out of many facilities they were used to which were not available in the rural schools. Ronfeldt, Kwok, and Reininger, (2016) observed a significant positive relationship between size and location of schools and achievement, where large schools in urban locations performed better than small schools in rural locations.

Other researchers (Tayyaba, 2012; Alokan, 2013; Leikvold, 2016) have found contrary results from the ones elaborated above. For instance, Alokn (2013) found students from rural locations performed better than their counterparts in verbal aptitude and English language, while Genshenson and Laugbein, (2015) found that school size could not exert direct effect on achievement towards science between students in urban and rural locations.

From the various opposing reviews, it is necessary to extend further research to confirm or reject the effects of interaction of location on students’ achievement in Basic Science.

In this globalization era, Basic Science is used as a necessity for Science and Technological development. in Nigeria, Basic Science as a subject, is offered by students at the Junior Secondary School level, which consists of subjects from the core sciences of Physics, Chemistry, Biology and Agricultural Science (UNESCO, 2007). It used to be named integrated science. The developed nations have reached their current feat because they have developed their science education and utilized it to achieve their growth sprouts (Gonzale, Brambila, Gonzalez and Perez-Angon, 2016). The teaching and learning of Basic Science therefore, requires expanding its activities outside the classroom and geared towards using the acquired knowledge for creating wealth (Igbohwe, 2015). Basic Science has to play a leading role in transforming the present Nigeria society into an emerging knowledge society which implies the need to build learning communities all over the country and in particular among the younger generation in their Junior Secondary School levels (Igbohwe, 2015). Improving the teaching of Basic Science therefore, stands as a main tool in promoting quality human resources that would rejuvenate the educational and national goals of the nation (UNESCO, 2007).

Every year, primary schools produce graduates who cannot meet up with current Basic Science trends in Junior Secondary Schools classroom, especially in the rural setting. This has serious social repercussion which need to be identified so that solutions could be sought (Nwafor, 2015).

Research Hypothesis

HO: There is no significant difference in the achievement of students in rural and urban Junior Secondary Schools in Basic Science.

METHODOLOGY

The research design for the study was descriptive survey of the ex-post facto type. The design is relevant because the respondents’ responses will not be manipulated by the researchers.

The population of this study comprised all Junior Secondary School (JSS III) students in the F.C.T, Abuja. The sample size was made up of 236 JSSIII students. School Location Questionnaire (SLQ) was used as instrument for data collection. SLQ contained two sections: Section A dealt with background of the respondents, while Section B elicited data on number of students in class in rural and urban schools and number of periods taught by teachers.

RESULTS

Table 1. Comparison of Achievement in Basic Science in Urban and Rural Schools

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Sigt</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>118</td>
<td>1.247</td>
<td>0.196</td>
<td></td>
<td>234</td>
<td>2.1</td>
<td>1.98</td>
<td>0.009</td>
</tr>
<tr>
<td>Rural</td>
<td>118</td>
<td>1.767</td>
<td>0.374</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 showed the measure of t-test to determine the significance or otherwise of the difference between the means of students’ achievement or urban and rural schools in Basic Science at alpha=0.05. The results
indicated a mean of 1.247 and standard deviation (SD) of 0.196 from urban schools while the result for rural schools showed a mean of 1.767 and SD of 0.374. With these results, the location in which the schools are (urban or rural) has affected the students’ achievement in Basic Science with \(t_{\text{cal}} = 2.11\) and \(t_{\text{crit}} = 1.98\) at alpha=0.05, thus rejecting the hypothesis and accepting the alternative hypothesis.

**DISCUSSION**

Table 1 showed that there is significant different between students’ achievement in urban and rural locations in Basic Science. The uneven distribution of resources such as teachers refusing to be posted to rural schools, lack of good roads in the rural areas and lukewarm attitude of rural dwellers to western education are predictors of poor achievement in the rural locations. This finding is in consonance with (Sulieman, Hussain, Khan & Nisa, 2012) who opined that socioeconomic status has strong relationship with students’ achievement in Basic Science. The finding also consolidated the findings of Kapinga (2014); Ogunshola and Adewale (2012) that a lot of coaching of urban students is done to prepare them for examinations, which may be lacking in the rural students due to lack of exposure and experience.

**CONCLUSION**

From available data in this study, it has been proven that there is significant difference in Basic Science achievement between students in urban and rural junior secondary schools in F.C.T, Abuja.

**RECOMMENDATIONS**

From the findings in this study, the following recommendations are drawn:

i. Since school location has significant influence on students’ achievement in Basic Science, school administrators and teachers should pay attention on matters that help rural students to measure up to their urban counterparts through provision of adequate school facilities that would attract teachers;

ii. Students should be encouraged by parents to study Basic Science irrespective of their school location;

iii. Parents in rural locations should pay particular attention to their children and help them maintain interest in the study of Basic Science.

**REFERENCES**


