INFLUENCE OF STUDENTS' POPULATION PRESSURE AND CLASS SIZE ON THE ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN CROSS RIVER STATE

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Abstract

The study investigated the influence of students' population pressure and class size on the academic performance of public secondary school students in Cross River State. The expopfacta research design was adopted for the study. A sample of 150 teachers and 450 students was selected through a stratified random sampling technique. A 16-item questionnaire was used as an instrument for data collection. Also raw scores of JSS3 students for English Studies, Business Studies and Mathematics were used. Two research questions and one hypothesis were formulated to guide the study. Data obtained were analyzed using mean rating and standard deviation scores to answer the research questions and t-test statistics to test the hypothesis at .05 level of significance. Findings of the study revealed among others that students' population pressure and large class size negatively affect teaching/learning and make it difficult for teachers to administer and mark test/assignment. The result of the hypothesis showed that there is a significant difference between the academic performance of students in largely populated schools and students in thinly populated schools. On the basis of these findings it was recommended among others that government at all levels, education stakeholders, etc should provide school facilities in proportion to exiting students' population. More so, there is need to adhere strictly to the teacher-students ratio of 1:40 as recommended by National Policy on Education for effective pedagogical delivery and learning in schools.

The dwindling achievement of students in their academic performance has often been attributed to the ineffectiveness of the teachers, not minding other factors that could affect the overall performance of students. Education which is the most potent tool for economic, social, technological and political development in any given nation of the world evolves through teaching and learning. Simultaneously, teaching and learning process can only be effective and efficient in a conducive environment. The students' population pressure and large class size are teething problems that need to be taken into cognizance in any educational discourse to ensure effectiveness of teaching and learning process. The academic performance of students which is an outcome of the teaching and learning effectiveness largely depend on the classroom population. Students' academic performance also depends on the effectiveness of instruction given by teachers. It becomes obvious that effective teaching which leads to the attainment of goals can only be achievable in a conducive classroom with manageable size. Agba (2010) reported that the ability of the teacher to recognize the students and accord individual assistance to them depends on population or class size. The condition (conducive or unconducive) of the classroom will affect the teacher's pedagogical delivery and the learner's reasoning or interest in the teaching and learning process. This shows that an over-crowded classroom adversely affects the morale of teachers and students. This is why Ogbanna in Agba (2010) maintained that a poorly organized school cannot be compared with a school that enjoys a congenial academic climate,
good and adequate infrastructure, with qualified staff. He further observed that, as over-population affects the nation's economy, so it affects the academic standard of students.

The increasing rate of students in enrolment and the declining rate of the academic performance of students in public secondary schools (due to Universal Basic Education Programme) has for a long time been an issue of concern to government, parents and the general public. Asiyai (2004) and Agba (2010) identified crowded examination halls, large class size, inadequate furniture and textual materials as impediments to students' achievement or success. This is a clear indication that school population and class size are also determinants of the academic achievement of students in any given school. Academic performance is one of the fundamental aims of a school, and this goal cannot be achieved successfully in the absence of good/conducive classroom environment. When a classroom becomes over-crowded with students with inadequate furniture to accommodate them, teachers may spend much time telling stories not related to the teaching and learning objectives, and controlling students who are misbehaving therein. Many public secondary schools in Cross River State especially those sited in the urban areas are grossly large in size without commensurate adequate infrastructural facilities.

Researches have shown that there is a correlation between school overpopulation, large class size and academic performance of pupils- Asiyat (2004) and Nyiam (2012) reported that over-populated classrooms lead to over stretching of available school facilities and overcrowded examination halls pave way for students to indulge in examination malpractice. Agba (2010) asserted that students' overpopulation have negative effect on the tone of the school which in turn dampens the morale of both teachers and students. On the contrary, researchers have noted that effective teaching and high academic performance can only be achieved when supported by adequate infrastructural facilities and manageable class size.

It is against this background that the researchers decided to investigate the influence of students' population pressure and class size on the academic performance of students in public secondary schools in Cross River State.

Statement of the Problem

The increasing rate of the poor quality of product of public secondary schools and the inability of many students to pass certificate examination in Cross River State is a critical issue to be considered in any discourse. This perhaps, is attributed to some factors that could be internally or externally controlled in the student. Deng (1991) opined that the bulging enrolment figures in most cases outstrip the existing learning space in today's classrooms. The size of the class has become increasingly unmanageable. He further reported that, with the teacher-students ratio of about 1:65, it becomes almost impossible for the teacher to give individual attention to the learners needing it. Continuous assessment stands dreaded by teachers when they consider the staggering number of scripts they will mark and record. The teachers' eye contact with the learner in class becomes so dissipated that a number of poorly motivated learners can form small committees at the back of the class to engage in non-school discussion, while the teacher is busy teaching. This situation is mostly in largely populated schools in both urban and rural areas in the state where principals of such schools now consider the school as business centres for the maximization of
impress at the detriment of qualitative education. The issue of overcrowding in classrooms resulting from the upsurge in student population and the failure of government/parents to provide more facilities and/renovate existing ones accords much concern as to want to ascertain its influence on the academic performance of students in these learning environments.

**Purpose of the Study**
This study focused on the influence of students' population pressure and class size on the academic performance of public secondary school students in Cross River State. In specific terms, the study seeks to:

1. Find out if there is any significant difference between the academic performance of students from largely populated schools and those from thinly populated schools.
2. Ascertain the influence of class size on teaching and learning activities in Cross River State public secondary schools.
3. Determine if class size has any influence on classroom management and control of secondary school students in Cross River State.

**Research Questions**
To guide the study, the following research questions were formulated;
1. How does class size influence the teaching and learning activities in Cross River State?
2. How does class size influence classroom management and control of secondary school students in Cross River State?

**Hypothesis I**
To further guide the study, the researchers postulated one null hypothesis which was tested at .05 level of significance, as shown below:

\[ H_0: \text{There is no significant difference between the academic performance of students in largely populated schools and thinly populated schools.} \]

**Research Design**
The study adopted an Expo-facto research design. It is a research in which the independent variables have already occurred and in which the researchers begin with the observation on a dependent variable, followed by a retrospective study of possible relationship and effects (Emaikwu, 2007). It was chosen because the researchers have no control over the variables of interest and therefore cannot manipulate them.

**Area of the Study**
The area where the study was carried out is Cross River State of Nigeria. It has three educational zones sited in Calabar, Ikom and Ogoja as headquarters of each Senatorial District in Cross River State. It is a tourist destination. It is predominantly dominated by civil/public servants and farmers as well as petty traders.

**Population for the Study**
The population consisted of all the 5,564 teachers and 46,128 students in the 263 public secondary schools in Cross River State (State Ministry of Education, 2013).
Sample and Sampling Techniques

The sample size for the study consists of 600 respondents made up of 150 teachers and 450 students randomly selected from the public secondary schools in the three education zones of the state. Thirty public secondary schools were sampled out of the 263 existing schools in the state. Ten schools were selected from each education zone and 5 teachers and 15 students were selected through stratified random sampling technique from each sampled school for the study.

Instrument for Data Collection

A closed structured questionnaire of four point rating scale and 16 items was used as main instrument for data collection. To provide basis for comparison between class size and student performance, the scores of all the JSS 3 (Basic Education) Examination in English Studies, Business Studies and Mathematics for two academic sessions 2010/2011 and 2011/2012 were also obtained from the sampled schools to assess the performance of students.

Validation and Reliability of Instrument

Two experts from Educational Foundations and one from Measurement and Evaluation in the Faculty of Education, Cross River State University of Technology, Calabar, validated the instrument. They offered relevant suggestions after scrutinizing the instrument. The instrument was pilot tested in ten secondary schools in Vandekya L.G.A of Benue State with a random sample of 30 teachers to ensure its reliability. The data gathered were analyzed using the Cronbach Alpha Coefficient. A coefficient value of .78 was realized and the result was considered reliable enough to measure what it was purported to measure.

Method of Data Collection and Analysis

A total of 600 copies of questionnaires were administered by the researchers with the aid of three research assistants from the three zonal offices of the State Ministry of Education. All the copies were completed by the respondents and retrieved immediately. The data collected were analyzed using mean rating and standard deviation scores, as well as independent t-test statistics to test the hypothesis at .05 level of confidence.

Presentation of Data Analysis and Interpretation of Results

Research Question 1

How does class size influence the teaching and learning activities in public secondary schools in Cross River State?
Table 1: Mean Rating and Standard Deviation Scores on Influences of Class Size on Teaching and Learning

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Large class site make? teachers to adopt passive instructional strategies</td>
<td>2.55</td>
<td>.83</td>
<td>Agreed</td>
</tr>
<tr>
<td>2</td>
<td>Large class size encourages students to make chorus responses during instruction</td>
<td>2.51</td>
<td>.82</td>
<td>Agreed</td>
</tr>
<tr>
<td>3</td>
<td>Large class size makes it difficult for teachers to accord tests/assignments to learners</td>
<td>3.2?</td>
<td>.93</td>
<td>Agreed</td>
</tr>
<tr>
<td>4</td>
<td>Teachers and students are always uncomfortable in large class size</td>
<td>3.48</td>
<td>.95</td>
<td>Agreed</td>
</tr>
<tr>
<td>5</td>
<td>Teachers and students are not motivated in large class size during instruction</td>
<td>3.33</td>
<td>.73</td>
<td>Agreed</td>
</tr>
<tr>
<td>6</td>
<td>Small class size facilitates detail coverage of the scheme of work in a term</td>
<td>3.35</td>
<td>.72</td>
<td>Agreed</td>
</tr>
<tr>
<td>7</td>
<td>Small class size spurs teachers and students to adopt active teaching and learning strategies</td>
<td>3.48</td>
<td>.95</td>
<td>Agreed</td>
</tr>
<tr>
<td>8</td>
<td>Small class size encourages teachers to organize political exercises for learners</td>
<td>3.22</td>
<td>.83</td>
<td>Agreed</td>
</tr>
<tr>
<td>9</td>
<td>The use at individualized instruction is very feasible in a smart class size.</td>
<td>1.40</td>
<td>.70</td>
<td>Agreed</td>
</tr>
<tr>
<td>10</td>
<td>Tests/assignments are given regularly in small class size</td>
<td>3.47</td>
<td>.66</td>
<td>Agreed</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2013

Data in table 1, revealed that the mean value of each of the item is above the cut-off point mean value of 2.5. This implies that each of the items portrays the influence of class size on teaching and learning. It is obvious that among others, large class size makes teachers to use passive teaching methods during instructions, encourages chorus responses from students and makes it difficult for teachers to accord test/assignment to learners. While small size class facilitates detail coverage of the scheme of work, spurs teachers and learners to adopt active teaching/learning strategies, and encourage regular practical exercises as well as giving/marking tests/assignments regularly.

Research Question 2
How does class size influence classroom management and control of secondary school students in Cross River State of Nigeria?
Table 2: Mean Rating and Standard Deviation Scores on Influence of Class Size on the Management and Control of Secondary School Students

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>X</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Large class size is an impediment to effective classroom management and control</td>
<td>3.22</td>
<td>.83</td>
<td>Agreed</td>
</tr>
<tr>
<td>2</td>
<td>Large class size causes many students misbehave during lessons</td>
<td>3.48</td>
<td>.65</td>
<td>Agreed</td>
</tr>
<tr>
<td>3</td>
<td>Large class size mates teachers to spend much time in handling disciplinary matters during instruction</td>
<td>3.47</td>
<td>.66</td>
<td>Agreed</td>
</tr>
<tr>
<td>4</td>
<td>Small class size eases the span of control</td>
<td>3.48</td>
<td>.65</td>
<td>Agreed</td>
</tr>
<tr>
<td>5</td>
<td>Monitoring and supervision of classroom activities is more effective in small class size</td>
<td>3.35</td>
<td>.74</td>
<td>Agreed</td>
</tr>
<tr>
<td>6</td>
<td>Small class size encourages individualized attention during instruction</td>
<td>3.30</td>
<td>.83</td>
<td>Agreed</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2013

Data in table 2 revealed that when the mean rating scores of the items therein were closely examined against the cut-off point of 2.50 for decision rule, it was observed that all items had above 2.50, hence they were all accepted. It showed that large class size impedes effective classroom management and control during instruction, causes many students to misbehave during lessons and makes teachers spend much time in handling disciplinary cases at the neglect of academic activities. Whereas small class size eases the span of control, enhances effective monitoring/supervision of classroom activities and encourages individualized attention during instruction.

Hypothesis 1: There is no significant difference between the academic performance of students in largely populated schools and thinly populated schools.

Table 3: t-test Analysis of Students from Largely Populated Schools And Thinly Populated Schools

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>X</th>
<th>SO</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Largely populated schools</td>
<td>260</td>
<td>3.09</td>
<td>.70</td>
<td>448</td>
<td>2.84</td>
<td>1.96</td>
<td>Rejected</td>
</tr>
<tr>
<td>Thinly populated schools</td>
<td>190</td>
<td>3.61</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data in table 3 showed that the mean performance of students’ from largely populated schools is lesser than those of students from thinly populated schools. The result in the table revealed that the t-
calculated value of 2.84 is greater than the critical value of 1.96 at .05 level of significance. Hence the null hypothesis above is rejected. This implies that there is a significant difference in the academic performance of students in largely populated schools and those in thinly populated schools.

Discussion

The findings of the study as regards to the research questions showed that, large class size makes teachers to use passive teaching methods during instruction, encourages chorus responses from students and makes it difficult for the teacher to accord test/assignment to learners. While, small class size facilitates detail coverage of the scheme of work, spurs teachers and learners to adopt active teaching/learning strategies, and encourage regular practical exercises as well as giving and marking of tests/assignments regularly. The finding corroborates the report of Agba (2010) who reported that students over-population have a negative effect on the tone of the school.

The finding of the study as regards to research question two revealed that large class size impedes effective classroom management and control during instructions, causes many students to misbehave during lessons and makes teachers spend much time in handling disciplinary cases at the expense of academic activities. Whereas small class size eases the span of control, enhances effective monitoring/supervision of classroom activities and encourages individualized attention during instruction. This finding agrees with the opinion of Sotonwa (2003) who reported that large class size has negative effects on adequate teaching and learning process since it hinders the teacher from attending to individual differences among learners so as to redress those observed academic lapses, m support of the findings, Offorma (2002) also noted that large class size gives a lot of stress and strain to dedicated and committed teachers to properly handle the pupils.

The result of this study as regards to the findings for hypothesis one showed that, there is a significant difference between the academic performance of students on largely populated schools and those in thinly populated schools. The finding lend credence to Asiyai (2004) and Agba (2010) who identified class size among others as an impediment to students’ academic achievement.

Conclusion

The result of the investigation showed that large class size has a lot of negative influences on the teaching and learning process, as it negates proper individualized attention to and assessment of students. It also impedes effective classroom management and control by the teacher, as the teacher uses much of the time to handle disciplinary cases at the expense of academic activities. This implies that the achievement of the desired quality outcome from public secondary schools in the state could be difficult under this present condition of students’ population pressure.

Recommendations

The findings of this study are relevant to education planners, policy makers, school administrators and the general public. This paper therefore recommends that:

1. The government at all levels should ensure that the provision of school plants/facilities match with the remarkable increase of students population to avoid students' population pressure and its attendant problems.
2. Alt the aforementioned groups should adhere strictly to the teacher-students ratio of 1:40 as
recommended by the National Policy on Education (2004), in order to maintain effective teaching and learning for better academic performance of students.

References


