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Assessment of Why Class-Size Reduction (CSR) Does Not Work in Public Schools in Nigeria: A Survey of Public Secondary School Administrators in Rivers State, Nigeria

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Abstract:

The study, Assessment of Why Class-Size Reduction (CSR) Does Not Work in Public Schools in Nigeria: A Survey of Public Secondary School Administrators in Rivers State. The purpose of this study is to assess why class size reduction does not work in public schools with the school administrators. One research question was raised and three hypotheses were formulated for the study. The study adopted the survey research design. The population was made up 268 public senior secondary schools administrators from which a sample size of 152 administrators was determined by Taro Yamane formula and out of which 144 questionnaires was retrieved. The instrument for data collection was a questionnaire titled 'Class-Size Reduction Questionnaire (CSRQ)'. The analysis of data was done using mean and simple ranking to answer the only research question while the independent sample t-test and one-way ANOVA was used to test the hypotheses. From the analysis, the research question revealed why Class-Size Reduction (CSR) does not work in public secondary schools as enormously expensive, not properly investigated, the cost of increasing classrooms, more funds spent on added teachers, nonchalant aspect of the government and increase in the number of administrators. The hypotheses testing revealed that, all the three hypotheses indicated no significant mean difference of Why Class-Size Reduction (CSR) Does Not Work in Public Schools. The study concluded that class sizes reduction in public schools will not be feasible; especially because of the nonchalant aspect of the government. The recommendation was that, the government should take the issues of class size reduction serious and as well put it into practice.

Keywords: Class-Size reduction, public secondary schools, administrators'

1. Introduction

As school population increases class sizes also increase, the performances of students become an issue. According to Adu, Ojelabi and Hammed (2009), class size has become a phenomenon often mentioned in the educational literature as an influence on pupil's feelings and achievement, on administration, quality and school budgets. They noted that class size is almost an administrative decision over which teachers have little or no control. Most researchers start from the assumption that size of the class would prove a significant determinant of the degree of success of students. With the exception of few, many studies have reported that, under ideal situation, class size in itself appears to be an important factor. In emphasizing the importance of class-size to the learning teaching process, All Nigerian Conference of Principals of Secondary Schools (ANCOPSS) recommended a maximum of forty (40) students per class for efficient and effective teaching and learning process. Although, the Federal Republic of Nigeria-National Policy on Education (2004) specified 20 in pre-primary, 30 in primary and maximum of 40 in secondary schools. But these directives appear unrealistic in our public schools, especially schools in the urban areas. Therefore, this study seeks to assess why class size reduction does not work in public schools from the school administrators.

1.1. Research Question

Why Class-Size Reduction (CSR) does not work in public secondary schools?

1.2. Hypotheses

- H_{01} There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' gender.
- H_{02} There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' location.

- H_{03} There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' educational qualifications.

2. Review of Related Literature

2.1. Class Size

The issue of class size is one that can be traced back to the early nineteen hundreds (Callahan as cited in Vandenberg, 2012), yet is still very relevant to the organizational structures of elementary, middle, and high schools of today (Biddle & Berliner in Vandenberg 2012). With such a long history, one would think that the class size debate would be settled by now with conclusive evidence to support or disclaim the assertion that student achievement is affected by class size. In Nigeria, The National Policy on Education revised (2004) stipulates the maximum number of students in each class to be 30-40 students. For effective teaching, teacher/student ratio should conform to this stipulated order. Today class sizes have bloated due to explosion of population of children of school age. This class situation makes one to wonder how teacher can cope with this number or more in teaching, counseling, organizing and marking their assignments.

2.2. Class Size Reduction and Students Achievement

Heinesen (2005) believes that reducing class size increase students' achievement and that it has a significant impact on the education of disadvantaged children or students (Nye, et al., 2004). Many of these researchers have come out with findings in favour of reduced or small class. They added that such classes will have an improved atmosphere because;

- There are fewer students to distract each other
- The level of noise in such a class will be reduced
- Students receive individualized attention

Rockoff (2009) suggested that smaller classes benefited student's achievement claiming that teachers in small classes paid greater attention to each pupil. Students in these classes experienced continuing pressure to participate in learning activities and became better, more involved students; attention to learning went up and disruptive and off-task behaviour went down. Pedder (2006) believed that class size might impact classroom processes and pupils' learning. He stated that smaller class size allowed teachers to cover more curriculum and students to be more cognitively engaged. These two features led to improved student achievement. Pedder asserted:

'In larger classes, more time is needed for non-academic activities related to administrative and organizational procedures and to the management and control of discipline...reductions in the quantity of learning opportunities constrain teachers from achieving the necessary pace, depth and breadth of curriculum coverage as class size increases (p. 224)'.

Achilles as cited in Charles (2015) believed that small classes facilitated more individualized help from teachers; afford student-teacher interaction, better classrooms management, reduction in teacher's work load and reduction in discipline problems, all of which enhance students' outcome. Studies conducted at school and college levels indicate that student team more where there are fewer students (Chingos, 2012). Dynarski, Hyman, and Schanzenbach (2011) also reported that 'assignment to a small class in the early grades increased college degree attainment rates by about two percentage points', advocated a reduction of class size as a strong option for increasing achievement of children.

In the Project Prime Time pilot study results in Indiana, 61 percent of the participating students were reported to have exceeded the normal achievement in reading and 53 percent of the participating students were reported to have exceeded the normal achievement in math (Gilman & Kiger as cited in Charles, 2015). Additionally, the research evidence from Tennessee's Project Star (Student Teacher Achievement Ratio) showed that students in smaller classes with fewer than 18 students did better when compared with students in larger classes (Whitehurst & Chingos, 2011).

2.3. Review of Empirical Studies

Mokobia and Okoye (2011) studied the Effect of Class Size on the Teaching and Learning of Chemistry in Secondary Schools in Delta State. The aim of their study was to investigate the effects of class size on the academic achievement of Senior Secondary Schools students in Delta State. They employed an ex-post-factor design and a sample of 681 SS II students were selected from 16 Secondary Schools. Their data collection was carried out using Chemistry Achievement Test (CAT) and their study was guided by two research questions and the ensuing null hypotheses were tested at the 0.05 level of significance. Their results showed that chemistry students in small sized classes perform better in relation to those in large sized classes. Their results also show that there is no interaction effect of school location and class size on the achievement of the considered students.

Yara (2010) investigated 'Class size and students' mathematics achievement of senior secondary schools in South Western Nigeria'. His major aim was to investigate class size and academic achievement of students in mathematics in Southwestern Nigeria. He found out that the performance of students in large classes was very low (23%) compared to those students in smaller classes (64%). The study also revealed that there was difference in the performance of male and female students in either group. He therefore recommended that policy makers and government should ensure that more classrooms are built and number of students in a class should not be more than 30 (thirty). In classes of 25-34 pupils at the primary level, the studies show some support for the hypothesis the smaller classes are related to higher achievement reading and mathematics, particularly if the pupils are socially or economically disadvantaged or remain in small classes for at least two years.

3. Methodology

The study adopted a survey design. This kind of research design was best suited to collect the data since it gave the researcher a chance to collect primary data from school administrators. The study population comprises of all the public senior secondary school principals in Rivers State, and there are two hundred and sixty-eight (268) senior secondary schools in the State. A sample size of 161 respondents was determined using Taro Yamane formula, out of which 144 copies of questionnaires were return; this gave a return rate 89 percent. The instrument was a self-constructed questionnaire titled 'Class-Size Reduction Questionnaire (CSRQ)' which had been validated by face and content validity from three experts and a Cronbach Alpha reliability method that yielded a reliability index of 0.70. The data retrieved from the administration of the instrument was analysed using mean and simple ranking to answer the only research question, while the independent sample t-test and one-way analysis of variance (ANOVA) were used for hypotheses testing at 0.05 level of significance with a decision that, if the p -value is equal or less than the chosen alpha level of significance, the null hypothesis will be rejected.

4. Analysis and Results

Research Question: Why Class-Size Reduction (CSR) does not work in public secondary schools?

Items	N	$\bar{x}$	Ranks
Class sizes reduction is enormously expensive	144	3.40	5 th
Class sizes reductions are not properly investigated after implementation.	144	3.41	4 th
The most clear-cut problem with reducing class size is the cost of increasing classrooms	144	3.18	6 th
In class sizes reduction, more funds must also be spent on added teachers	144	3.42	3 rd
The nonchalant aspect of the government	144	3.62	1 st
Administrators' mismanagement of funds	144	1.38	7 th
Increase in the number of administrators	144	3.61	2 nd
Criterion Mean = 2.5			

Table 1: Why Class-Size Reduction (CSR) does not Work in Public Secondary Schools

In Table 1, the values of the entire mean are above the criterion mean of 2.5; except the mean value of 1.38 which was ranked 7th. The mean value below the criterion mean of 2.5 could be that, the item has to do with the administrators, therefore exempting themselves. In all, the positive mean responses above the criterion mean revealed why Class-Size Reduction (CSR) does not work in public secondary schools.

Hypothesis 1: There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' gender.

Gender	N	Mean	Std. Deviation	df	t-value	p-value	Alpha	Decision
Male	93	22.00	1.69					
				142	-.132	.896	0.05	Not Significant
Female	51	22.04	1.72					

Table 2: T-test for Difference why CSR does not Work Based on Administrators' Gender

In Table 2, t -value is $-.132$, the p -value is $.896$ and the chosen alpha level is 0.05 . The p -value is greater than the significance alpha level ($.896 > 0.05$). Therefore, the null hypothesis is accepted, which means there is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' gender.

Hypothesis 2: There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' location.

Location	N	Mean	Std. Deviation	df	t-value	p-value	Alpha	Decision
Urban	99	22.00	1.69					
				142	-.250	.803	0.05	Not Significant
Rural	45	22.07	1.71					

Table 3: T-test for Difference why CSR does not Work based on Administrators' Location

Also in Table 3, t -value is $-.250$, the p -value is $.803$ and the chosen alpha level is 0.05 . The p -value is greater than the significance alpha level ($.803 > 0.05$). Therefore, the null hypothesis is accepted, which means there is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' location.

- Hypothesis 3: There is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' educational qualifications.

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.062	2	3.031	1.053	.352
Within Groups	405.910	141	2.879		
Total	411.972	143			
α = 0.05					

Table 4: ANOVA of Why CSR Does Not Work Based on Administrators' Educational Qualifications

In Table 4, the hypothesis was tested at a significance level of 0.05. The p -value was found to be .352. From the result, the p -value is greater than the significance alpha level (p -value > .05). This indicated that the null hypothesis is not rejected; indicating that, there is no significant mean difference of why Class-Size Reduction (CSR) does not work in public secondary schools based on administrators' educational qualifications.

5. Discussions

In research question, the assessment of why CSR does not work in public schools was that; CSR is enormously expensive, even after implementation CSR are not properly investigated, the problem with the cost of increasing classrooms, more funds spent on added teachers, nonchalant aspect of the government and increase in the number of administrators. For the study test of hypotheses, all the three hypotheses indicated no significant mean difference. In hypothesis one there is no significant mean difference on administrators' views of why Class-Size Reduction (CSR) does not work in public secondary schools based on gender. The finding is similar with the finding of Yara (2010) who investigated 'Class size and students' mathematics achievement of senior secondary schools in South Western Nigeria'. He found out that the performance of students in large classes was very low (23%) compared to those students in smaller classes (64%). The study also revealed that there was difference in the performance of male and female students in either group. In hypothesis two, there is no significant mean difference on administrators' views of why Class-Size Reduction (CSR) does not work in public secondary schools-based location. The finding corresponded with the finding of Mokobia and Okoye (2011) in their study on 'Effect of Class Size on the Teaching and Learning of Chemistry in Secondary Schools in Delta State'. Their results showed that chemistry students in small sized classes performed better in relation to those in large sized classes. The results also showed that there is no interaction effect of school location and class size on the achievement of the considered students. Hypothesis three also revealed there is no significant mean difference on administrators' views of why Class-Size Reduction (CSR) does not work in public secondary schools based educational qualifications. These findings from this study indicated that all the administrators are of this same view why Class-Size Reduction (CSR) does not work in public secondary schools irrespective of their gender, location and qualifications.

6. Conclusion/Recommendation

Based on the results of the survey, it is concluded that class sizes reduction in public schools will not be feasible; especially because of the nonchalant aspect of the government. Therefore, the study recommended that, the government should take the issues of class size reduction serious and as well put it into practice.

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