Class-Size and Internal Efficiency of Colleges of Education in Nigeria: The Need for Counselling

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Abstract:  
This research examined relationship between class-size and internal efficiency of Colleges of Education in Nigeria and the need for counselling. This study adopted the ex-post facto research design of descriptive survey type. The population comprised all the 70 Colleges of Education in existence between 2013/2014 and 2017/18. The sample for this study comprised of the six Colleges of Education. One Colleges of Education from each geo-political zone. The respondents were all the 142 heads of departments drawn from these six (6) Colleges of Education in six geo-political zones. Two sets of instruments were used; an inventory titled “School Based Variables and Internal Efficiency Inventory” (SBVIEI) and Questionnaire on Class-size and Internal Efficiency of Colleges of Education and the need for Counselling (QCIECOEC). The results showed that the Co-efficient of internal efficiency for the colleges of Education was low (33.78%), There was significant relationship between internal efficiency and class-size in the Colleges. The result shows that there was relationship between the variables and class-size. Most of the factors of behavioural problems like class-size and students’ tardiness (0.595), class-size and students’ dominance (0.624), class-size and boredom (0.619), class-size and distraction (0.71) and class-size and students’ truancy (0.312) have positive relationship. Based on the findings, it was concluded that there was low internal efficiency of Colleges of Education in Nigeria. There was relationship between class-size and internal efficiency of Colleges of Education in Nigeria. Class size can also predispose students to behavioural problems like truancy and study habit problems. Based on the findings, it was recommended that efforts should be made to reduce class size in Colleges of Education. Stakeholder should make sure that adequate funds are allocated to Colleges of Education to reduce over dependence on internally generated revenue that always forced school management to admit students that are more than the carrying capacity of the institutions. School counsellors should act as intermediary between the lecturers and students towards curtailing behavioural issues that may arise due to class size.

Keywords: Class-size, internal efficiency, cohort, counselling

1. Introduction  
The perceived low internal efficiency in the Nigerian Education System can be attributed to several variables. At the primary school system, Abagi and Odipo (2000) cited by Adu (2010) grouped the variables into three namely: community based variables, government based variables and school-based variables, but it seems the school-based variables appear to be the most prominent variable which leads to low internal efficiency at the College of Education. It was also observed that class-size is one of the major variables within the school community that hinder the rate of Education out-put. Although one may infer that the number of the students in a class will determine the number of output. However, many students may be admitted but due to lack of equitable resource allocation in terms of teacher-student ratio may lead to wastage and some behavioural problems which may also impede learning. The implication is that some students may dropout when the teacher finds it difficult to manage the class effectively while some may remain in class but performing below expectation.

Ade-Ajayi, Asubiojo and Olaniyi, (2019) opined that conducive and appropriate learning environments, class-size are subsumed under the index of quality of education. They went further that there cannot be quality education without an effective class-size in a school system. Yara (2010) described class – size as the number of students per teacher in a class.

The class-size is observed to have effect on the internal efficiency of schools. A situation whereby a large number of students are in a class, one may envisage high number of stagnation or dropout. Adeyemi (2008) reported that average class-size in a school has effect on the quality and quantity of output: the higher the class-size the lower the efficiency of such department. However, observation shows that most of the classes in education courses at the Colleges of Education are overcrowded stretching resources thinly and thereby affecting the teaching/learning process. This has been observed as a source of poor internal inefficiency. The inconveniences the students go through seem to affect their learning process; it may lead to high rates of stagnation and dropout in the schools, Colleges of Education inclusive. It was observed that this may lead to lack of interest in education, inattentiveness, truancy, inability to comprehend which may eventually increase
the rate of wastage in terms of dropout. Fauzia and Kuchah (2016) identified learners' engagement and interaction, high noise level and heterogeneous classes as some of the problems in teaching large classes in some Colleges where the students admitted into various departments are few, the classes will be well managed as teacher/student relationship tends to be more cordial. The researchers observe that when teachers have sizeable number of students to manage, there will be enough time to monitor and assist individual student to learning at their own pace. Ali (2006) remarked that a class with more than adequate number of students will be inconvenient due to lack of conducive space. This situation as explained has been identified as one of the perceived causes of inefficiency in Colleges of Education.

At any level of education system impressive enrolment figures are supposed to justify the availability of human, material and financial resources. The higher the number of the students in the school, the more the need for increase in the availability of resources to meet up with these variables, but the governments at both federal and state levels do not release sufficient funds to the various institutions (Akangbou, 1982). It has been observed that government at both Federal and State levels in Nigeria has continually failed to adequately fund the education sector thus forcing schools (tertiary institution in particular) to admit students more than the stipulated policy in order to increase/boost their internally generated revenue. For example, the College of Education Ikere needs more than 250 million naira to pay workers’ salaries apart from the running expenses but received about 175 million naira monthly as government subvention (Source).

Lecturer-student ratio is observed to have effect on internal efficiency in schools. The approved lecturer-student ratio in Colleges of Education is 1:25. However teaching experiences of the researchers show that most of the Colleges of Education have more than 1:400 lecturer-student ratio most especially in education courses which is compulsory for all students. This seems to make most Colleges to be inefficient in terms of output. Observation shows that when asked from stake holders their views on lecturer-student ratio, parents and teachers generally report that they prefer smaller classes. This may be because those involved with teaching believe that smaller lecturer-student ratio promotes student learning, or simply because smaller lecturer-student ratio offers a more pleasant environment for the teachers in them. Social scientists and school administrators also have a long standing interest in the lecturer-student ratio question. Lecturer-student ratio is often thought to be easier to manipulate than other school inputs, and it is a variable at the heart of policy debates on school quality and the allocation of school resources in many countries (Durosaro (1985). This seems to be particular to higher institution. At the higher institution level, Colleges of Education inclusive, it was observed that teachers are faced with many students most especially in Education and other courses that are general to all students.

Class-size is an educational tool that can be used to describe the average number of students per class in a given institution. Dean (2004) described it as the number of students per class. For the purpose of this research, class-size is the number of students in every programme of studies. Fadipe (1999) and Ayodele (2000) believed that in measuring the level of efficiency of the school system, the number of classroom as well as the number of students per programme should be noted. This assertion supports the view point of Mcmashon (1993) that on schools and the number of classrooms for each year is indicator of internal efficiency and can therefore be used for quality control. Kedney (1989) too, saw class-size as a tool that can be used to measure the internal efficiency of the education system. Most of the available literatures are related to primary and secondary school systems. This research is on tertiary institutions, Colleges of Education in particular which could be applicable to it. As such, Wise (1968) reported that a primary school is officially regarded as being reasonably staffed if it has classes of not more than 40 children. He argued that although the National Union of Teachers in Britain has suggested a maximum class-size of 30, it was discovered that 3 out of every 4 children were in over-size classes. He contended that about half one million children are in classes of fewer than 25 while another one million are in classes of over 40.

There are conflicting findings on the relationship between class-size and student's performance and hence internal efficiency of the school system. Some studies have shown inconsistent relationship between class-size and students' performance (Ayodele, 2000). Anderson, (2000), however, found out that student-class ratio has no significant influence on outcome.

The importance of class-size was made by Sheehan (1973). According to him, 'class-size is important when considering the efficiency or effectiveness of educational provision. He reported that the relationship between maximum and average class-size is a function of the structure and organisation of the school system. He contended that in the UK, targets of maximum class-size of forty pupils for primary schools and a target of thirty for secondary schools (excluding the Sixth Forms) were proposed by the former Advisory Council on the training and supply of teachers (Sheehan 1973).

In relation to the size of a Toth and Montagan (2006) reported that the rational utilization of classroom space depends upon class-size. This in turn would depend upon the area of the classroom. He contended that there are approved norms of class-size: 40 pupils per class for grades one to eight and 35 pupils per class for the senior classes; while the standard allocation (norm) of class space per pupil is 1:25 square meters. He observed that there could be normal class-size where the classroom has a maximum area of 45 to 50 square meters; but as a rule, such classes could only be found in specially constructed schools with classrooms built to standard plans.

There are variations in class-size in the Colleges of Education. The NCCE only recommend based on the existing facilities in each department. In science-based courses like Physics, Chemistry, Biology and Integrated Science the approved class-size in the Colleges of Education, Ikere is 1:25 while in Federal College of Education, Kontagora, the class-size is 1:30. the observation shows that Federal Colleges of Education enrolled students less**** than the College of Education, Ikere. (NCC—

Much variation has been discovered in class-size in many countries of the world. This variation was identified by Anderson (2000) who compared the class-size in England and Spain and found out that class-sizes in Spain are
significantly higher than England especially in the 17-18 age range. According to them, the mean class-sizes in Spain for the age range 11-16 was about 34 while in England, it was about 26. He found that for the age 17-18 the mean class-size in England reduced to 13 whereas in Spain, the mean class-size remained almost the same as for earlier years.

Commenting on class-size in British secondary schools, Dean (2004) remarked that small classes are a priority for parents. According to her, the average size of one-teacher class was 23 in 1994 compared with 22.7 in 1993 and 22.1 in 1984 for pupils under 16. She made a comparison of class-size in secondary schools in some OECD countries. Her findings revealed that four countries - Turkey, Norway, Netherlands and New Zealand had class-sizes of 20 or more; the UK, USA, Japan, Canada and Ireland had class-sizes of between 15 and 20 while eight countries - France, Australia, Sweden, Denmark, Austria, Italy, Luxembourg and Belgium had class-sizes of below 15.

Masoud, Masoud, & Sohrab, (2013) too, researched into relationship between EFL teachers' attitudes, teaching techniques and classroom (large and small) and found that an Economics 'O' level had an average class-size of 19.8 pupils per class compared with 23 pupils per class in the Commerce 'O' level class. Okoro (2005) however, disagreed with such a small class-size and remarked that a secondary school class should have 35 or 40 students. He argued that few pupils per class are uneconomical as they do not make full use of space, teachers and teaching materials.

Supporting this view, Yara (2010) maintained that, large class-sizes result to dropout and stagnations as a result of incapability of both the students and teachers to perform, especially psycho-motor activities. Hence, the researchers observed that large class-size does not promote teaching-process and this could lead to wastage in terms of output and other forms of behavioural problems which may require counselling intervention. The findings of Toth and Montagna (2002) and Blatchford, Bassett and Brown, (2005) were not however in agreement with those of Ngoboka and Schultz (2002) Yara (2010).

The above discussion has shown that class-size is a controversial educational tool that has varied from one country to another. This discussion has led the researcher to examine school-size as another variable that might be associated with internal efficiency.

1.1. Purpose of the Study

The main purpose of this study was to investigate how class-size correlate with the internal efficiency in some courses in the Colleges of Education in Nigeria.

Specifically, the following purposes will guide the study:
- To investigate whether there is internal efficiency in the Colleges of Education in Nigeria between 2015 cohort.
- Investigate the differences in the rate of internal efficiency between the low class-size and high class-size
- To determine the relationship between class size and internal efficiency in Colleges of Education.
- To proffer solutions that will enhance internal efficiency in Colleges of Education

1.2. Research Questions

For the purpose of this research, the following questions were raised:
1. Are the Colleges of Education in Nigeria between 2015 cohort internally efficient?
2. Is there any relationship between class size and internal efficiency in Colleges of Education?
3. Is there any relationship between class size and behavioural problems among Colleges of Education Students?

1.3. Significance of the Study

The findings of this study would be of immense benefit to stakeholders of Colleges of Education students, teachers, policy makers and researchers. The findings of the study would be of immense benefit for students to understand how class-size management can help them improve their learning activities in schools. Findings of the study would provide feedback for planning of Colleges of Education programme by the policy makers, curriculum developer and planners in Ekiti state and in Nigeria as a whole. Finally, the findings would assist the National Commission for Colleges of Education and the government in ensuring adequate resource allocation (both human and material) to Institutions for effective teaching and learning.

2. Methodology

2.1. Analysis of Data

Are the Colleges of Education in Nigeria internally efficient?

In answering this question, data on the cohort of the students enrolled in 2013/2014 academic session were collected from the heads of academic departments of Colleges of Education to when the cohort had spent 3years and when those that could not meet up within the stipulated three years till spent when each of the students was expected to leave the colleges after spending five maximum years. The data were collected using the responses on inventory that requested for data on progression, stagnation and drop-outs of students. The findings are presented in tables 1 while the average total of the wastage and internal efficiency are shown in tables 5, 6, 7, 8, 9. The cohort analysis for the set is shown in figure 1.
Table 1: Progression, Stagnation and Dropout Rates for 2013/2014 Set

| Year | 100L 2013/2014 | 200L 2014/2015 | 300L 2015/2016 | 2016/2017 | 2016/2017 |
|------|---------------|---------------|---------------|----------|----------|
|      | No of student enrolled | No of progression | No of stagnation | Graduates |
| 2013/2014 | 24201 | 22942 | 21985 | 12319 | 3032 |
| 2014/2015 | 21985 | 23210 | 447 | 12312 | 3032 |
| 2015/2016 | 3032 | 999* | 12312 | 3032 |
| Total output | 9374 | 942 | 331 |
| Total inputs | 85634 |
| Actual output ratio | 9647 |
| Wastage ratio | 8.88 |
| Ideal input - output | 3 |
| Wastage ratio | 2.96 |
| Co-efficient of internal efficiency | 33.78% |

As indicated in the above result, the average years spent by successful completers of Colleges of Education is 8.88 years.

In order to determine the level of efficiency, otherwise known as the co-efficient of efficiency, the reciprocal of the wastage ratio is determined. The co-efficient of internal efficiency of was 33.78% which is considered as low internal efficiency of 2013/2014 set. That is, there is low internal efficiency of Colleges of Education in Nigeria.

Research Question 2: Is there any relationship between class size and internal efficiency in Colleges of Education?

In answering this question; the research question was transformed to hypothesis that there is no significant relationship between class-size and internal efficiency in the Colleges of Education in Nigeria.

This hypothesis was tested using the Pearson Product Moment Correlation Co-efficient. Data on internal efficiency of each department and its class-size were collected from responses to items 1 of the inventory. The findings are shown in table 2.
Students were collected using responses of class size. The efficiency may not at all be related to class size since no policy mandated them to stagnate in such classes. Academically poor. They most have been having carryover courses right from their year one but kept on moving to higher levels. The dropout rate was high among those that spent extra one or two years which indicates that some did not have interest on the courses for which they were admitted or engaged in certain work. However, the findings disagreed with Ali (2006) in 'College Life' who reported that there would be decline in the trend of dropout. On the issue of low dropout in year one found in this study, the findings made by Fetler (1989) who in a study examined the relationship between the variables and internal efficiency which led to the acceptance of the hypothesis. The findings of this study showed that dropout rates fluctuated within the sessions for year one and year two. But there was high average dropout rate in part one that had 2.08% as compared with year two that had 1.54%. This contradicts the report of Giwa (1993) on result allocation and internal efficiency in Colleges of Education in Oyo State which predicted an increase in the drop out in the Colleges. The finding was however in consonance with the findings made by Fetler (1989) who in a study examined the rate of dropout in high schools which was high. He however revealed that there would be decline in the trend of dropout. On the issue of low dropout in year one found in this study, the findings disagreed with Ali (2006) in 'College Life' who reported that dropout rate was higher in year one due to the fact that some did not have interest on the courses for which they were admitted or engaged in certain work. However, the dropout rate was high among those that spent extra one or two years which indicates that the students might be academically poor. They most have been having carryover courses right from their year one but kept on moving to higher level since no policy mandated them to stagnate in such classes.

3. Discussion

The findings of this study showed that dropout rates fluctuated within the sessions for year one and year two. But there was high average dropout rate in part one that had 2.08% as compared with year two that had 1.54%. This contradicts the report of Giwa (1993) on result allocation and internal efficiency in Colleges of Education in Oyo State which predicted an increase in the drop out in the Colleges. The finding was however in consonance with the findings made by Fetler (1989) who in a study examined the rate of dropout in high schools which was high. He however revealed that there would be decline in the trend of dropout. On the issue of low dropout in year one found in this study, the findings disagreed with Ali (2006) in 'College Life' who reported that dropout rate was higher in year one due to the fact that some did not have interest on the courses for which they were admitted or engaged in certain work. However, the dropout rate was high among those that spent extra one or two years which indicates that the students might be academically poor. They most have been having carryover courses right from their year one but kept on moving to higher level since no policy mandated them to stagnate in such classes.

Table 2: Test of Relationship between Class-Size and Internal Efficiency in Colleges of Education

| Variables         | N  | X   | SD  | Df  | r-cal | r tab |
|-------------------|----|-----|-----|-----|-------|-------|
| Internal Efficiency | 45 | 43.805 | 9.935 | 44 | -0.193 | 0.288 |
| Class-size        | 45 | 85.80 | 462.33 |    |       |       |

From the Table 2 above, the coefficient of correlation between class-size and internal efficiency is -0.193 and the table value is 0.288 which implies that the strength of relationship is negative and low while at 0.05, there is no significant relationship between class-size and internal efficiency which led to the acceptance of the hypothesis.

Research Question 3: Is there any relationship between class size and behavioural problems among Colleges of Education Students?

Hypothesis 2: Is there any relationship between class size and behavioural problems among Colleges of Education Students?

In testing this hypothesis, data on class size were collected from the responses of the heads of departments to the inventory while data on behavioural problems among Colleges of Education Students were collected using responses of the selected Heads of departments to the questionnaire. Table 3 shows the findings.

Table 3: Correlation Matrix Analysis on Class Size and Behavioural Problems of the Students of the Colleges of Education in Nigeria

| variables         | 1   | 2    | 3   | 4   | 5    | 6    | 7    | 8    | 9   |
|-------------------|-----|------|-----|-----|------|------|------|------|-----|
| Class-size        | 1.00|      |     |     |      |      |      |      |     |
| Tardiness         | 0.595 | 1.00 |     |     |      |      |      |      |     |
| Lack of preparation | 0.025 | -0.591 | 1.00 |     |      |      |      |      |     |
| Student dominance | 0.624 | 0.712 | -0.046 | 1.00 |      |      |      |      |     |
| Boredom           | 0.619 | 0.322 | 0.543 | 0.631 | 0.518 | 1.00 |      |      |     |
| Personality clash | -0.057 | 0.032 | 0.143 | 0.071 | 0.124 | 0.181 | 1.00 |      |     |
| Inattentive       | 0.413 | 0.772 | 0.003 | -0.147 | 0.613 | 0.232 | 1.00 |      |     |
| Distraction       | 0.712 | 0.684 | -0.173 | -0.164 | -0.192 | 0.221 | 0.421 | 1.00 |     |
| Truancy           | 0.312 | -0.336 | -0.43 | 0.043 | 0.453 | -0.142 | 0.419 | 0.271 | 1.00 |

Table 3 shows the relationship between each pair of variables examined in this study. The result shows that there is relationship between the variables and internal efficiency. The following pairs of variables indicated that there is significant relationship between class-size and students’ tardiness (0.595), class-size and students’ dominance (0.624), class-size and Boredom (0.619), class-size and Distraction (0.712) and class-size and students’ truancy (0.312). There is negative relationship between these pairs of variables; class-size and personality clash (-0.057)
Oyedjei (1990) maintained that class-size has no relationship with students’ output. Adeyemi (2008) contradicted this result that a negative relationship existed between the performance of students in small and large class-size. This study was also consistency with the findings of Obemeata (1992) that schools with best results are those with smaller class size. The findings also agreed with Corrare’s (1993) findings that increased class-size tends to lower the internal efficiency and that of Barbers (1988) which depicts that statistical significant differences in favour of small class but the number of outputs will be low. The findings were also at variance with O’Connors (1994)and Yara (2010) that there was a relationship between class size and wastage ratio which implies that an increase in class size will increase graduate output and tends to increase the level of internal efficiency of the school systems and that of Adeyemi (2008) that there is a relationship between achievement and class-size. The result shows that there was relationship between the variables and class-size. Most of the factors of behavioural problems like class-size and students’ tardiness (0.595), class-size and students’ dominance (0.624), class-size and Boredom (0.619), class-size and distraction (0.71and class-size and students truancy (0.312) have positive relationship. This is in line with Ekenem (2016) that average class-size distribution could determine students’ well-being in terms of concentration, sadness and anxiety; while it was not significantly dependent on dizziness. Also the research in constant with the report of Ayeni and Olowe, (2016) that large class size has negative implications on effective teaching and learning of Business Education in tertiary institutions.

4. Conclusion

Based on the findings, it was concluded that there was low internal efficiency of Colleges of Education in Nigeria. There was relationship between class size and internal efficiency of Colleges of Education in Nigeria. Class size can also predispose students to behavioural problems like truancy, study habit problems

5. Recommendations

Based on the findings, it was recommended that efforts should be made to reduce class size in Colleges of Education. Stakeholder should make sure that adequate funds are allocated to Colleges of Education to reduce over dependence on internally generated revenue that always forced school management to admit students that are more than the carry capacity of the available resources. School Management to adhere strictly to student/lecturer ratio and provide adequate facilities to meet the requirement. Small class size yields short- and long-term benefit to students therefore lecturers should build a classroom environment where positive interaction will be a norm. Teaching / learning process should be based on student centred approach. School Counsellors should act as intermediary between the lecturers and students towards curtailing behavioural and anti-social behaviour that may arise due to class size

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