A CASE STUDY OF SCHOOL-RELATED FACTORS AFFECTING NIGERIAN SECONDARY SCHOOL PUPILS’ ACADEMIC PERFORMANCE

By
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ABSTRACT
A ten-item questionnaire containing various descriptions of school-related characteristic which have been found to adversely affect pupils academic performance was administered on 809 teachers and 1012 students of secondary schools from ten randomly selected states in Nigeria. The respondents ranked the characteristics in terms of their degree of effect on pupil academic performance. The result showed that lack of resource materials for teaching, instructional strategies, teacher shortages and teachers’ attitude to work were rated more highly than other characteristics. The result further showed that while the teachers considered lack of resource materials for teaching as having the greatest degree of effect on pupils academic performance, the students on the other hand considered poor instructional strategies as having the greatest degree of effect on pupil academic performance.

INTRODUCTION AND BACKGROUND LITERATURE
On attaining Independence status as a nation in 1960 what seemed a major concern to most Nigerian leaders then was how education would be accessible to all citizens of the newly created nation. Education was seen as the necessary instrument immediately and essentially for the consolidation of the independence, for securing the new nation against neocolonianism and for making workable the newly established self government in a multi-ethnic society. Mass education, at least to the level of literacy, was also seen by the Nigerian leaders to be necessary to create a proper foundation for a democratic government (cf. Best, 1984). The desire to use education for nation building was (and is still) very compelling and so much was the faith in education that the schools of the nation were not only meant for political socialization but also for other social functions and for economic growth. To achieve these goals Universal Primary Education (UPE) was introduced nationwide in 1976, although hitherto this has been practiced in some parts of the country. Toward the end of the second decade of achieving nationhood status, therefore, Nigeria witnessed a phenomenal expansion at all levels of her education.

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Despite the laudable motives which seemed to justify the very "high cost of the expanded education programme of the late 1970s, (the expansion which is still proving very difficult to cope with) the schools in Nigeria are not really effective engines for the diverse functions for which they are set up. The performance of the schools as attested to by the academic performances of the students especially at the secondary school level have been rather very disappointing. The situation actually tends towards threatening the future of the nation. The reports of the many
studies and surveys (for example, the 1980-1984 Statistics of Education by the Federal Ministry of Education, Lagos; the report published in the Times Publication (Nigeria) of September 15, 1985 and the one in the Nigerian Guardian of February 2, 1990) and the many editorials in many Nigerian daily newspapers all point to the academic performances of Nigerian secondary school students which have been on the decline for some times now. This declining trend has been causing a lot of concern and fears in various governmental quarters since the reports conclude that the nation is heading for the breeding of generations of illiterate Nigerians. The failure of Nigerian schools is thus indicating that the health and the well-being of the nation's society may be in jeopardy.

The literature on poor academic performance by school pupils reveals as causes factors related to personal characteristics of pupils (Thompson & Standford, 1975; Reinhart, 1976 and Belkin, 1981) and factors related to the pupils' environment - the school and the home (Little & Thompson, 1983). In support of the pupil environment as a factor in academic achievement Maclean (1966) and Little and Thompson, (1983) note that the difficulties resulting in failure by the pupils may not necessarily lie with the child but with the educational system and in particular the school. Lockheed and Komenan (1989) report that if we control for the student background, school characteristics have significant effects on academic achievement and that in many cases the effects of the school characteristics are greater than the effects of family background.

According to Wehlace and Rutter (1984) although a number of study findings reveal that academic failures are caused by factors related to the social, family and personal characteristics of the pupils, however, these results have been negligible in the obvious implications they carry for shaping school policy and practice. They were therefore of the opinion that research efforts should be better focused on understanding the characteristics of the school and how these affect the student performance rather than trying to identify factors which are least amenable to change. They further argue that search efforts continue to focus on the relatively fixed characteristics or attributes of the students- the effect of such research efforts may tend to absolve schools from blames for their lack of success with the pupil academic performance. The issues therefore are: What are these school-related characteristics or factors which adversely affect pupil academic performance? How do these characteristics rate in order of the degree of their effects on pupil academic performance? How would the teachers and the students rate these characteristics in order of the degree of their effects on pupils academic performances? In an attempt to explore these issues the study reported below was carried out.

METHODOLOGY

Secondary school teachers and their pupils were the subjects of this study. They were selected randomly from among the secondary school teachers and students in ten randomly selected states in Nigeria. Of the more than one thousand teachers and two thousand students contacted for this study the responses of 809 teachers and 1012 students were actually found usable. The 809 teachers (425 males and 384 females) all of who were either in their fourth or fifth year of school ranged in age from 16 to 20 with a mean age of 18.4 years.

The research instrument used for the study was a questionnaire developed by the researcher. The main body of the instrument presented variety of commonly observed characteristics and or conditions of schools in Nigeria which were found in the literature and from an earlier preliminary study findings of opinions of some teachers by the researcher. These school characteristics include physical appearances and structure, location, class size, class room space, resource materials for teaching, teacher shortages, instructional strategies, workload and attitude to work. These characteristics and or conditions of schools were grouped into ten categories, thus leading to a ten-item questionnaire. Necessary steps such as constitution of a
panel of judges and pilot study were taken to ensure that the Instrument was valid for the study.

The respondents were told that the characteristics of the school described in the questionnaire have been found to affect pupil academic performance in Nigeria rather very adversely in the recent time. They were to study the characteristics very carefully and then to rank them according to how they felt these characteristics have affected pupil academic performance in Nigeria. That is, the group of school characteristics which a respondent considered has the greatest degree of effect on pupil academic performance should be assigned rank order of number one (1), the group of school characteristics which was felt was next in importance in the degree of effect on pupil academic performance should be assigned the rank order of number two (2). The process should continue on progressively until the respondent reached the group of school characteristics considered to have the least effect on pupil academic performance and this should be assigned rank order of number ten (10).

The questionnaire was distributed and collected by mail through the principals of the school selected. Personal appeal letter was written to each principal to ensure that the questionnaire forms were distributed fairly evenly among the teachers and the students especially taken into consideration their sexes. Self-addressed envelopes with stamps were also sent to the principals for the return of the questionnaire forms.

RESULTS

The ranks assigned to each group of school-related characteristics by members of each group of respondents were added up. The sum total of the assigned ranks for each group of characteristics by each group of respondents were found. Table i presents the results. The group of characteristics with the smallest sum total of ranks is the group of school-related characteristics considered to have the greatest degree of effect on pupil academic performance and this group of characteristics is given rank order number one (1). The group of school-related characteristics with the largest sum total of ranks is the one considered to have the least degree of effect on pupil academic performance, and this group of characteristics is assigned rank order number ten (10).

To test the significance in the differences of responses between the teachers and the students Mann-Whitney U test procedures were performed on the ranks assigned by the pair groups of respondents being compared. The results are presented in Table 2.

DISCUSSION

An examination of the ranks assigned to the groups of school-related characteristics reveals some degree of agreement between the teachers and the students, for example, by assigning the same rank order numbers to groups of school-related characteristics of "poor teachers' attitude to work" (3) and "teacher shortages" (4). The students and the female teachers seemed to agree by their assignment of the same rank order number of two (2) to the group of school-related characteristics described as "lack of resource materials for teaching". The female teachers and the male students also agreed by assigning the same rank order of number four (4) to the school-related characteristics resulting In academic failures by the students. Maclean argued further that generally varying aspects of dysfunctional teacher-pupil relationship may instill anxieties and fears in the students and these may interfere with application and retention resulting In academic failure. The students of this study most probably valued very highly teacher-pupil relationship especially that which is established through provision of Instruction as the most important factor in pupil academic achievement than any other factor.

Large class size was perceived by the teachers as the second most important factor...
affecting pupil academic performance. In support of this view Little and Thompson (1983) state that pupils can fall behind in the school work or experience academic failure where large classes do not permit the teacher to give personalized or individual attention to the pupils. Because of the expansion started in the late 1970s Nigerian schools have been over-populated. Unfortunately however; the increasing number of students are not being matched by increasing the number of teachers proportionately. The result is large classes with student population between 50 and 60 to a class . This definitely can cause difficult to the teachers in their work.

Teachers' attitude to work was assigned the same rank by the teachers and the students. Teaching is a low-paying job and the teacher's poor condition of service may have been responsible for their attitude to work. Okebukola and Jegede (1989) have observed that the somewhat out-of-tune politicking and sentiments expressed by the Nigerian Union of Teachers (NUT) in 1987 was not unconnected with disinterestedness, non-commitment to work and "lack of steam" among the Nigerian teachers. Apart from poor condition of service especially in form of low pay another factor which may cause poor attitude to work and ineffectiveness may also be overload of teaching schedule as a result of teacher shortages, a school-related condition ranked highly as affecting pupil academic performance adversely. Thus the inadequate resource materials for teaching, large class sizes, and overload of schedule are conditions which can lead to teachers' poor attitude to work and ineffectiveness. This argument is consistent with Bacharach, Bauer and Shebb's (1986) claim that lack of resource materials for teaching has a direct effect on the teacher's ability to perform and an indirect impact on teacher's motivation and satisfaction. It is further argued that a basic principle of job design is that incumbents must be provided with the resources necessary to carry out the duties assigned. No matter how motivated or competent employees may be, lack of resources will prevent them from accomplishing their responsibilities and may even result in frustration and de-motivation (Bacharach described as "poor teachers' attitude to work". All the students and the male teachers agreed by assigning the same rank order numbers of (3) and (4) to the groups of school-related characteristics described as "poor teachers' attitude to work" and "teacher shortages" respectfully. The male students, and the female students were in agreement by their assignment of the same rank order numbers to the following school related characteristics: "poor instructional strategies" (1); "inadequate resource materials for teaching" (2); "large class-size" (6) and "poor physical appearance of school" (8).

The results displayed in Table 2 reveals some significant differences between the ranks assigned to the groups of school-related characteristics by the teachers and students.

**School Characteristics that ranked highly**

School-related characteristics which seem to have been ranked more highly than any other of the ten groups of characteristics presented to the respondents on the questionnaire is inadequate resource materials for teaching. Although this group of characteristics was ranked as number one (1) by the teachers and as number two (2) by the students this nevertheless is an indication that the respondents of this study perceived this group of characteristics as the one that affect pupil academic performance the most.

Inadequate resource materials for teaching is indeed a major problem in Nigeria. A Nigerian Times Publication of September 15, 1990 reported findings of a research commissioned by the World Bank and the British Overseas Development Administration stating that many institutions in Nigeria do not make available to school pupils textbooks, appropriate reading materials, library and laboratory facilities. The perception of a situation of this nature as having the most effect on pupil academic performance or as responsible for the high rate of academic
failures among students is supported by Maclean's (1966) claim that difficulties expressed by failing students may be due to lack of material information for learning. A supposedly learning environment devoid of necessary learning materials will definitely result into learning difficulty and hence failure by the learner.

To the students respondents of this study instructional strategies employed by the teachers seemed to them the factor that affect pupil academic performance the most. Again Maclean's (1966) claim is consisted with this view in the statement that poor teaching methods and too much emphasis on unrealistic curricular objectives and contents may cause emotional block to learning.

Table 1
The sum total of the ranks assigned to each group of school-related characteristics by respondents.

<table>
<thead>
<tr>
<th>School Characteristics</th>
<th>Sum Total of Ranks by TEACHERS</th>
<th>SUM TOTAL OF RANKS BY STUDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ALL (809)</td>
<td>M (425)</td>
</tr>
<tr>
<td>1. Large class-size (too many students, over-population.)</td>
<td>1398</td>
<td>979</td>
</tr>
<tr>
<td>2. Inadequate resource materials for teaching</td>
<td>1194</td>
<td>478</td>
</tr>
<tr>
<td>3. Physical Appearance and facilities, small roomspace poor lighting/ventilation</td>
<td>2652</td>
<td>1273</td>
</tr>
<tr>
<td>4. School-location (close to or in noisy environment)</td>
<td>2306</td>
<td>1591</td>
</tr>
<tr>
<td>5. Co-curricular activities, sporting/social inadequate</td>
<td>2805</td>
<td>1459</td>
</tr>
<tr>
<td>6. Teacher-shortages (not enough to go round all subjects)</td>
<td>2271</td>
<td>1272</td>
</tr>
<tr>
<td>7. Frequent changes of teachers (yearly or biannually)</td>
<td>2805</td>
<td>1459</td>
</tr>
<tr>
<td>8. Poor teachers' attitude to work including noncommitment</td>
<td>2203</td>
<td>1168</td>
</tr>
<tr>
<td>9. Poor trained/ substandard teachers</td>
<td>3213</td>
<td>1799</td>
</tr>
<tr>
<td>10. Poor instructional strategies/poor teaching methods</td>
<td>2559</td>
<td>1408</td>
</tr>
</tbody>
</table>

N. B. Numbers in the parentheses are the rank order numbers.
Results of Man - Whitney U test performance on the ranking to compare groups respondents.

<table>
<thead>
<tr>
<th>Groups of Respondents</th>
<th>z-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All teachers versus all students</td>
<td>2.80*</td>
</tr>
<tr>
<td>2. All teachers versus all male students</td>
<td>0.23</td>
</tr>
<tr>
<td>3. All teachers versus all female students</td>
<td>-1.21</td>
</tr>
<tr>
<td>4. All students versus all male teachers</td>
<td>-3.40*</td>
</tr>
<tr>
<td>5. All students versus all female teachers</td>
<td>-3.61*</td>
</tr>
<tr>
<td>6. Male students versus female students</td>
<td>0.98</td>
</tr>
<tr>
<td>7. Male teachers versus female teachers</td>
<td>-1.06</td>
</tr>
</tbody>
</table>

* P < 0.05
(z-critical value = 1.96 for a two - tailed test at the .05 level).

& Shebb, 1986, p. 254). Okebukoba and Jegede (1989) also found out that poor service conditions, large classes and inadequate teaching facilities strongly lead to experience of stress by teachers causing them to be ineffective and less committed to work.

**Differences between the groups of respondents**

Table 2 reveals major difference between the teachers and students. An examination of Table 1 shows that the teachers and the students seemed to disagree rather sharply with regard to their assignments of ranks to eight out of the ten groups of school-related characteristics in the questionnaire. In particular sharp disagreement occurred in the two groups' assignments of ranks to characteristics described as "poor instructional strategies" and "large size". While the students assigned rank order of one (1) to "poor instructional strategies" the teachers ranked this group of characteristics as the fifth indicating, as it were, that this group of characteristics was not as important as the students reported or thought.

One explanation which could be given for the assignment of number one rank to poor instructional strategies by the students may be to probably assume that they valued this group of school-related characteristics more highly than their teachers. That is, the students probably perceived teachers' instructional strategies or generally the teacher-pupil relationship or interaction through the medium of instruction more importantly for their academic success than any other school-related factor presented to them on- questionnaire. The emotional climate for learning provided by the teacher whether in the attitude or considered by the student of this study to be more highly valued than any other factor in the school which may have effect on the academic achievement. Nigeria has just introduced a new secondary school curriculum with new subjects and the existing ones being modified. With this new curriculum the school demand on the students has increased tremendously. Thus as the demand of the school increased far above what it used to be and with the competitive nature of academic programmes of the teachers need to adjust their instructional strategies to suit the current school demand on the students. When, however, teachers place too much emphasis on the competitiveness of the classroom learning without themselves offering needed assistance in form of good quality teaching this can be a good source of trauma and suffering for the students resulting in emotional block to learning and hence academic failure (Maclean, 1966).

It is interesting to note that there appears to be some agreement between the teachers and the students in assigning the same rank order to teachers' attitude to work. Much more interesting it is, however, to note that the teachers did not perceive their instructional strategies
as that important as the students reported. One explanation which can be offered is probably to assume that the teachers were biased in their perception. This teachers' bias can be explained by the employment of attribution researcher, Bradley's (1978) hypothesis that the individual are motivated to take credit for their successes and to deny responsibility for their failures in order to protect or enhance their self-esteem. This "Self-Service-Effect" (SSE) or bias as described by Marsh (1986) represents either conscious intentional distortions that protect one's self-esteem or unconscious unwitting distortion in perception of the causality that accurately reflect one's self-perception. Although considerable controversy exists as to how this bias should be interpreted but if it can be proved that the teachers' rating actually reflects an unconscious non-motivational tendency then it may be said that the rating is entirely a valid representation of their self-perception. It is also possible to assume that the students' rating was also valid if as suggested by Rowe and Sykes (1959) it can be established that they saw a relationship between the teachers' instructional strategies and their academic performances, which was probably the case. It must be noted that the students' rating are a function of both their attitude and the interaction between them and their teachers. This may be in the sense as suggested by Meighan (1978) that the students perceived teaching as more important than learning and teachers' activity as more central than pupils'. This of course contradicts the official rhetoric of educational writing and debate that makes the claims for the pupils' welfare as the central focus, Meighan argues further. Goos (1982) also found out that many students over the years develop a negative attitude not only to school and subject materials, but also to teachers in general. Such students often find it difficult to relate to teachers and more often they attribute many of their difficulties to "poor teaching" and "rotten Instructors".

CONCLUSION

Some implications can be drawn from the results or this study. Some school-related characteristics were highly rated by both the teachers and the students to indicate that these characteristics have much more stronger effects on pupil academic performance than the other characteristics not so highly rated. It is however very interesting that these highly rated characteristics are related, that is, the effect of one leads to the other. Inadequate resource materials for teaching seems to be the characteristic that has the greatest effect on pupil academic performance. From the discussion it could be seen that other school-related characteristics revolve around this characteristic of the school,. Thus it has been argued that without adequate resource materials for teaching in a large over-populated classroom and with the teacher having overload of teaching schedule such a situation can dampen the spirit of an articulated teacher and make her or him very ineffective. The implication which this result has for Nigeria (and for many developing African countries embarking on massive expansion of education programme) is to consider that such effort can only yield desired fruits only by provision of adequate (both in quality and in quantity) resource materials for teaching. Educational equipment, supplies and materials such as textbooks, workbooks, chalk and erasers, audio-visual materials and other published materials are needed if the school and the teachers are to function effectively. The basis for conceptual understanding and knowledge as well as retention is in encouraging the building up of what may be described as "mental library" of illustrations of the subject-matter or material being presented. To do this there is need for a series of teaching materials (both audio and visual which are carefully selected or developed and properly presented. To deliver good quality teaching the concern must not be only on just what is to be taught but also on how it is to be taught.

Nigeria, like many developing African countries expend a lot of money on import from overseas of many resource materials with very little being produced within the country.
Overseas-produced resource materials are very expensive, take a long time to arrive and may not be good for use locally because they may not be culture-related. There is also the problem of spare parts availability and regular maintenance at the local level. These problems often leave many resource materials purchased at very high cost to be abandoned. What this can therefore be translated to mean is that these countries should begin to look inward. Means of producing cheap custom-made resource materials locally for teaching must be found. These countries need to mobilize their local resources and make use of their local agencies and Institutions like Art Council or department, commercial artists, printers, libraries, manufacturers, etc. to develop and produce resource materials. Both the students, the teachers and the school boards have roles to play in the production of resource materials for teaching in the secondary schools. Students can be taught the necessary skills to produce a lot of materials they can use. The production of these materials can in fact be an integral part of their learning experience and such a process can help students develop positive attitude to learning, critical thinking ability, interest and appreciation as well as acquisition of information and other relevant skills. Lack of materials and facilities should not be a problem to any articulate teacher who is desirous at giving her or his students rich-learning experiences especially through their own creative production. Even In times when there are more students than ever before, who are expected to learn more and more in less time, a well prepared materials by teacher properly timed In presentation can turn a drab classroom into attractive setting, aid detailed study by the students and make learning an interesting adventure in living.

Perhaps the most important area in educational resource materials provision is in the area of textbooks production. Textbooks play a major role in the process of improving the overall effectiveness of an education system. Well conceived textbooks can enhance progress and encourage Innovative styles of teaching and learning. Nigeria, like most developing African countries depend mainly on foreign-produced textbooks most of which are very expensive for the school or the students to purchase and contain information unrelated to the cultural context of the students. Education policy makers in Nigeria and other developing African countries therefore need to establish a policy and or develop culture of producing textbooks which are designed with both the financial and cultural context as well as other realities of the local classroom in mind. In this way the books can be expected to encourage the students to play active part in the learning process, make learning a pleasurable experience and help to make preparation of the lessons easy for the teachers.

Finally one is constrained to state that a lot of the Improvement being sought in our schools depends greatly on the teachers and in particular on their preparation for their teaching duties. Just as good, training can improve teachers' abilities to deliver good quality teaching, so also training can Improve the teachers' attitude. Another implication of the findings of this study is, therefore, for better teacher training and for provision of In-service training for those already on the field.
REFERENCES


