

ASSESSMENT OF THE UTILIZATION OF MATHEMATICS TEACHERS IN NIGERIA

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Abstract

This study assesses the utilization of mathematics teachers in Nigeria primary schools. The NPE and UBE Policy statements encourage a change from the use of TCI 1 teachers in the primary schools to using teachers with at least the NCE, and the use of specialist teachers who teach only mathematics. There is therefore, the need to assess the use of these teacher. Three research questions were raised. The study employed the sample survey design. The population of the study consists of 157 primary classroom teachers in Edo State. Data were collected and analyzed using simple percentages. The findings arc: (1) majority of primary school teachers have the minimum NCE qualification, though very low percentage has the NCE qualification in mathematics Majority of Primary school teachers teach all subjects in the curriculum, including mathematics and (ii) more rural school than urban school utilize teachers to teach all subjects in the curriculum. Therefore, mathematics in Nigeria primary schools is taught by non-specialist teachers. The educational implications of the findings are fully discussed and recommendations made.

Introduction

Primary education is the base and foundation of school based teaching and learning Mathematics is generally accepted as a science of size, numbers and shapes. Primary Mathematics education therefore, is the science of size, numbers, shapes and space, and problem solving skills taught in schools to children aged 6 to 11 However, our idea of mathematics depends so much upon our experiences and our knowledge of the subject.

In Nigeria, the primary education sub-section lacks staff with requisite knowledge and the necessary skills for curriculum delivery and school management (UBE, 2001:2). Factors adduced for this include shortage of personnel and low academic qualities of the entrants into pre-service-teacher training the theory based nature of teacher education programme, and the resultant poor classroom practices, and the uncoordinated integration of trained teachers into the profession. The problem may not be that of inadequate teachers in primary schools but of quality utilization of the available teachers.

From the publication of the National Policy on Education in 1977, immediate question has been that of how to implement the Policy. In September 1979, free and universal primary education was introduced with its attendant problems of inadequate teachers, and subsequent utilization of unqualified and poorly trained teachers (Ehiamentalor, 2003). In 1999, the Federal Government set up the Universal Basic Education (UBE) Programme to cater for children in primary one to third year of junior secondary school, and the Attainment of the Education for all (EFA) goals (FRN, 2004). Thus, the UBE programme is intended to actualized the ideas expounded in the NPE, and also a reform measure by the Federal Government, which is aimed at rectifying the existing distortions in the basic education sub-sector of our education system, (Tahir, 2004).

This study is therefore, concerned with assessing the utilization of mathematics teachers in Nigeria primary schools. The main focus of the study is to:

- i. Report on the characteristics of primary mathematics teachers and their school settings; ii. Assess the practice of utilization of primary school mathematics teachers; and iii. Identify factors of school setting that may be useful as explanatory variable on the practice of utilizing primary mathematics teachers in Nigeria primary schools. **Research Questions**

Three research questions are therefore, raised:

- i. What are the qualifications of primary school Mathematics teachers?
- ii. Do primary school teachers teach all subjects?
- iii. Do primary school teachers who teach all subjects differ by school location?

Review of Related Literature

The question of teacher's utilization is one in which quantity and quality have to go together. Quantity of teachers means that learners have to be served by teachers in terms of reasonable teacher-pupils ratio while quality of teacher has to do with teachers who are appropriately trained, motivated and constantly professionally supported (Obayan, 1994). The quality of education is largely tied to the quality and supply of teachers in the system. Utilization of teachers means putting to a practical purpose classroom teachers in the various subject areas of specialisation. Here, the question is how best do schools and administrators make use of their available qualified (specialist) teachers in teaching primary school mathematics!

Research has shown that the teaching and learning of mathematics in Nigerian Primary School have not made the .desire impact: for primary school teachers have no adequate mastery of the primary Schools mathematics content (Harbor-Peters and Omaka, 1991); that low percentage of science teachers (including mathematics) having at least NCB certificate as minimum qualification, and with most teachers teaching all subjects in their various class (UBE, 2001). The USE also reported a general low level of performance of pupils in mathematics achievement test.

Bishop (1985) states that (i) A curriculum is only as good as the quality of its teachers, (ii) No change in practice, no change in the curriculum has any meaning unless the teacher understands it and accepts it; (iii) No genuine innovation occurs unless the teachers are personally committed and involved from start to ensuring its success.

Recently, three categories of primary school teachers have been identified: Teachers Grade 11 Certificate (TCI 1), Nigeria Certificate in education (NCE), and Bachelor of Education holders. They are specialist who ended in teaching all subjects in the school timetable (UBE 2001).

Research, however shows that students who ended in teacher training colleges were normally those who found it difficult to enter into secondary schools (Obi, 1980), and secondary school dropouts (Okorosaye- Urubite, 1998). The result, they had on the average a low academic attainment at the end of the Grade Two. Hence, the primary school mathematics curriculum has been generally less than truly successful for teacher effectiveness or competence in and out of class is a great indicator of his academic and professional quality.

Eraikhuemen and Eraikuemeri (2005), investigated the practice and problems of mathematics assessment in Nigeria primary schools, in Edo State. Out of 300 teachers sample for the study, they found that 25% of the teachers specialized in mathematics. As primary school teachers teach all subjects in curriculum, they concluded that 76 percent of the teachers teaching mathematics in Nigerian primary Schools are not specialist in mathematics. Tahir (2004), also reported that, in 2003, out of the 598, primary school teachers, 252, or 42.8 percent were with at least NCE as minimum qualification. Also Urevbu (2004), reported that, in 1999 only 40 percent of primary school teacher had the NCE.

From the available studies the primary school teacher is trained as a generalists who must teach all subjects though majority have at least the NCE qualification and therefore, can be regarded as specialist teachers. A low percentage of the teachers are specialist in mathematics who also teach all subject. A low percentage of the teachers do not teach all subjects, which may include mathematics. Research has shown therefore, that the practice of utilization of teachers in the primary school is more of the sole-teacher than specialist-teacher.

Method

This study is a descriptive research and it is basically exploratory. It is a descriptive research that examines the current, situation of an issue so as to make decisions to improve the situation. The research population consisted of all classroom teachers in public primary schools in Edo State. A local government area was sampled from each of the three senatorial districts with four schools from each Local Government Area. Twelve primary schools were sampled altogether with all the classroom teachers as subjects for the study. The basic sampling procedure for the study was the stratified random sampling technique. The instrument used in this study is: classroom Teachers' Utilization Questionnaire (CTUQ). The CTUQ consists of 14 items on biographical information and solicited information on subject taught, number of students in class, numbers of mathematics period per class. The CTUQ was validated by two mathematics education experts. The research instrument was administered.

Data collected were analyzed using descriptive statistics, that is, simple percentages.

Results

Research Question 1

What are the Qualifications of Primary Mathematics teachers?

Table 1: Percentage of Primary School Mathematics Teachers by Qualifications

Qualification	Total	
	No	%
SSCE	13	8.3
TCII	29	18.5
B. Ed/NCE (mathematics)	06	3.8
NCE/ (others)	81	51.6
B. Ed/B.Sc (ed.),others	17	10.8
OND/HND	11	7.0
Total	157	100%

Table 1, above shows that 38.5 percent are TCII, 3.8 percent are B.E/ NCE (Mathematics) 51.6 percent are NCE (other than mathematics) and 10.8 percent (SSCE and OND/ HND) have n: teaching qualifications. That is, 84,7 percent have teaching qualification. A further examination of the table shows 66.2 percent (NCE, B. Ed and B. Sc (Ed.), have the minimum qualification of the Niger:-Certification in Education (NCE). In addition, the table shows that 3.8 percent have the minimum NCE qualification in mathematics.

From the foregoing, it would be said that primary mathematics teachers fall into three categories; first, teachers with the required minimum qualification: second, trained teacher without minimum qualification and third, teacher without teaching qualification. The second category of teachers comprise TC 11 holders. And B.Ed/ B. Sc (Ed), NCE who are not specialists in mathematics though they are specialists in other subject areas. However, the TC II holder in a generalist teacher trained to teach all subjects in the; }curriculum.

The study found that though most primary school mathematics teachers have the minimum qualification of the NCE,;the proportion of specialist mathematics teachers is very low. The results obtained therefore, reveals- that mathematic in the primary school is mostly taught by non-specialist teachers.

These findings are in line with the research findings of Eraikhuemen and Eraikhuemen (2005) and UBE (2001). However, these findings contradict the findings of Tahir and Urevbu (2004). Variation of the Vrevbu and Tahir reports with the findings of this research may be geographical. year of study, as well as the sample size. The two reports are of a national scale with a large number of subjects (Schools) and Measures (teachers). Consequent upon these and over'the years many serving teachers might have enhanced their qualifications through in-service training, and the recruitment of new teachers with the minimum qualifications by schools.

Research Questions 2

Do Primary School Teachers Teach all Subjects?

Table 2: Responses of Classroom Teachers To Teaching all Subjects

Response	[Number	Percentage
Yes	116	73.9
No	41	26.1
Total	157	100.0

The study therefore found that majority of primary school mathematics teachers teach mathematics and all other subjects in the curriculum, and that some schools utilize few teachers who do not teach all subjects. This finding is in line with the research finding of Eraikhuemen and Eraikhuemen (2005) and UBE (P. 112). Eraikhuemen and Eraikhuemen, found that, majority of teachers in Edo State primary schools teach all subjects. The UBE study also corroborated the research finding that majority of primary school teachers in Nigeria (65.1 percent) teach all the subjects in their various classrooms.

Research Question 3

Dom Primary School Teachers who Teach all Subject Differ by School Location?

Table 3: A Cross Tabulation of Responses of Class Teachers who Teach all Subjects

by School Location

Urban			Rural			Total		
Response	Count	% within school Location	% of Grand Total	Count	% within School Location	% of Grand Total	Count	%
Yes	69	59.5%	44.0%	47	40.5%	29.9%	116	73.9%
No	28	68.3%	17.8%	13	31.7%	08.3%	41	26.1%
Total	97		61.8%	60		38.2%	157	100%

Results from table 3 shows that though more rural schools utilize teachers to teach all the subjects than urban schools, however, the proportion of teachers who teach all subjects is more in urban schools than rural schools. This can be explained by the fact that there are more teachers in urban schools than rural schools.

Recommendation and Conclusion

Majority of primary school teachers have the minimum qualification of the NCE. However, the proportion of primary school mathematics teachers with the minimum qualification of the NCE in Mathematics is very low. Majority of primary schools teachers teach all subjects including mathematics in their various classes. Rural schools utilize teachers to teach all subjects than urban schools. However, the proportion of teachers who teach all subjects is more in urban schools than rural schools.

Based on the finding of this study, the following recommendations are made:

- 1) There is an urgent need for the retraining of primary school teachers generally as most of them are not specialists in mathematics.
- 2) State Ministries of Education should establish efficient inspectorate services to monitor and maintain minimum standards, and to organize in-service training seminars and workshops for teachers.

Governments should rationalize staff between public schools in urban and rural schools to ensure adequate and efficient distribution of mathematics teachers in quantity and quality.

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