AN ASSESSMENT OF REGULATORY STANDARDS AND SPATIAL DISTRIBUTIONS OF PUBLIC PRIMARY SCHOOLS IN CALABAR MUNICIPALITY, NIGERIA

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Abstract
This study examined the regulatory standards and spatial distribution of public primary schools, by carrying out a comparison between the available primary education facilities with the set UNESCO standards of 1996 in Calabar municipality of cross river state. Global Positioning System (GPS) receiver was used by the researchers to obtain the coordinates (latitude and longitude) of the public primary schools in Calabar municipality. Also, the digital map of Calabar municipality of cross river state served as the basic map on which the positions of the schools were plotted. Data pertaining to the population figures, pupil`s enrolment, number of classrooms and teaching personnel in each of the schools were sourced from the records of the various schools through the State Universal Basic Education Board (SUBEB). The data analysis was carried out with ArcGIS 10.1 (version) software and UNESCO standards of 1996. Result of the study showed a clustered pattern in the southern part of the municipality and about 2kilometers buffer in the northern part suggesting that some pupils around northern parts of Calabar Municipality trek more than 2kilometers to school. The net enrolment ratio in the area was 14.6%. The net enrolment ratio indicates that there were more pupils in private schools than in government public schools. The study concluded that school location maps should be provided and all related information to assist government in expanding current schools that are overcrowded. The study also suggests that there should be new sites for schools in the area, and that government should improve the standard of public schools in order to enhance patronage and increase the net enrolment ratio of pupils in government public schools.

Introduction

After the Dakar Declaration of Education For All (EFA) and the reaffirmation of some of the United Nations Millennium Development Goals (MDGS) of September 2001, International Development Partners (IDPS), Government, Civil Society Organizations (CSOS) and other stakeholders have done a lot to promote both the EFA and MDGS. This has been done through the advocacy and policy dialogue of the United Nations (UN) to provide access to free, compulsory and qualitative basic education. Nigeria, recognizing education as a fundamental human right became a major signatory to the protection of the right of the children with the launch of the Universal Basic Education (UBE) on the 29th of September 1994. With determination and much commitment in 2004, the country enacted the UBE act to fast track the attainment of education for all goals. The enabling legislation of the compulsory free 'UBE ACT' provides a 9 years continuous and uninterrupted formal education (comprising 6-years primary and 3 years junior secondary education) known as 'basic education' for every Nigerian child of school going age, as well as reduce incidence of drop out from the formal school system through improve relevance and efficiency.

Education has always been considered as the key to success. It is believed that he who has education can break free from the jaws of poverty. Primary education as it is known in Nigeria is meant to equip children with the inculcation of permanent literacy, and numeracy, and the ability to communicate effectively. Therefore, it is in place to say that primary school education is very important as it sets the pace of a person`s educational career. In many developing countries including Nigeria, educational opportunity has become a social and political good and this has led to declining quality (Nkinyangi, 1982). The state of school infrastructure has been shown to have a major impact on perceived and actual educational quality and on sustained pupil access in Nigeria (UBEC, 2012a, NPC and RTI international, 2011).

More so, universal basic education plan of 2010-2019 reveals that for effective teaching and learning, the teacher/pupil ratio should be 1:35, whereas UNESCO prescribes the ratio of 1:25 in public primary schools (Chukwu,2011), and with the walking distance of 1-2km for all learners of primary school-going age (Federal Ministry of Education, 2009). Despite large amounts of money being allocated to UBE, studies have consistently commented on the poor state of repair of many Nigerian public primary schools (e.g. Hardman, 2008; Holfeld, 2008).

In the 2010, over 40% of respondents perceived that there were problems with primary school buildings and facilities, as well as classroom overcrowding and spatial distributions of primary schools. School supply has an impact on both pupil access because distance to school is a major factor in children`s enrolment, and on school quality, since insufficient schools to satisfy demand for schooling can lead to overcrowded classrooms (NPC and RTI International, 2011). Rather than looking at school provision directly, the 2010 NEDS consider school provision in terms of school proximity. This is particularly important as distance to school was the most widely cited reason in the survey for children never having attended school, mentioned by almost a third of respondents and by a higher proportion of poorer and more rural households.

Few studies carried out on distance to school and dropout situations (e.g. Abiodum, 2012; Filmer & Lant, 1997; Hoover-Dempsey, 1997) show that proximity to school has the tendency of moderating for dropout. Such studies reveal that children who trek long distances to school are more likely to dropout than their counterparts who trek shorter distances.

Despite the launch of the UBE in Nigeria with fanfare and much commitment, the quality of basic education in Nigeria is seemingly very poor with a good number of children of primary

school age out of school. This has led to low demand and unacceptable net enrolment ratio of 80% suggesting that a substantial proportion (20%) of primary school ages are not enrolled in primary schools nationwide. Again, education institutions are confronted lately with increasing pressures to improve the quality of education process and management. Based on these issues, the focus of this study was to investigate the degree of primary school education compliance with united nation education scientific and cultural organization (UNESCO) globally acceptable standards.

Specifically, this study was an assessment of regulatory standards and spatial distribution of public primary schools in Calabar Municipality, Nigeria with emphasis on the relationship between net enrolment ratio and spatial distribution of public primary school.

To guide this study, the this research question was posed:

1. To what extent does net enrolment ratio relate with spatial distribution of public primary school?

Method

This study was a survey and the population consisted of all the 24 public primary schools, 485 teachers, and 10225 pupils in Calabar Municipality. From the population, the researchers made a sample of the entire 24 public primary schools (the census of schools) in the Municipality, through purposive sampling technique. The instrument used in the collection of data in the research were data from State Universal Basic Education Board (SUBEB), and a hand held GPS (Global Positioning System), used to obtain the coordinates points (latitude, longitude) of all the public primary schools in the study area. In order to prepare data from the information obtained from SUBEB and the GPS, the researchers used ArcGis statistical package, version 10.1, to analyze the pattern of distribution as well as the UNESCO 1996 standards to and analyze the net enrolment and spatial distribution of schools in the area.

Results and Discussion

Research question one

To what extent does net enrolment ratio relate with spatial distribution of schools? UNESCO standards 1996 were used for the analysis. The result shows a net enrolment ratio of 14.6%. This implies that majority of the pupils within age 6-11 are found more in private primary schools than in government public school.

Figure 1: Distributions of Public Primary Schools in the Study Area

The spatial distribution of schools as shown in figure 1 indicates that schools tend to have a clustering pattern. The clusters are also at different locations. The first cluster is found at the southern part of the study area (Calabar Municipality), which include Akim, Ediba, Marian, Barracks Road among others. The second is few schools clustering around the central part of Ikot Anwatim, Ekorinim and Ikot Ishie. The Northern part has few schools that are linear (that is close to the major roads such as the Murtala Mohammed highway). The areas that have few numbers of public primary schools include Nyahasang with only Eyo Ita memorial primary school serving the whole of that area. Also Akai Effa has only one public primary school in the area whereas the areas are expanding annually with increasing population. However, Ekorinim, and the settlement along the highway such as; Ikot Omin, Ikot Effanga and Ikot Eneobong have few schools. Population of these areas seems to be increasing, indicating that those areas need more schools.

In general, spatial distribution analysis in Table 1 indicates that the distribution of schools is a clustered pattern using the Near Neighbor index. The index, as given in table 1, shows index of (Rn=0.94; <1).

Table 1: Near Neighbour Index

	VALUES	N/A	Rn
D	1.21666		
2D	2.43333		
A	158.902	0.151036	0.94
N	24		

The result in Table 1 shows the mean distance between the different schools. The Nearest Neighbor Index (R_n) obtained is close to zero (0) (Rn= 0.94 < 1.0) and shows evidence of clustering of the various schools (Table 2). Using the general rule:

- Clustered: R_n = 0 All the dots are close to the same point.
- Random: R_n = 1.0 There is no pattern.
- Regular: R_n = 2.15 There is a perfectly uniform pattern where each dot is equidistant from its neighbours.

Figure 2: The pattern of distribution of schools shows clustered pattern

Figure 3: Catchment of Public Primary Schools in the Study Area

Figure 3 shows that almost all the 24 public schools are served with less than 2km service radius using UNESCO (1996) standards. Only some pupils around Eko Odoso and other Northern part of Calabar municipality trek more than 2km. Generally, the suggesti on is that more schools are needed on the northern part. This also justifies that, all existing 24 public primary schools are served within the stipulated service radius of UBE (3km) in the study area.

Results of the study are in conformity with the findings of Chukwu (2011) who reported a UNESCO 2km service radius standard and Federal Ministry of Education (2009) walking distance of 2-4km for all learners of primary school-going age. The finding of the on net enrolment and spatial distribution showed that many children dropped out of school because of long trekking distance. This result   corroborate the report presented by NPC and RTI International (2011) that school supply has an impact pupils access to school because distance to school is a major factor in children`s enrolment, and on school quality because insufficient schools to satisfy demand for schooling can lead to overcrowded classrooms.

Distribution of public primary schools in Calabar Municipality, in particular, and Cross River State, in general has been a long standing problem. Some areas have public primary schools at proximal locations while some others, in time past, have distantly located schools that make trekking distance high for pupils. The situation is particularly worse for areas where government residential estates are located. The findings of this study tend towards this situation with the northern part of the study area like the State Housing, the Federal Housing and Eighth Mile having more trekking distance to public primary schools. The researchers observed an inclination to private schools in these northern parts of the Municipality. Based on the findings of the study, the following recommendations were made:

1. Government should build more schools in the northern part of Calabar Municipality to reduce trekking distance for pupils in the area.

2. Government should construct modern classrooms equipped with basic amenities so that it can attract more pupils into government public primary schools.
3. Government should as well reduce the service radius to the minimum of 500km within the study area so as to enhance patronage by the public thereby increasing the NER in the study area.

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