# Are Rural School Children at the Same Academic Level with their Urban Peers? Evidence for Education Policy in Nigeria

Joseph I. Amuka
Fredrick O. Asogwa
Anthony O. Agu

**Abstract**

As important as education for all is, qualitative education for all matters as well. Neither education for all nor qualitative education for all can be achieved without a closer look at the way rural education is organized, especially in the developing countries. The concern for rural education in developing countries is obvious. Majority of the children in developing countries live in the rural areas and under heavy social, economic and political deprivation. It is no choice of theirs to be rural and depriving them of qualitative education now means postponing the day they will be liberated from the situation in which they find themselves. As a first step to guide education policy in this direction, performance evaluation of rural and urban school children was done in 2012 in Nigeria. Really, judging by the test scores of both groups of children, there is a serious performance gap. What can then be done? Solution is in providing incentives to rural teachers, making education materials accessible in rural schools, retraining programme for rural teachers, provision of social services (water, electricity, internet service) in the rural areas to make life attractive and redesigning curriculum to include local examples.

**Keywords:** Rural, Urban, School, Children, Academic, Level, Nigeria

## Introduction

Education is an essential element in every aspect of human life and the declaration of education for all by 2015 by the global community is very laudable. Apart from being a veritable tool for social integration and escape from poverty, education is a behavioural changer which helps people to break loose from chauvinistic practices. It integrates one into a more dynamic and progressive world where more opportunities abounds. Viewed from a wider perspective, the social benefit of education is very high, which supports heavy investment in the sector in developed countries. Return on investment in education overlaps from generation to generation in the form of discovery of better ways of doing things, availability of wider range of consumer goods and longevity. Manrique Milliones et al (2011) maintain that education is the motor of meaningful economic and social policy.

Rural education is an essential component of universal primary education, making it strategically important in the effort to eradicate illiteracy all over the world. Special attention for rural education is campaigned for because of the condition of rural children and communities. In one respect, majority of the world children live in the rural areas under heavy deprivation. In another, rural children are impoverished and study by Oxaal

(1997) shows that education is a veritable tool for poverty alleviation. Oxaal states that higher income is associated with higher education because of the impact of education on skill development and employability. That is why Schreuder (2010) stresses that rural children lack important tool (quality of education) they need to overcome their disadvantages. Thus, taking care of rural education is a step further in meeting millennium development goals 1-4.

There is renewed interest now in the quality of education received by rural school children, especially those in the developing countries. Advances in information and communication technology is a serious signal that tomorrow belongs to those with skills and for one to cope with the changing world, he or she must not only be educated but must receive qualitative education and training. Seen in this way, majority of the world's children that live in rural areas will be left out in the fast moving technology train tomorrow because of where they are today. Education in the rural areas is inferior to the one received in urban centres (Schreuder, 2010, Alcazar, 2009), and this is not unconnected with the poor quality of teachers that impart knowledge to rural children given that better ones prefer to teach in urban centres (Mulkeen, 2005). Mulkeen says that rural teachers lack access to support services such as in-service training courses, quality books and instructional materials unlike their urban counterparts. Poor access to instructional materials impairs learning. He summarizes that rural children are more difficult to educate due to lack of parental encouragement and excessive domestic demand on their time.

It does not follow that urban schools should be left behind while trying to raise the standard of rural education. What one is saying is that equity demands that design and implementation of education policy should recognize the current imbalance between the two groups of children. Urban children should be motivated in the areas they have problem such as declining interest in mathematics and sciences (Schlakman and Unrau, 2006). A study by McCracken and Barcinas (1991) shows that aspirations to advance in education, occupational choice and expectation of higher income are exhibited more by urban children. The aspirations of the rural children should be raised as well. Qualitative education for majority of the world's children today will benefit the global community tomorrow in many respects. At least, it will reduce the number of beggar nations and people, reduce unemployment and crime, reduce social unrest and bring a lasting peace to the entire human race. Therefore, effort to find the differences in school performance between the rural and urban children is necessary to guide education policy and curriculum designers.

Mulkeen shows that although primary school enrolment in Africa increased from 78 % to 91 % between 1998 and 2002, the increases were mainly in urban areas. Mulken (2005) states that every normal child has a latent potential that can be developed to the benefit of all. According to the Bulgarian government, 'the children' this time are our wealth. We have to oil and service our wealth so that it will last long. Poor quality education in Nigeria and other Sub-Saharan Africa countries support research effort on the causes of poor academic performance among school children in the sub-continent. Though, a good number of researches has been done in America, Europe and Asia, those studies cannot limit studies in Africa because of institutional, economic, social and technological differences. Standard of education is going down in Nigeria and the situation is worse in rural areas where access to private schools is limited because of

poverty. Considering the poverty level above 60 percent in Nigeria today (NBS, 2010), poverty reduction strategy of the government will not mean anything if the people are not skilled to compete in those jobs that will leverage them out of poverty in the long run. As greater numbers of Nigerians live in the rural areas (Ochiawunma, 2002), it means that greater number of school children reside in the rural areas as well. In this sense, the present study is highly needed in Nigeria more than any other country.

**Related Literature**

The Social Cognitive Theory posits that social environment influences academic achievement and self-concept of an individual. Rich environment motivates learning and enhances children's education performance and outcome. Such factors that make school environment rich are availability of instructional materials, quality of teachers, electricity, water, physical structures such as good classroom, and library. In line with this theory, children in an urban school are at advantage of achieving better academic outcome than their rural counterparts since urban schools have richer environment conducive for learning. Following this theory, many researches have been done in both developed and developing countries to find out the differences in academic performance between rural and urban school children.

Researches on rural-urban difference in school performances are interesting ones because of the nature of emerging results from different countries. Research findings in America are startling and evidence points to either no difference in school performance between rural and urban children (Fan and Chen, 1999), or better performance by the rural children over the urban ones (McCracken and Barcinas, 1991; Yang and Fetsch, 2007). While Fan and Chen find no evidence of difference in performance between rural and urban school children in school test in four subjects, study by McCracken and Barcinas was startling and reveals that rural children in Ohio have higher grade point average than their urban peers, though, urban children have higher aspiration to further their education. This is similar to a later finding by Yang and Fetsch showing that despite the fact that the self esteem of rural American children is the same as that of their urban peers, rural children may even have better scholalistic competence.

Evidence from other countries on the performance differential between rural and urban school children seems to contrast with the results in America (Gardiner, 2008; Greaney et al, 1999). Gardiner's study in South Africa reveals that remote rural and rural children perform worse than township and urban school children in school test in language, mathematics and natural sciences. This is in line with the research finding in Bangladesh by Greaney et al that urban children are two times better than rural children in academic exercises. Does that mean rural setting of America is different from rural setting in developing countries? While this is true, one thing that is even truer is that America has a good functional education system to the extent that rural-urban differential is not clear.

Many scholars have tried to find out the causes of performance differences in school test between rural and urban children. Among the causes are the extra lesson urban children receive after school (Nadel and Sagawa, 2002), which give them valuable advantage over their peers in rural school, and secondly, children in rural areas find themselves in the midst of illiterate parents who are not in the position to render any useful academic help (Mulkeen, 2005). Moreover, urban children receive individual attention and help from both teachers and parents (Hunt and Hopko, 2009), while parents in the rural areas are

less available to supervise the school works of their children and assist them in their class assignment (Perrocel, 2000).

Study by Suleman et al (2012) in Pakistan reveals that the performance of students in rural schools is affected by availability of educational facilities, absenteeism, teachers' abilities and distractions as a result of domestic duties, and this falls in line with the discovery of Mulkeen that the supply of educational services such as quality and experienced teachers favour urban schools more than rural ones in Africa, and there is a positive relationship between school children's performance and the experience and qualifications of school teachers (Devi and Mayuri, 2003). Study by Dent (2006) in Uganda reveals that availability of educational services such as school library have positive impact on the performance of rural school children. Another contributing factor is the design of school curriculum (Taylor and Mulhall, 2001). Taylor and Mulhall argue that school curricula is always designed with examples that are not suitable for children in rural areas, and the use of familiar examples enhances academic excellence. Bouck (2004) follows the same curriculum argument in the observation that curriculum design, teacher quality and financial problems are those unfavourable experiences of rural African school students. This argument holds true in the sense that when you are teaching a child with what he has known, the message flows and the child can even make useful contribution.

The need to have good and conducive school environment was explored by Abdel Rasoul et al (2012) whose study in Egypt found that exposure of school children to lead paint dust has negative effect on their performance. The study was a reinforcement of the finding of positive association between school environment and student performance (Berry, 2002; Pahdi, 1991), and that noisy environment impairs reading (Shield and Dockrell, 2002). On classroom organization, study carried out in Kentucky by Freeman and Anderman (2005) shows that rural classroom are more conducive for learning in terms of organization than urban ones. The study finds out that urban classrooms are often disrupted by noise and violence when compared to rural classrooms in the area. On the whole rural school students have higher mastery goal more than their urban peers.

Other factors found to have positive effect on the performance of rural school children are attendance to school and school meal (Acham et al, 2012). Acham et al (2012) in their study found that poor performance in rural schools in Uganda is mainly the problem of children from poor homes who are deprived of either breakfast or midday meal. Accordingly, they argue that good feeding pattern in schools; especially in rural ones will bring improvement in school test performance of children. Basically, many studies have been done in this area, but research has not been extensive as not to warrant further work, especially as it concerns developing Sub-Sahara Africans in particular where the standard of education seems to be in serious threat. Two major short comings were noticed in the previous research. They are-

1. Almost all the studies used descriptive statistics to do their analysis, thus treating school performance as only a causative of one factor, which is not so.
2. The use of secondary data ignores differences in the design of curriculum across states, that is, it is difficult for all the states in a large country to follow one curriculum design in all the primary schools.

In other to overcome these, the present study used regression analysis; in recognition of the role other factors such as maternal education can play in a child's school

outcome. Secondly the study area was narrowed down to a particular state where test was administered to a sampled group, which is a deviation from the use of secondary data.

**Methodology**

Past researchers applied mainly descriptive statistics in the analysis of the connection between school locality and academic performance of school children. This work departs from this and rather employed regression analysis because it sees performance in schools as dependent not only on one factor but on two or more factors. Descriptive statistics is inferior to regression analysis as a method of research when quantitative data can be gathered to inform policy. Ordinary Least Squares (OLS) method served our methodology well because of its Best Linear Unbiased Estimator (BLUE).

Four primary schools from rural and urban areas were randomly selected from Enugu in Eastern Nigeria where 201 pupils in elementary 6 were given test in three core subjects, namely; English language, mathematics and general studies. The three subjects were chosen because they are the test areas for the state and national common entrance examinations which will see them transit from primary to secondary school.

**The model**

Pfi= f ($x_i$)…….. 1

Where

$pfi$= average performance at test by i pupil

$(xi)$ = vector of the variables that affect i pupil's performance

Equation 1 can be transformed to make it estimable, therefore,

Pfi = $\alpha + \beta_0$lci +$\beta_1$mei+$\beta_2$tqi +$\beta_3$agei +$\beta_4$pvi +Ui ……..2

Where

$lci =$ School location of pupil i (rural=1, urban=0)

$mei$= maternal education of pupil i.

$tqi =$ qualification of teacher i.

$agi =$ age of pupil i.

$pvi =$ poverty status of pupil i

$\alpha$= intercept.

$\beta_0$, $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$= slopes of the model.

U$i$ =error term

other variables remain as defined before.

**Result**

Result of the regression analysis is presented in table1 of the appendix

**School Location (lc)**

School location and other variables included in the model appeared with the correct sign and satisfied the 'a priori' expectation. A variable appearing with the right signs is the first test that needs to be satisfied before further analysis could be made in econometrics.

The coefficient of school location is -9.433058, which is the impact of school location on school test score of school children. The econometric analysis indicates that a step movement from urban to less urban school reduces the average school test score of a pupil by 9.43 basic points. Or, on the other hand, a movement from rural school to an urban one increases the average school test score of a school pupil by the same 9.433058 basic points. By implication, taking into account, the school location leads to a significant change in performance of a primary school pupil as shown by the't' statistic of -6.9 and probability of (p□0.000). The result is in line with the finding of Gardiner (2008) in South Africa that urban school children are better than their rural peers in academic performance. With $R^2$ value of 0.41, the variables explain the model very well.
Another important revelation of the study is the positive relationship existing between maternal education and the performance of the school children. The coefficient of 1.25159 exactly means that a grade increase in the education of a woman will lead to 1.25 basic point increases in average test score of her child in primary school. The higher the education level of a woman, the more intelligent her child would be. However, the variable is not significant at either 1 percent or 5 percent level.

**Discussion of Result**

The purpose of this study is to find out whether there is difference in academic performance between the children in rural primary schools and those in urban areas. Test in English, Mathematics and General Knowledge was administered to 201 children from 4 randomly selected primary schools in rural and urban areas. Because of missing information, 131 pupils entered the analysis. The result of the analysis conforms to the earlier finding that there is intelligence gap between children in rural schools and those in urban areas (Greaney et al, 1999). Obviously, the superiority shown by urban children over their peers in rural schools in the exercise is clear and more than expected.
Effort was made to find out the root cause of the wide gap in result between urban and rural schools in Nigeria; and 3 major problems were discovered from information gathered. The number one cause of the gap is extra lesson urban children enjoy both at home and school outside the normal school hour. In the urban schools, extended lesson is always organized for them 3 times in a week and each day they go home, many of their parents are at hand to supervise the day's class work. Many parents hire private teachers for their children during the weekend. In rural schools, extended lesson is only organized when the children are going for external exam like national or state common entrance exam and or first school leaving certificate exam. At home, rural school children rarely receive help from parents and the only help that can come to them is the one they receive from their peers in higher class, and there is a limitation to this.
The other contribution to the performance gap is absenteeism in school which was discovered to be mainly a rural phenomenon. In the course of interview with a school teacher in one rural school, the teacher revealed that some of the children often abscond from school to make quick money as construction attendants or plucking fruits during season. According to the school teacher, mature ones among them engage in motor cycle transporting known as 'okada'.
The other serious factor contributing to the poor performance of rural school children is the distractions they receive from home in the form of domestic work and financial matters. Many of the rural children trek long distances after school in search of water on

a daily basis while week-ends are for the fetching of fire wood and farm work. These domestic chores leave them with little time to read at home to the extent that they depend mainly on the little knowledge they received in school.

On teachers' quality, there was no evidence to show that teachers in urban areas are more qualified than those in rural areas. However, the important discovery is that attendance to class and lesson notes of teachers in urban areas are more closely supervised by officials of education authority. As a, result teachers in urban schools observe work to rule more than those in rural schools. Such is an added advantage to school children in urban schools. Infrastructure wise, many of the rural schools are dilapidated and children in some of the schools sit on the bare floor as observed in the course of this research. Few communities can boast of electricity and water supply and both pupils and teachers use lantern to read. The situations distract learning.

**Conclusion**

Good policy implications can be drawn from this research for the attainment of the millennium development goal 2 in developing countries. First of all, there are serious gaps in academic performance and the quality of education received by rural children and their peers in urban areas which cannot be ignored. As long as majority of the children live in the rural areas, the needed transformation in the country's education will not be achieved until rural schools receive the needed attention. Infrastructural defects in the rural schools must be addressed to provide the environment of school conducive for learning activity. Two, social services that are important for quality life should be provided in rural areas to reduce the degree of distractions suffered by rural school children in their school work; and help to reduce the exodus of teachers from rural to urban schools. Water and electricity are the most needed now. And lastly, provision of instructional materials, closer supervision of teachers in rural areas with rural allowance will raise the morale of pupils and teachers in rural schools and bring improved quality education in rural areas.

World resources will be efficiently managed when qualitative education is pursued in pari passu with education for all since education helps people to manage resources better (World Bank, 2000a). Urban and rural areas provide two different environments of learning and challenges to children. Such environmental challenges like good teachers, classroom, teaching materials and class competition exert positive influence on learning. The earlier they are recognized in rural areas, the better for rural education. The limitation of this study is its inability to track the children who transferred from rural schools to the urban ones. This is important to throw more light on the role environment of school plays in influencing the academic performance of a child. Effort is being made for such a follow-up research.

**References**

Bedard K. and E. Dhuey (2006) The Persistence of Early Maturity: International Evidence of Long-Run Age Effects, in Dobkin C. and F. Ferreira (2007ed) Do School Entry Laws Affect Educational Attainment and Labour Market Outcomes? Paper Presented at UC Santa Cruz and NBER-Education Group.

Busari A.O. (2012) Evaluating the Relationship between Gender, Age, Depression and Academic Performance among Adolescents. Scholarly Journal of Education, Vol.1 (1) p.6-12

Cosden M.; J. Zimmer and P. Tuss (1993) The Impact of Age, Sex and Ethnicity on Kindergarten Entry and Retention Decisions. Educational Evaluation and Policy Analysis, 15 (20) p.209-222, in Lin H.; L. Freeman and K. Chu (2009ed) The Impact of Kindergarten Enrollment Age on Academic Performance through Kindergarten to Fifth Grade. European Journal of Social Sciences, Vol.10 (1) p.45-54.

Datar A. (2006) Does Delaying Kindergarten Entrance give Children a Head Start? Economics of Education Review, Vol. 25, p.43-62

Dobkin C. and F. Ferreira (2007) Do School Entry Laws Affect Educational Attainment and Labour Market Outcomes? Paper Presented at UC Santa Cruz and NBER-Education Group.

Ebenuwa-Okoh E.E (2010) Influence of Age, Financial Status and Gender on Academic Performance among Undergraduates. Journal of Psychology, 1 (2) p.99-103

Elder T.E and D.H. Lubotsky (2008) Kindergarten Entrance Age and Children's Achievement: Impact of State Policies, Family Background, and Peers. Research Funded by National Institute of Child Health and Human Development and University of Illinois.

Elliott A. (2006) Rethinking and Reshaping Early Childhood Care and Education Policy –Visions and Directions for Future. Australian Council for Educational Research, National Education Forum Conference, Brisbane.

Hamori S. (2008) The Effect of School Starting Age on Academic Performance in Hungary. Centre for Doctoral Studies in Economics, University of Mannheim, Discussion Paper no.34

Heckman J. (2000) Policies to Foster Human Capital. Research in Economics, 54, p.3-56

Lin H.; L. Freeman and K. Chu (2009) The Impact of Kindergarten Enrollment Age on Academic Performance through Kindergarten to Fifth Grade. European Journal of Social Sciences, Vol.10 (1) p.45-54

Lincove J.A. and G. Painter (2006) Does Age that Children Start Kindergarten Matter? Evidence of Long-Term Educational and Social Outcomes. Educational Evaluation and Policy Analysis, Vol. 28, no.2, p.153-179

Malone L.M.; J.F. West; K.D. Flanagan and J. Park (2006) The Early Reading and Mathematics Achievement of Children Who Repeated Kindergarten or Who Began School a Year Late. Statistics in Brief. NCES 2006-064.

Pellizzari M. and F. Billari F. (2011) The Younger, the Better? Age Related Differences in Academic Performance at University. Research Paper Funded by University of Bocconi, Italy.

Ribble M. (1943) The Rights of Infants: Early Psychological Needs and Their Satisfactions. New York: Columbia University Press.

Schweinhart L.J. (2007) Outcomes of the High Scope Perry Preschool Study and Michigan School Readness Program in M.E. Young ed, 'Early Child Development from Measurement to Action: A Priority for Growth and Equity. Rural Education Action Project, 'Early Childhood Education. Standford University/Freeman Spogli Institute for International Studies.

Sparling J.; C.T. Ramey and S.L. Ramey (2007) The Abecedanian Experience, in M.E. Young ed, 'Early Child Development from Measurement to Action: A Priority for Growth and Equity. Rural Education Action Project, 'Early Childhood Education. Standford University/Freeman Spogli Institute for International Studies.

Yao B. and Y. Xie (2004) Thought on Current Situation of Kindergarten Teachers in Rural Areas. Kid Education (7-8).

**Appendix 1**

**Table1 impact of school location on children performance**

| Var | coeff | std err | 't' | p□ □t□ |
|---|---|---|---|---|
| Lc | -9.433058 | 1.366875 | -6.9 | 0.000 |
| Me | 1.25159 | 0.6688519 | 1.87 | 0.064 |
| Pv | -1.252942 | 1.474799 | -0.85 | 0.397 |
| Tq | 0.6650547 | 1.33027 | 0.5 | 0.618 |
| Ag | -0.9754453 | 0.5866048 | -1.66 | 0.099 |
| Cons | 26.21254 | 8.874971 | 2.95 | 0.004 |

R-squared = 0.4148
Adj R-squared = 0.3914