



School Location as a Predictor of Achievement in Reading among Nigerian Learners of English as a Second Language

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Abstract: This study determined whether school location was a predictor of English as a second language learners' achievement in reading when taught with synthetic phonics using the non-equivalent, non-randomized control group quasi-experimental design. The population of the study comprised 1844 primary one school pupils in Enugu East Local Government Area of Enugu State. Out of this population, a sample of 66 pupils from urban location and 52 from rural location was drawn using multi stage sampling technique. The instrument used for data collection was Initial Reading Achievement Test (IRAT) which was designed by the researcher. Mean, Standard Deviations and Analysis of Covariance (ANCOVA) were used to analyse the generated data. The results of the study revealed that school location significantly influenced pupils' achievement in reading. It also showed that there was significant interaction effect of teaching method and location on pupils' achievement in reading. It was concluded that in addition to teaching method, school location proved to be a predictor of pupils' achievement in reading. Hence, it was recommended that pupils from different school locations should be exposed sufficiently to equal literacy-enriched environment to bridge the gap in achievement among learners from urban and rural school environments.

Keywords: School location, literacy-enriched environment, achievement in reading, interaction effect, Initial Reading Achievement Test, synthetic phonics

Introduction

Reading is one of the four basic language skills which promotes life-long learning. It is the process of learning a number of skills that facilitates the interpretation of meaning and/or the comprehension of a written or printed text. The ability to read is seen as a benchmark for intellectual ability. Hence, reading is key to educational achievement. Synthetic phonics is perceived to be one of the effective ways of teaching beginner reading. It involves a part-to-whole approach in teaching pupils to convert letters to sounds. It is an instructional method that teaches children to first pronounce the sounds associated with specific letters and then combine them to form words in both the spoken and written language. Through synthetic phonics pupils are made to understand that the letters of the alphabet are speech sounds, which can be used to form words. Using synthetic phonics for initial reading instruction is expected to enhance learners' achievement in different reading skills. Achievement can be expressed according to school location.

Scholars, researchers and parents generally hold the assumption that a child's academic achievement may be greatly influenced either by the environment in which he lives or the school location (Amadi, 2018). 'Location' refers to the geographical setting in which a school is situated and such a setting could be rural or urban. Rural schools are located in the interior constituency of a state while urban schools are located in the township area of a state (Amadi, 2018). Rural-urban location of schools has been found to be one of the important predictors of differences in pupils' academic achievement. The urban environment is said to have a stimulating effect on

learning and social interaction which rural pupils are not exposed to. According to Singh, Abdul Rahman and Hoon (2010), some studies align with the commonly held belief that urban learners have relatively less problem coping with the language of instruction (English) compared to their rural counterparts. Nwosu (2009) observes that a wide gap exists between rural and urban areas and this gap as it concerns the academic achievement of students still remains inconclusive. Chianson's (2012) study shows that students in urban schools perform better than their rural counterparts in Circle Geometry. The study is a corroboration of Owoeye and Yara (2012), who compared the performance of students in West African School Certificate Examination (WASCE) between 1990 and 1997 based on school location, and it was shown that students in urban locations have better academic achievement than those in rural schools. The researchers however link the rural-urban dichotomy in achievement to uneven distribution of resources, poor school mapping, problem of qualified teachers refusing appointment or posting to isolated, remote villages, lack of social amenities, poor communication, nonchalant attitude of some communities and parents to schooling among others. Ramo, Duque and Nietos (2012) further reveal that the educational achievement of rural-based students was worse than those of urban-based students. This is in tandem with Ulo-Bethel's (2012) study, which also reveals that location had a significant influence on students' achievement in consonant clusters.

Conversely, Uzoegwu (2004) and Macmillan (2012) reveal that there was no significant difference in the achievement scores of urban and rural

students. Macmillan (2012)'s study show that achievement in physics was enhanced by the instructional strategy employed by the teacher, and not location *per se*. Macmillan further explains that despite the differences in the conditions of livelihood in urban and rural areas, the non-existence of achievement gap among students in the two locations may be because they were subjected to equal opportunities of learning physics through the use of the same instructional method. In another study that investigated the relationship between reading achievement and school location, Graham and Teague (2011) observe that rural and urban third graders have lower average achievement than their suburban counterparts. They note that the difference in average reading achievement for third graders in these three locations (rural, suburban and urban) reflect average achievement differences at the start of kindergarten. They also find that suburban children made greater gains in reading achievement from kindergarten to grade three than their rural and urban counterparts.

With regards to the interaction effect of teaching method and location on students' academic achievement, Egbe (2015) reveals that there was a significant interaction effect of method and location on students' achievement in English grammar. On the other hand, the earlier studies of Omeje (2009) and Terty (2010) indicate that there was no interaction effect of teaching method and location on students' achievement.

Researchers have given some explanations for the gaps in reading achievement of students across school locations. XU (2009) notes that rural youths exhibit lower educational aspirations than their urban

counterparts. He found that smaller percentages of students in rural schools were enrolled in post-secondary institutions. Other studies have also shown that students in rural schools tend to place less value on academics, and so have lower academic motivation (Arnold, Newman, Gaddy and Dean, 2005; Macmillan, 2012 and XU, 2009). This may subsequently affect their academic performance.

Differences in academic achievement of students have also been associated with different educational opportunities and school resources available to students in rural and urban environment. To substantiate this, Graham and Teague (2011) in their study on Early Childhood Education in United States report that 39 percent of teachers in rural schools accept that their school library was always adequate as against 61 percent of teachers in urban schools. In the same study, 13 percent of rural teachers indicate that their classrooms were often inadequate compared to 11 percent and 9 percent of teachers in suburban and urban schools respectively. Nwosu (2009) equally reiterates that schools located in urban areas can attract more quality students and teachers who are ready to take academic ventures seriously.

Unequal conditions present in different environments may lead to achievement gaps among students from different school locations. The variation in performance has been associated with a number of factors ranging from differences in school facilities to learners' attitude towards learning. Differences in methods of teaching may also influence the achievement of students in different school locations. This explains the need for the present study, which determined whether school

location predicts differences in reading achievement among Nigerian learners of English as a second language when taught with synthetic phonics.

Research Questions

The following research questions were generated in order to facilitate this study:

1. What is the difference in the achievement scores of pupils in urban and rural schools in reading?
2. What is the interaction effect of teaching method and gender on pupils’ achievement in reading?

Hypotheses

Two hypotheses were formulated and consequently tested at ($p < 0.05$)

H₀₁ There is no significant difference in the mean achievement scores of pupils in urban and rural schools in reading.

H₀₂ There is no significant interaction effect of teaching method and location on pupils’ achievement in reading.

Methodology

The study adopted the non-equivalent non-randomized control group quasi-experimental design. The instrument used for data collection was the Initial Reading Achievement Test (IRAT). It was constructed to test pupils’ ability in reading after being taught with synthetic phonics. Part one of the instrument was used to elicit the pupils’ demographic

information while part two comprised 15 items which covered different initial reading skills. The instrument yielded a reliability coefficient of 0.85 and was administered as pretest and posttest before and after treatment was administered. Data generated from the instrument was analysed using Mean, Standard Deviations and Analysis of Covariance (ANCOVA). While Mean and Standard deviations were used to answer the research questions, Analysis of Covariance was used to test the hypotheses at 0.05 level of significance ($p < 0.05$). The population of the study comprised all the primary one school pupils in Enugu East Local Government Area of Enugu State, Nigeria. The sample of the study was 118 pupils in four intact classes drawn from four public primary schools using multi stage sampling technique. Sixty-six pupils were sampled from urban locations while 52 were drawn from rural locations. One school each from the two locations was assigned to the experimental group and another school to the control group through tossing of coin respectively.

Results

Research Question One

What is the difference in the achievement scores of pupils in urban and rural schools in reading?

Table 1: Mean and Standard Deviation of Urban and Rural School Pupils’ Achievement in Reading (N=118)

Location	N	Pretest		Post test		Gain Scores	Gain Scores Difference
		Mean	SD	Mean	SD		
Urban	66	26.98	7.96	38.97	13.93	11.99	2.74
Rural	52	22.40	4.38	31.65	7.81	9.25	

Table 1 shows the mean and standard deviations of achievement scores of

urban and rural school pupils in reading. The result reveals that in the pretest,

pupils in urban schools had a mean achievement score of 26.98 with a standard deviation of 7.96 while pupils in rural schools had a mean achievement score of 22.40 with a standard deviation of 4.38. In the posttest, urban school pupils had a mean achievement score of 38.97 and a standard deviation of 13.93 while the rural school pupils obtained a mean score of 31.65 with a standard deviation of 7.81. The result indicates that the mean achievement scores of

pupils in urban schools are higher than that of their counterparts from rural schools. The implication is that school location makes a difference in pupils' achievement in reading in favour of pupils from urban locations.

Research Question Two

What is the interaction effect of teaching method and location on students' achievement in reading?

Table 2: Mean and Standard Deviation of Interaction Effect of Teaching Method and School Location on Pupils' Achievement in Reading (N=118)

Instructional Approaches		Location	N	Mean	Std. Dev.
Synthetic (Experimental Group)	Phonics	Urban	23	53.30	13.14
		Rural	33	33.42	8.92
Analytic Group)	Phonics (Control	Urban	43	31.30	6.10
		Rural	19	28.58	3.72

Table 2 shows the mean scores and standard deviations of the interaction effect of teaching methods and school location on pupils' achievement in reading. The results indicate that the mean achievement scores of urban and rural pupils in the synthetic phonics group were 53.30 and 33.42 with standard deviations of 13.14 and 8.92 respectively. Urban and rural pupils in the analytic phonics group also had mean achievement scores of 31.30 and 28.58 and standard deviations of 6.10 and 3.72 respectively. This shows that urban and rural pupils exposed to synthetic phonics (experimental group) achieved higher than their counterparts exposed to analytic phonics (control

group). The result also showed that urban school pupils in both groups achieved higher than their rural counterparts in reading despite the teaching methods used. This implies that there is interaction effect of teaching method and school location on pupils' achievement in reading. The level of significant interaction effect in the mean scores of the two groups was further verified by testing hypothesis 2 that is, no significant interaction effect of location and teaching method.

Hypothesis One

There is no significant difference in the mean achievement scores of pupils in urban and rural schools in reading.

Table 3: Summary of Analysis of Covariance (ANCOVA) of Rural and Urban School Pupils' Mean Achievement Scores in Reading when exposed to Synthetic Phonics Method and Analytic Phonics Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11332.930 ^a	8	1416.616	25.945	.000
Intercept	2347.979	1	2347.979	43.003	.000
Pretest	2168.188	1	2168.188	39.710	.000
Method	3718.308	1	3718.308	68.100	.000
Location	1382.405	1	1382.405	25.319	.000
Error	5951.443	109	54.600		
Total	168060.000	118			
Corrected Total	17284.373	117			

The result in Table 3 was derived from testing hypothesis one. The table reveals that $F(1,109) = 25.319$, $p = .000$. With the exact probability value of .000 which is less than the level of significance set at 0.05 ($p < 0.05$), the null hypothesis of no significant difference was rejected. Hence, there is a significant difference in the mean achievement scores of urban and rural

school pupils in reading in favour of pupils from urban schools. School location is therefore a significant factor in pupils' achievement in reading.

Hypothesis Two

There is no significant interaction effect of location and teaching method on pupils' achievement in reading.

Table 4: Summary of Analysis of Covariance (ANCOVA) of the interaction effect of Teaching method and Location on Pupils' Mean Achievement Scores in Reading

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11332.930 ^a	8	1416.616	25.945	.000
Intercept	2347.979	1	2347.979	43.003	.000
Pretest	2168.188	1	2168.188	39.710	.000
Method	3718.308	1	3718.308	68.100	.000
Location	1382.405	1	1382.405	25.319	.000
Method * Location	838.079	1	838.079	15.349	.000
Error	5951.443	109	54.600		
Total	168060.000	118			
Corrected Total	17284.373	117			

Table 4 presents the result of the analysis that tested hypothesis two. The Table reveals that F calculated yielded 15.349 ($F(1, 109) = 15.349$) which is not significant at .000. The exact probability value of .000 associated with

teaching method and location is less than 0.05 level of significance; ($p = .000$, $p < 0.05$), hence, the null hypothesis of no significant interaction effect of teaching method and location on pupils' mean achievement scores in reading is

rejected. Thus, there is a significant interaction effect of location and teaching method on pupils' achievement in reading.

Discussion

The findings in Table 1 showed that school location made a difference in pupils' achievement in reading with pupils from urban schools achieving higher than their counterparts from rural schools. This result was further strengthened by the ANCOVA analysis in Table 3 which also showed that there was a significant difference in the mean achievement scores of urban and rural schools pupils in reading, implying that location was a significant factor in pupils' achievement in reading. The finding is in line with Ramo, Duque and Nietos' (2012) study which found that the educational achievement of rural students was worse than those of urban students. The finding is also in tandem with Owoeye and Yara (2012) who observed that students in urban locations had better academic achievement than those in rural schools in the West African School Certificate Examination (WASCE) between 1990 and 1997. The study further corroborates Ulo-Bethel's (2012) study which showed that location had a significant influence on students' achievement when tested in consonant clusters in favour of urban students.

The better achievement of students from urban schools over those from rural schools could be attributed to poor learning environment, scarcity of teachers in rural schools and other socio-economic factors associated with the learners. The less achievement of rural pupils could also be as a result of the quality of the pupils and teachers in such locations. This agrees with Nwosu's (2009) opinion that schools located in urban areas are capable of

attracting quality students and teachers who are ready to take academic ventures seriously.

However, the findings of the study negate earlier studies of Uzoegwu (2004) and Macmillan (2012) which reported that school location was not a significant factor in students' academic achievement. In effect, the study on the influence of school location on students' academic achievement still remains inconclusive since research findings are still tripartite in direction. The higher achievement recorded by pupils in urban schools could be attributed to the better learning environment they enjoyed over those in rural schools. Another reason could be the quality of teachers found in urban schools. It could also be attributed to the quality of kindergarten schools the pupils attended before transiting to primary school. However, it is expected that synthetic phonics will bridge these gaps when used appropriately over time since the findings also showed that both urban and rural pupils exposed to synthetic phonics performed better than those exposed to analytic phonics.

The findings in Table 2 indicate that there is interaction effect of teaching method and school location on pupils' achievement in reading. This is further validated by the result of Analysis of Covariance (ANCOVA) presented in Table 4, which reveals that the interaction effect between the variables is statistically significant. Hence, there is a significant interaction effect of teaching method and school location on pupils' achievement in reading. This implies that the influence of school location is significant enough to exact impact on pupils' achievement in reading irrespective of the method of instruction they are exposed to. The finding is in tandem with Egbe (2015)

who reported that there was a significant interaction effect of method and location on students' achievement in English grammar. It is however inconsistent with the studies of Omeje (2009) and Terty (2010) which revealed that there was no interaction effect of teaching method and location on students' achievement. The existence of interaction effect between teaching method and school location revealed in this study suggests that the achievement of pupils in reading across school location is inconsistent. In other words, treatment is sensitive to school location. The different literacy environment the pupils are exposed to in the different school locations might be the reason for the interaction effect observed in the finding.

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Conclusion

The findings of this study prove that school location significantly influences pupils' achievement in reading. The result shows that urban pupils achieved higher than rural pupils in reading when taught with synthetic phonics. In other words, in addition to teaching method, school location proves to be a predictor of pupils' achievement in reading. Hence, it is recommended that in addition to adopting synthetic phonics for reading instruction, pupils from different school locations should be exposed sufficiently to equal literacy-enriched environment to bridge the gap in achievement among learners from urban and rural school environments.

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