



Effect of Picture Reading Instructional Approach on English Language Achievement of Upper Basic Students in Imo State, Nigeria

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Abstract

The design of the study is a quasi-experimental design, using a pre-test, post-test control groups. The area of this study was Owerri Educational Zone of Imo State. The population of the study comprised 27680 upper basic two students. Eighty (80) students constituted the sample (40 males and 40 females). Purposive sampling technique was employed in the selection of two co-educational schools from the area while random sampling technique was used to select the two classes, one treatment and the other control. The instrument used for data collection was a Researcher-Made comprehension passage and vocabulary building instrument titled (CPAVB), which was developed from students' recommended class reading textbook. The instrument was validated by three experts, one from Curriculum Studies, one English Language and one from Measurement and Evaluation, all from Abia State University, Uturu. A test-retest method was carried out to determine the reliability of the instrument (DCPAVB) using the Pearson Product Moment Correlation Statistics. The reliability coefficient obtained was 0.71. Mean and standard deviation were used to answer research questions two (2) – six (6), while Analysis of Covariance (ANCOVA) was used also to test the hypothesis at 0.05 level of significance. The main findings of the study indicate that differences exist between the students taught English Language using picture reading approach and those taught using lecture method in favour of picture reading and that there is no significant difference between the mean achievement scores of male and female students taught English Language using picture reading approach. Based on the findings, the study recommended that: English Language teachers should use picture reading instructional approach in teaching English Language and Government should encourage and motivate English Language teachers by sponsoring and organizing workshops, seminars, conferences and in-service training programmes on the implementation of picture reading method in the classroom etc.

Keywords: Achievement, English language, Imo state, Picture reading instructional approach, Upper basic students

Introduction

Education is the bedrock of a nation's development. It is indeed a major determinant of the quality of a nation's growth and development in social, political and economic systems (Edame, 2001). Picture reading is one of those very important school activities that an upper basic school student may carry out. Actual picture reading starts from lower basic education level, that is from Junior Primary school classes to the tertiary level and even when a student will be out of school. Available evidence from the works of Nwanorim (2010), Okonkwo (2013) and Onukaogu (2003) from the experience of parents, teachers and empirical studies show that a good number of Nigerian school students especially those from semi-literate and rural home backgrounds are very poor picture readers, both in the mother tongue and English language. They show very little interest in reading materials within and outside prescribed class texts. The Federal Republic of Nigeria National Policy on Education (FRN, 2013) acknowledges picture reading as a subject in the curriculum, but it does not feature on daily basis on the school timetable.

It is in recognition of the importance of literacy skills that the same National Policy on Education emphasizes the inculcation of permanent literacy and numeracy and the ability to communicate effectively as the primary goal of education. The other objectives of the upper basic education are to: provide the child with diverse basic knowledge and skills for entrepreneurship and educational advancement; develop patriotic young people equipped to contribute to social development and in the performance of their civil responsibilities; inculcate values and raise morally upright individual who is capable of independent thinking, and who appreciates the dignity of labour and inspire national consciousness and harmonious co-existence irrespective of differences in endowment, religion, ethnic and socio-economic background. Furthermore, the Federal Republic of Nigeria (FRN, 2013:15) Draft National Policy on Education states that "education which a child receives immediately after the lower (Primaries 1-3) and middle basic education (Primaries 4 - 6 classes) is for upper basic education classes. It is a 3-year study in junior secondary education, that is, upper basic 1-3. These documents state that English Language should be used as a medium of instruction at these upper basic classes because the students may have acquired enough picture reading drills and practices.

Onukaogu (2005) opined that picture reading is a teaching strategy where students are made to read and interpret the pictures in the curriculum content. Picture reading is giving meaning to visual symbols e.g. pictures, diagrams, charts etc. Picture reading approach promotes literary competence in upper basic students. Picture reading approach is the ability to interpret such pictures. It involves creative thinking. In educational practice, students learn to watch, observe and handle such pictures in order to learn. This is true because picture reading is one of the four basic communication skills while others are: listening, speaking and writing. Picture reading takes precedence because one has to learn picture reading before one knows what to write. These volumes of picture readings or reading generally determine what kind of final grade he/she earns in his/her upper basic school certificate examination result (JSCE). This result determines his/her preparation for the senior secondary school as well as readiness for higher education. Time is not allotted for practising picture reading under the close supervision of the English language teacher or picture reading expert. The inadequate, quality provision of pictures or reading materials and dearth of qualified teachers in picture reading have not helped matters. Studies by Anukam (1999) and Onukaogu (2003) have shown that picture reading is all embracing in the development of a student's education.

Picture reading approach is a teaching strategy where students are made to read and interpret the pictures in the curriculum content. The picture should be part of the curriculum content. Each student is allowed to say his or her mind about what is in the picture. Each student's idea is not noted until the actual reading takes place. It is only then that students evaluate themselves. The pictures should not make derogatory remarks on any group, religion or sex to avoid conflicts. The effective picture reading teacher would organize the picture content to bring about communicative competence and integration among the groups. Borich (2011:269) explained inquiry method/approaches of upper basic two students' achievement as "emphasis on how English Language topics/aspects of picture reading are organized, how they change and how they interrelate". One relevant factor in the teaching-learning process is the issue of gender. Gender is defined as representing those varied socially and culturally

roles, qualities and behaviours that are ascribed to women and men in different societies (Noblelius, 2010). Gender has also been defined as socially constructed roles, relationships and learned behaviour of male and female. Okeke (2007) defined gender as socially/culturally constructed characteristics and roles which are ascribed to males and females in the society.

Olagunju (2002) conducted a study to determine if sex difference has significant effect on students' performance in Mathematics achievement test. A sample of 60 boys and 60 girls of senior secondary school students who were randomly selected from Ondo West Local Government Area of Ondo State formed the subjects of the study. The instruments which were self-constructed consisted of a 40-item multiple objective Mathematics achievement test. The reliability of the instrument was determined and a reliability coefficient of 0.71 was obtained using Kuder-Richardson formula 20. Data were analyzed using descriptive statistics of mean and standard deviation to answer the research questions posed while the hypotheses were tested at 5% significance level using the analysis of covariance (ANCOVA). Result indicated no significant difference in Mathematics achievement between boys and girls. Galadima (2003) investigated gender inequality in algebraic word problem-solving performance among secondary school male and female students in Sokoto and Zamfara States. A total of one hundred and sixty-two (162) senior male and female secondary two (SS2) physics students constituted the sample. Physics Practical Achievement Test (PPAT) and Physics Theory Achievement Test (PTAT) were used in gathering data for the study. The reliability of the instruments was determined using Cronbach Alpha and a reliability coefficient of 0.74 for PPAT and 0.81 for PTAT were obtained. Two hypotheses were stated to guide the investigation and the data obtained from the study were analyzed using the independent t-test. The findings of the study showed that students taught Physics by integrating laboratory work with theory performed significantly better than those taught by treating practical work after and separate from theory.

Monotony of one particular teaching method without a mix in teaching of English Language does not cater for the needs and interests of the students in the classroom. It is evident that the method employed by English Language teachers is one of the causative factors for students' poor performance in English Language (Anukam 1999) and (Onukaogu 2003). Can picture reading approach make a difference to children's poor performance in English language? This is the question this study hopes to answer.

Purpose of the Study

The main purpose of this study was to determine the effects of the picture reading approach on upper basic students' achievement in English Language in Imo State. Specifically, the objectives of the study were to:

1. determine if students taught with picture reading approach will obtain better mean achievement scores in English Language than those taught with lecture method.
2. find out if there would be any significant difference between mean achievement scores of male and female students taught English Language using picture reading approach.

Research Questions

This following research questions were posed to guide the study:

1. What is the difference in the mean achievement scores of students taught with picture reading approach and those taught using lecture method?
2. What differences exist in mean achievement scores of male and female students taught English Language using picture reading approach at post-test?

Hypotheses

To guide this study, the following null hypotheses were formulated and tested at 0.05 level of significance.

HO₁: There is no significant difference between the mean achievement of students taught using picture reading approach and those taught using lecture method in English Language lesson at post-test.

HO₂: There is no significant difference between the mean achievement of male and female students taught using picture reading approach at post-test.

Methodology

The design of the study is a quasi-experimental design, using a pre-test, post-test control groups. There are two groups in the study, out of which one was subjected to treatment (picture reading approach) while the other was control group. The lecture method was used for the control group. The independent variable is picture reading approach and the dependent variable is students' academic achievement and the moderating variable is gender. The area of this study is Owerri Educational Zone of Imo State. Owerri Education Zone has urban and semi-urban population. The Zone has nine (9) Local Government Areas, namely: Aboh Mbaise, Ahiazu Mbaise, Ezinihitte Mbaise, Ikeduru, Mbaitoli, Ngor-Okpala, Owerri Municipal, Owerri-North and Owerri-West; out of the twenty-seven (27) Local Government Areas in Imo State.

The population of the study comprised of (27680) upper basic two students in the 247 public upper basic secondary schools in Imo State. One hundred and twenty (80) students constituted the sample (40 males and 40 females) Out of the 80 students, 40 belonged to the Picture Reading Group (PRG) (20 males and 20 females) while 40 belonged to the Control Group (CG) (20 males and 20 females). Simple random sampling technique was employed in the selection of the two classes. The instrument used for data collection was a Researcher-Made comprehension passage and vocabulary building instrument titled (CPAVB), which was developed from students' recommended class reading textbook. The instrument was used to elicit the achievement of students in English Language. The text items were derived from the four different comprehension passages and their corresponding vocabulary building exercises. The test was a fifty (50) item multiple choice questions with four options (letters A to D) each, out of which only one option was the correct answer. A table of specification was constructed to guide in the allocation of questions (at the required level of cognition, knowledge, comprehension and application). Each test item was allocated two (2) marks and this gives a total of one hundred (100) marks for the fifty (50) text items. The validation of the instrument was done by three experts, one in Curriculum Studies, one in English Language and one in Measurement and Evaluation, all from Abia State University, Uturu. They checked the relevance, the clarity of the language and contradictions (if any) of the instruments. They also ensured that the questions covered knowledge, comprehension and application levels of cognitive domain. The corrections were done in the final draft of the instruments. A test-retest method was carried out to determine the reliability of the instrument (DCPAVB).

A simple random sampling technique of twenty (20) upper basic two students, who were not part of the study sample, was used. They had the same comparable characteristics as the students in the study, such as class, age, amongst others. The instrument was administered to the group. The students were requested to attempt all the fifty (50) items of the DCPAVB. The same instrument was administered again to the same students after two-weeks interval. The first and second test scores were correlated using the Pearson Product Moment Correlation Statistic. The reliability coefficient obtained is 0.71. Mean and standard deviation were used to answer research questions while Analysis of Covariance (ANCOVA) was used to test the hypothesis at 0.05 level of significance. To control for intervention of these factors, the two classes were given equal opportunity to become either treatment or control group by being randomly assigned to treatment and control groups respectively. To ensure regular attendance to classes by students in the treatment and control groups, it was announced that attendance would form part of their continuous assessment. To avoid infiltration of students from one class to another, the teacher improvised identity cards, to ensure that only members of the class (group) were physically present. ANCOVA was used to analyze the data so as to remove from the treatment the difference which could be linearly correlated with variances.

Results

Presented below are the results of the study:

Research Question One

What is the difference in the mean achievement scores of students taught English language using picture reading approach and those taught using lecture method?

Table 1: Mean Scores and Standard Deviation of Students Taught English Language Using Picture Reading Approach and Those Taught Using Lecture Method at Pre and Post Tests

Teaching Method			N	Pre – Test		Post - Test		MEAN GAIN
				Mean	SD	Mean	SD	
Experimental (Picture Reading Approach)			40	45.40 X	3.14	81.50 X	4.43	36.10
Control group (Lecture Method)			40	45.05	3.20	45.53	3.32	0.48
Total			80					

Table 1 revealed that the experimental group (picture reading approach) pre-test mean achievement score was 45.40 with a standard deviation of 3.14 while the control group (lecture method) had mean achievement score of 45.05 with standard deviation of 3.20. The post-test mean achievement score of the experimental group (picture reading approach) was 81.50 with standard deviation of 4.43, while the control group (lecture method) was 45.53 with standard deviation of 3.32. The mean gain of the experimental (picture reading approach) and control group (lecture method) were 36.10 and 0.48 respectively.

The mean gain of 36.10 was in favour of the experimental group (picture reading approach). The result showed that at post-test, the students taught using picture reading approach attained a higher mean score of 81.50 compared with their counterparts taught using the lecture method who had a lower mean score of 45.53. Hence, picture reading approach had a higher mean score on the subjects than the subjects exposed to lecture method.

Research Question Two

What differences exist in the mean achievement scores of male and female students taught English Language using picture reading approach at post-test?

Table 2: Mean Scores and Standard Deviation of Male and Female Students Taught English Language Using Picture Reading Approach at Post Test.

Language Using Picture Reading Approach at Post Test.										
Teaching Method			SEX	N	Pre – Test		Post – Test		MEAN GAIN	
					<u>Mean</u>	SD	<u>Mean</u>	SD		
Experimental (Picture Reading Approach)			Male	20	45.60 X	3.08	81.60 X	2.98	36.00	
			Female	20	45.20	3.27	81.40	5.58	36.20	
Total				40						

Analysis in Table 2 revealed that the mean (pre-achievement test scores) of male students in experimental (picture reading approach) group was 45.60 with a standard deviation of 3.08 while the mean (pre-achievement scores) of female students in the experimental (picture reading approach) was 45.20 with a standard deviation of 3.27. The table also revealed that the mean (post achievement test scores) of male students in picture reading approach was 81.60 with a standard deviation of 2.98, while that of female students in the same group was 81.40 with a standard deviation of 5.58. The mean gain for male and female students taught with picture reading approach and 36.00 and 36.20 respectively.

Hypothesis One

There is no significant difference between the mean achievement scores of students taught using picture reading approach and those taught using lecture method of the same English Language lesson at post-test.

Table 3: Summary of Analysis of Covariance (ANCOVA) of Students Taught Using Picture Reading Approach and those Taught with Lecture Method of the Same English Language Lesson at Post Test

Source of Variation	Sum of Square for x (SSx)	Sum of Square for y (SSy)	Total Sum of Product (TSP)	DF	Adjusted SSy	MS ¹ y	F-ratio	F-Crit
Between group	2.45	25,884.02	251.82	1	25,656.13	25,656.13		
Within group	785.5	1,475.97	230.95	78	1,408.07	18.05	1,421.39	3.96
Total	787.95	27,359.99	482.77	79				

Table 3 indicated that calculated F-value was 1,421.39, while $F_p(1, 78)$ was 3.96. The calculated value of $F(1, 421.29)$ was greater than the F-critical of value ($F\text{-critical} = 3.96$) at 0.05 level of significance and numerator/denominator degrees of freedom of 1 and 78 respectively. Since the F-calculated value is greater than the F-critical value, the null hypothesis is rejected. Thus, there was a significant difference between the mean achievement scores of students taught using picture reading approach and those taught with lecture method of the same English language lesson at post-test. The hypothesis that there is no significant difference between the mean achievement scores of students taught using picture reading approach and those taught using lecture method of the same English language lesson at post-test is hereby rejected.

Hypothesis Two

There is no significant difference between the mean achievement scores of male and female students taught English Language using picture reading approach.

Table 4: Summary of Analysis of Covariance (ANCOVA) of Male and Female Students Taught English Language Using Picture Reading Approach at Post Test

Source of Variation	Sum of Square for x (SSx)	Sum of Square for y (SSy)	Total Sum of Product (TSP)	DF	Adjusted SSy	MS ¹ y	F-ratio	F-Crit
Between group	1.6	0.4	0.8	1	0.31	0.31		
Within group	384	765.6	24.2	38	764.07	20.11	0.015	4.08
Total	385.6	766	25	39				

Analysis in Table 4.11 showed that the F-calculated value was 0.015, while the F-critical value was 4.08 at 0.05 level of significance and the numerator/denominator of 1 and 38 respectively. The F-calculated value is less than the F-critical value. The null hypothesis is accepted. This indicates that there is no significant difference between the mean achievement scores of male and female students taught English Language using picture reading approach.

Discussion of Findings

The result of research question two revealed that the picture reading approach had improved the students mean achievement scores than the students exposed to lecture method. This implies that picture reading approach is significant in raising the academic achievement scores of students in Imo State. This finding is in line with Gbenedio (1999) who carried out a study with a view to finding out the relative effectiveness of the individualized reading strategy (IRS) and the conventional reading strategy (CRS) in terms of achievement in reading. The result indicated that the difference between the two strategies was statistically significant. The implication of this study is that the individualized reading strategy should be used in teaching reading since it is capable of facilitating the reading achievement of students.

The study further revealed that no difference exists in mean achievement scores of male and female students taught using picture reading approach at post-Test. This showed that the male and female academic achievement in picture reading approach. The result of the study strengthens the case that

reading short stories leads to more effective comprehension. John (2000) examined whether there is any significant difference between male and female academic achievement in introductory technology based on the use of charts and pictures in secondary schools in Billiri and Gombe Local Government Area of Gombe State. The findings were that there exists no significant difference between male and female students in their academic achievement.

Conclusion

The findings of this study have demonstrated that Picture reading approach enhanced students' achievement scores in English Language comprehension and vocabulary buildings respectively than lecture method. In addition, gender was no a significant factor in the students' mean achievement in English Language under the picture reading approach. Based on the findings, one can conclude that the use of picture reading instructional method could contribute significantly in increasing students' achievement in English Language irrespective of gender. This does not mean that lecture method diminished academic achievement; rather it means that the use of picture reading method was more effective than the lecture method. The findings also indicate that the key factor in teaching learning processes is how active the learners are involved. Active instructional approaches enable meaningful learning. Thus, students performed extremely very well when picture reading was employed together irrespective of gender. The findings of this study have implications for students, teachers, curriculum planners, educational counsellors and policy makers. The study highlighted that the problem of poor achievement in English Language among students lay it largely on the method employed by the teachers. Hence, teaching method should be such that would involve students in their own learning. The findings of this study imply that picture reading approach is a functional approach. Teachers when exposed to picture reading instructional method will make effective learning impacts in the learners' performance. The finding further implies that controlling of gender stereotyping in classroom can bring about tangible results. English Language teachers therefore have a role to play in encouraging male and female students to participate actively in valuable teaching learning processes using picture reading method since it is gender friendly.

Recommendations

Based on the findings of this study, the following recommendations were made:

English Language teachers should always endeavour to use picture reading approach during class instruction since it improved students' achievement in English Language.

The Ministry of Education should encourage and motivate English Language teachers by sponsoring and organizing workshops, seminars, conferences and in-service training programmes on active teaching methods such as picture reading method for enhanced performance of students in English Language.

The Federal and State Government should also encourage and motivate students, teachers especially English Language teachers, through the provision of adequate pictorial instructional materials for effective English Language studies etc.

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