

EFFECT OF COOPERATIVE LEARNING ON PRIMARY SCHOOL PUPILS' READING ACHIEVEMENT IN AWKA METROPOLIS

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Abstract: *This study investigated the effect of cooperative learning on reading achievement of primary school pupils in Awka Metropolis in Awka South Local Government Area. Two research questions and two null hypotheses guided the study. The study adopted a quasi-experimental design specifically the pre-test, post-test control group design. The population comprised of 3,419 primary five pupils in Awka metropolis and 65 pupils selected from schools that use Macmillan English who participated in the study formed the sample for the study. Reading Achievement Test (RAT) with a reliability coefficient of 0.89 determined using Kuder-Richardson Formula 20 was used to collect data for the study. Pupils in the experimental group were taught reading using reciprocal peer tutoring, a type of cooperative learning considered in the study while those in the control group were taught reading using conventional method. Data collected were analyzed using mean scores for research questions and Analysis of Covariance (ANCOVA) for testing the hypotheses at 0.05 level of significance. Major findings revealed that pupils taught reading with Reciprocal Peer Tutoring (RPT) performed significantly better than those taught with conventional method*

did. There was no significant difference in the performance of male and female pupils taught reading with RPT. Based on the findings, it was recommended that teachers training colleges and universities should incorporate reciprocal peer tutoring in their curriculum so that prospective teachers will be acquainted with the basic skills for designing RPT instructional materials for use in their respective classrooms. Teachers should be well equipped and integrated with RPT for an effective teaching, mastery and its application in the teaching and learning processes.

Keywords: *Reading; Peer tutoring; Primary school; Pupils; Achievement.*

Introduction

An interesting spectrum of human personalities abounds in any primary school classroom. Each individual has his or her unique and innate academic needs. Nwosu (2012) noted that in schools, individuals with diverse capabilities come to learn and to grow and while some learn how to read with ease, others learn with certain difficulties. Some achieve highly and some poorly even below what is expected of them and quite interestingly however, the Federal Government of Nigeria in her National Policy on Education emphasized that primary education should aim at inculcating permanent literacy, numeracy, and the ability to communicate effectively in the recipients (FRN, 2013). Aggarwal as cited by Nwosu sees education as a process that draws out the best in the child with the aim of producing well-balanced personalities that are culturally refined, emotionally stable, ethically sound, mentally alert, morally upright, physically strong, socially efficient, spiritually upright, vocationally self-sufficient and academically balanced. The school serves as one of the agents for achieving this worthwhile aim.

To achieve this aim and be successful in this 21st century, an individual requires the ability not just to read and write but also the possession of strategies that enables one to read critically so as to solve the ever complex and challenging problems confronting the society. The achievement of the basics in literacy is indispensable for any academic success in formal education as they create basis for further learning. A child who acquires the ability to read at an early stage is bound to improve on other cognitive demands because it is the key to educational achievement. Therefore, a child's success in school and throughout life depends, to a high extent, on the ability

to read. Reading is important as it aids in the cognitive demands of learners. Nwosu (2012) sees reading as a skill that aims at facilitating the acquisition and development of relevant literacy skills for effective communication in different contents. According to the researcher, becoming a reader is a continuous process that begins with development of oral language skills and leads to independent reading over time. Oral language is the ability to speak and listen; it is a vital foundation for reading success. Nwosu also stressed that children learn the language of their environment as they observe, listen, speak and interact with adults and other children in their environment.

Reading for comprehension helps children to construct meaning from texts as well as to examine and extend the meaning of the text to previous reading. However, Loan (2012) opined that reading is a much more complex process involving the understanding of a whole text composed of written signs and not just mere extraction of visual information from a given code. In addition, reading is fundamental to progress and success in all school subjects. The development of reading skills involves the participation of children, parents, educators and community as a whole, since it is process-oriented and involves socio-cultural dynamics. Hecht and Greenfields (2001) emphasize the importance of reading intervention in the early years of formal education. They noted that few changes in individual reading skills occur after primary three. Additionally, poor academic outcomes, increased behavioural problems, higher probability of dropping out of school are all more likely to result following failure to acquire literacy skills at the primary school level.

Most pupils' reading abilities as observed by Aina, Ogundele and Olanipekun (2013), are very poor and have led to low performances in reading comprehension. The researchers reported that over the years, reading achievement of pupils at the primary school has been below eighty percent and this has led to a great deterioration in their external examinations. There is a great need therefore, to introduce and implement innovative teaching methods for teaching reading in primary schools in Nigeria to remedy the situation at hand. Literature has blamed the lack of basic skills in reading and writing on the type of teaching method used to teach reading by the teachers. For example, Oviawe (2010) pointed out that the conventional method of instruction is the one commonly used for teaching reading at all levels in Nigerian schools. The researcher further noted that in this method, the teacher assumes the more active role in the lesson, as he exposes the learners/pupils to new ideas, more like a harbinger of information. In addition, Amekodo (2012) and Okwuduba et al. (2018) stated that conventional method is widely practised in teaching reading although it does not provided much needed impart because a teacher can reach a larger number of pupils at the same time and large amount of materials can be covered within a short period. Not that conventional method is completely bad, but its flaws remain obvious as

pointed out by literature. For example, Lawal as cited in Ofodu (2009) stressed that through observation and personal experience, teachers often test pupils reading achievement instead of teaching them how to read and comprehend. The researcher also posited that teachers equally employ the conventional method of teaching where reading is seen as a solo affair in which the learner is hooked to a text and is not encouraged to read and dialogue with peers or in groups. According to Abbas & Jafar (2012), the consequence of using conventional method in teaching English language is that pupils are unable to retain their learning and apply it to a new situation. The researchers further asserted that in alternative, cooperative learning could be used to help pupils become active learners in the classroom, thus improving their achievement.

Akinbobola (2009) defined cooperative learning as a way of learning in which students of different ability levels work together in small groups using a variety of literature to achieve a goal and in this case, it is to improve learning. Cooperative learning according to Şimek, Byilar and Kucuk (2013), is a process aimed at facilitating the achievement of a specific objective through people working together in groups. Naseem and Bano (2013) believe that when students of different cognitive, intellectual and physical levels are exposed to solving a given task, they have the opportunity to interact and work as a team. They opined that it improves learning attitudes, interpersonal skills and self-concept and teacher dependency decreases. Therefore, the teacher's role changes from providing information to facilitating student learning. The tasks of cooperative learning are usually intellectually demanding, creative, open and involve higher-order thinking tasks. Ajaja (2018) opined that cooperative learning can give weak students the opportunity to learn and achieve the maximum. He further highlighted the four basic elements that underpin cooperative learning: (1) small groups must be structured for positive interdependence; (2) there must be face-to-face interactions, (3) individual responsibility and (4) use of interpersonal skills and small groups. Reiness as cited in Oviawe (2010) opined that cooperative learning among peers promotes learning outcomes, higher thinking skills, social interaction, experiences and context that make pupils willing and able to learn. Reiness further identified three distinct areas of cooperative learning among peers namely: Cross-Age Tutoring (CAT), Peer Tutoring (TP), and Reciprocal Peer Tutoring (RPT). For this study, the Reciprocal Peer Tutoring (RPT) will be considered.

The Reciprocal Peer Tutoring (RPT) as explained by Gazula, McKenna, Cooper and Paliadelis (2017) involves a situation whereby the learners reverse the roles of tutor and tutee in a reciprocal manner. It allows each child to reap the benefit derived from preparing to teach another child. Children provide instruction, evaluation and reinforcement to one another, thereby creating mutual assistance and social support among themselves. RPT also has the

tendency to build self-efficacy in a pupil who acts as a tutor and source of knowledge. The goal of RPT according to Nwosu (2012) is to use discussion to enhance learners' reading comprehension, develop self-regulatory and monitoring skills and achieve overall improvement in motivation. Another goal of RPT according to Egbochuku and Obiunu (2006) is that it provides a non-judgemental acceptance, care, support, and it provides opportunities to give and receive from others, and it creates a non-competitive empowering environment. The reciprocal peer tutoring can also help pupils to meet one of the objectives of primary education in Nigeria, which is the development of literacy and numeracy skills. Considering the importance of the RPT as highlighted by literature, it becomes necessary to examine the effect of this mode of instruction on the reading achievement of pupils in Awka Metropolis using comprehension passages in English Language, thus, the need for this study. However, it has been reported in research that reading skills acquisition can be influenced by certain factors, among which is gender.

Gender stresses the roles and responsibilities of males and females. According to Ezeh (2013), gender can be referred to as one's subjective feelings of maleness or femaleness irrespective of one's sex. Ezeh further stated that gender is classified into masculine or feminine and is concerned with the attitudes that describe males and females in the socio-cultural context. The issue of gender on reading achievement of pupils have become an area of interest to researchers. Researches have shown a disparity in the reading achievement of male and female pupils' taught using the RPT (Onuigbo, 2008; Uroko, 2010). Some studies however, reported no disparity (Agiande, 2006; Igbo, 2004). Following these argument, this study is an attempt to resolve the discrepancies in the findings of the research on the influence of gender as it relates to learners' reading comprehension achievement.

Purpose of the Study

The purpose of this study is to determine the effect of reciprocal peer tutoring on the reading achievement of primary school pupils in English language in Awka Metropolis. The study specifically sought to determine;

1. the effect of reciprocal peer tutoring (RPT) on the reading achievement of male and female primary school pupils in English language
2. whether any significant difference exist between the mean achievement scores of male and female pupils taught reading using reciprocal peer tutoring (RPT)

Research Questions

The following research questions guided the study:

1. What is the effect of reciprocal peer tutoring (RPT) on the reading achievement pre-test and post-test scores of pupils in English language?

2. What is the effect of reciprocal peer tutoring (RPT) on the reading achievement pre-test and post-test scores of male and female pupils in English language?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference between the mean achievement pre-test and post-test scores of pupils taught reading using the reciprocal peer tutoring (RPT), and those taught with conventional method.
2. There is no significant difference between the mean achievement pre-test and post-test scores of male and female pupils taught reading using reciprocal peer tutoring (RPT).

Method

The study was conducted to determine the effect of RPT method on the reading achievement of primary school pupils in Awka Metropolis. Two research questions and two null hypotheses guided the study. A quasi – experimental design was used for the study. The population of the study comprised of 3,419 primary schools pupils in Awka metropolis. A sample size of 65 primary five pupils from two schools selected randomly was used. The instrument for data collection in this study was Reading Achievement Test (RAT). The lesson plan that covered every unit in the RAT was used as an instructional tool. The reading achievement test was based on six weeks lesson plan. The RAT is a 30 items, four options multiple-choice test compiled from six-comprehension passage from Macmillan English Textbook for primary five. Primary five was used for the study because it is the onset for preparing pupils for external examinations and it is assumed that the pupils in this class must have been fluent in reading comprehension. The RAT and the lesson plan were subjected to both face and content validation by two experts in the Department of Early childhood and Primary Education and one expert in the Department of Educational Foundations (Measurement and Evaluation unit) all from Nnamdi Azikiwe Univerity, Awka.

To determine the reliability of the instrument RAT, the internal consistency of RAT was determined using the Kuder – Richardson formula 20 (K–20). The coefficient of internal consistency was found to be 0.89. It was administered to the pupils (control and experimental group) as pre-test before they were taught for six weeks using validated lesson plans for RPT techniques and conventional method. At the end of the treatment, the items were reshuffled and administered to the subjects as post-test. The research questions were answered using statistical mean, while the null hypotheses were tested using Analysis of Covariance (ANCOVA) at 0.05 level of significance. In this case, the pre test scores were used as covariant measures on the post-test scores.

RESULT AND DISCUSSION

Research Question 1: What is the effect of reciprocal peer tutoring (RPT) method on the reading achievement pre-test and post-test scores of pupils in English language?

Table 1: Mean and standard deviation for pre-test and Post-test Reading Achievement score of pupils taught with RPT and Conventional.

Groups	N	Pre-test Mean	SD	Post-test Mean	SD	Gained Mean	Decision
RPT	5	38.86	5.806	47.83	4.76	8.97	More effective
Control	3	34.07	8.733	35.40	11.0	1.33	

*RPT=reciprocal peer tutoring

LM = Lecture method

Table 1 showed the pre-test mean and post-test scores of the pupils on reading achievement in the RPT and control groups. The pre-test mean scores of the RPT was higher than that of the control group. Also, the post-test means scores treatment group was significantly higher with mean gain of 8.97 than that of the control group with mean gain of 1.33. This shows that RPT enhanced reading achievement in English language.

Research Question 2: What is the effect of RPT on reading achievement pre-test and post-test scores of male and female pupils in English language?

Table 2: Mean and standard deviation for Pre-test and Post-test Reading Achievement Scores of Male and Female Pupils Taught with

Groups	N	Pre-test Mean	SD	Post-test Mean	SD	Gained Mean	Decision
Male	8	39.11	5.411	46.67	5.17	7.56	More effective
Female	7	38.59	6.35	49.06	4.07	10.47	

RPT

Table 2 shows the pre-test and post-test score mean and standard deviation of reading achievement scores of male and female pupils in the RPT. The pre-test mean score of male pupils is 39.11 while their post-test mean score is 46.67. Their mean gain is 7.56. The pre-test mean score of female pupils is 38.59 while their post-test mean score is 49.06. Their mean gain score is 10.47. This indicated that female pupils gained more in RPT than male pupils.

Hypothesis 1: There is no significant difference between the mean achievement pre-test and post-test scores of pupils taught reading using RPT and those taught with conventional method.

Table 4: ANCOVA for Differences in Reading Achievement of Pupils taught Reading with RPT and those taught using the conventional method

Source	Type III Sum of Squares	df	Mean Square	F	Sign.	Partial Eta Squared	Decision
Corrected Model	3816.442 ^a	2	1908.221	9.397	.000	.560	
Intercept	854.085	1	854.085	7.633	.000	.211	
Pretest	1321.167	1	1321.167	7.277	.000	.306	
Group	1291.977	1	1291.977	6.674	.000	.301	Significant
Error	3003.004	6	500.501				
Total	1219.84	6					
Corrected Total	6819.446	4					

a. R Squared = .560 (Adjusted R Squared = .545)

Table 4 shows that there is a statistically significant difference between the mean achievement scores of pupil taught reading using RPT and those taught with expository method. This is because the p-value (.000) is less than the level of significant (0.05). Based on the above, the null hypothesis is rejected, implying that there is a statistically significant difference between the mean achievement scores of pupils taught reading using RPT and those taught with expository method.

Hypothesis 2: There is no significant difference between the mean achievement pre-test and post-test scores of male and female pupils taught reading using RPT

Table 5: ANCOVA for Differences in Reading Achievement of Male and Female Pupils Taught Reading with RPT.

Source	Type III Sum of Squares	df	Mean Square	F	Sign.	Partial Eta Squared	Decision
Corrected Model	139.593 ^a	2	69.796	.537	.041	.181	
Pretest experimental	89.563	1	89.563	.539	.041	.124	

Gender experimental	56.220	1	220	56.	2	.849	101	.082
Error	631.379	32	731	19.				
Total	80836.000	35						Not significant
Corrected Total	770.9	34						
Intercept	1015.	1	15.119	10	5	1.449	000	.617

a. R Squared = .181 (Adjusted R Squared = .130)

Table 5 shows that there is no significant effect of treatment in the post-test reading achievement of male and female pupils $F(1, 34) = 2.849, p > 0.05$. This means that there was no significant difference in the mean achievement scores of male and female pupils in the reading achievement taught with RPT. Therefore, the hypothesis that there is no significant mean difference in the reading achievement of male and female pupils taught with RPT is not rejected.

Discussion

The effectiveness of reciprocal peer tutoring was demonstrated through significant improvement in the reading achievement of pupils taught with it. The result of the data clearly shows that the experimental group who were taught with RPT achieved better than the control group who were taught with the conventional method. The analysis of hypothesis 1 using ANCOVA also shows a better reading achievement by the experiment group. This means that reciprocal peer tutoring seems to have contributed immensely to the improvement of pupils reading achievement. The result of the findings is in agreement with previous research findings of Uroko (2010), who state that that reciprocal peer tutoring are beneficial to students, because they encourage students to read more, think deeply about books, listen carefully to classmates, share their responses and interpretations of texts, and often become lifelong readers. Also in line with the study, Ofodu (2009) examined the effect of RPT on students' reading performance as well as students' levels of comprehension and performance levels. The author's report proved that RPT was more effective in teaching reading.

There was no significant difference between the reading achievement of male and female pupils taught reading with reciprocal peer tutoring. This was shown from the result of the data that male and female pupils taught with RPT performed equally. The analysis of hypothesis 2 using ANCOVA as shown in table 2 shows equal performance in the reading achievement of male and female pupils taught with RPT. This is in line with the study of Igbo (2004) who maintain that instructional approaches neither favor nor disfavor a particular sex in achievement. The findings of this study also agreed with Agiande (2006) that gender is not a significant factor in pupils' achievement.

A well-applied teaching strategy would produce the same effect on the pupils' achievement in reading English irrespective of gender.

Conclusion

The findings from the study revealed that reciprocal peer tutoring, a type of cooperative learning is effective in improving pupils reading achievement in English language. In this regard, there was an observed significant difference in the mean achievement scores of pupils taught with RPT and those taught with conventional method. It was thus concluded that pupils taught with RPT achieved better than those taught with the conventional method.

Recommendations

Based on the findings of this study and taking into cognizance its educational implications, the following recommendations were made:

1. To enhance pupils reading achievement, new innovative instructional strategies such as RPT should be adopted in the primary schools, especially in teaching English language. Also, school authorities and educational administrators should ensure that RPT is integrated in our schools since it will help pupils in becoming cooperative learners and problem solvers.

2. Teachers training colleges and universities should incorporate reciprocal peer tutoring in their curriculum so that prospective teachers will be acquainted with the basic skills of designing instructional materials for use and implementation of RPT in their respective classrooms. Teachers should be well equipped and integrated with RPT for an effective teaching, mastery and its application in the teaching and learning processes.

3. School authorities and educational administrators should organize seminars, conferences and workshops for teachers to acquire skills for effective use of reciprocal peer tutoring in schools since it improves reading achievement.

4. Government should finance the use of RPT by sponsoring conferences and workshops for teachers and curriculum planners, so that curriculum planners can develop improved instructional materials that would meet up to the needs of the global society and encourage teachers to use them in their instructional activities.

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