www.ijarp.com ISSN 2456-9992 Page: 01-10

International Journal Advanced Research Publications

Research Article

Volume: 02
Issue: 04

EFFECT OF JIGSAW AND PEER TUTORING STRATEGIES ON STUDENTS' RETENTION IN SOCIAL STUDIES IN CROSS RIVER STATE, NIGERIA

***Odey Anthonia Zake**

Department of Social studies FCE, Obudu.

Article Received: 15 March 2026, Article Revised: 04 April 2026, Published on: 24 April 2026

***Corresponding Author: Odey Anthonia Zake**

Department of Social studies FCE, Obudu.

DOI: https://doi-doi.org/101555/ijarp.7742

ABSTRACT

The study investigated the effect of jigsaw and peer tutoring strategies on students' retention in social studies in Cross River State, Nigeria. The study employed a quasi-experimental non-randomized pre-test, post-test control group design. Three research questions and hypothesis were formulated. The sample consisted of 308 Junior Secondary School students in two intact classes in two secondary schools in Cross River State, Nigeria. The instrument used for data collection were Social Studies Academic Performance Test (SOSAPT) Social Studies Retention Test (SSRT). The instrument were face validated by three experts. Kuder-Richardson (K-R20) formula was used to test the internal consistency reliability of SSAPT and the result was 0.98 and Cronbach Alpha was used to ascertain the reliability coefficient of SSRT which yielded a reliability coefficient of 0.89. The data were analysed using descriptive statistics and Analysis of Covariance (ANCOVA). The results showed that was a significant difference between the mean retention scores of students taught using Jigsaw teaching strategy and those taught using peer tutoring strategies in Social Studies $F(1, 201) = 12.300$; $p = 0.001 < 0.05$; there was a significant main was a significant difference between male and female students' retention scores when taught Social Studies using Jigsaw teaching strategy. $F(1, 100) = 0.024$; $p = 0.158 > 0.05$. The study recommended that social Studies teachers should use jigsaw and peer tutoring to enhance students' retention in the subject and principals and Supervisors of Social Studies teaching and learning encourage the use of Jigsaw and peer tutoring strategies to enhance male and female students' retention in the subject.

KEYWORDS: Jigsaw, Peer torturing, Retention, Social studie .

INTRODUCTION

Social Studies, as an integrated subject, is designed to equip learners with knowledge, values, skills, and attitudes necessary for responsible citizenship and national development. However, over the years, students' interest, performance, and retention in Social Studies have remained low in many Nigerian schools. Factors such as teacher-centered instructional methods, lack of learner engagement, and limited opportunities for collaborative learning have contributed to this persistent challenge. In recent times, scholars and educators have advocated for innovative instructional strategies that promote active participation, motivation, and deeper understanding among learners. Two such approaches are the Jigsaw Cooperative Learning Strategy and Peer Tutoring Strategy.

Jigsaw teaching strategy involves organizing classroom activities that make learners depend on each other to succeed. It breaks a class into groups and breaks assignments into pieces that the group assembles to complete. Jigsaw is a teaching and learning strategy developed by Elliot Aronson (Frances, 2020). It involves the formation of home groups to resolve the task. The home groups allocate one member to each expert or research group to gather data to bring back to the home group (Umar, 2015). For example, students are divided into small groups of five or six students each. Each member of the group is assigned a portion of an assignment or research project. Each member must research the material pertaining to their section of the project and be prepared to discuss it with their classmates. JTS places great emphasis on cooperation and shared responsibility within groups. The success of each group depends on the participation of each individual in completing their task. This means the Jigsaw strategy could effectively increases the involvement of each student in the activity.

Peer tutoring is an instructional strategy where students teach and support each other. Its origin can be traced back to ancient Greece where older and brilliant students would tutor young ones. However, the modern concept of peer tutoring gained popularity since 1960s since it encourages students' partnership, linking high achieving students with lower achieving ones for structured reading, discussion and information exchange among students during lesson (Okoye, 2017). Furthermore, the study noted that peer tutoring is a systematic peer mediated teaching strategy. Using this method, the Social Studies teacher after presenting a topic to a group of learners by direct interaction, permits the brighter students to interact with their less bright counterparts. According to Okeke (2018), peer tutoring is a

process by which students, with guidance from their teacher, helps by teaching one or more peers to learn skills or concepts. This means that this approach focuses on peers to solve problem, and it can be effective in fostering motivation, academic performance and learning of deep concepts. Furthermore, the author noted that peer tutoring gives teachers the capability to accommodate a classroom with diverse learners to improve academic achievement across ability levels and content areas.

Retention is the term use to describe the remembering of a factor an idea after a passage of time (Ayoola, 2019). It is by the demonstration of such recall that learning could be judged to have taken place. Permanent and meaningful learning is the target of our educational endeavor while understanding and retention are the products of meaningful learning when teaching is effective and meaningful to students. Meaningful learning is deemed to have taken place if after passage of time, learner can recall and apply information which they have been taught previously. Bennet and Rebello (2020) define retention as having the information stored in long-term memory in such a way that it can be easily retrieved. Farrant (2016) observes that increase in knowledge lies solely on the ability to remember. The author further asserts that if an individual could not grasp and keep hold of what was taught and learnt, it would seem like trying to fill a bucket without bottom with water.

RESEARCH QUESTIONS

This study was guided by the following research questions:

1. How is the mean retention scores of students taught Social Studies using Jigsaw teaching strategy and those exposed to peer tutoring strategy differ?
2. What is the difference in the mean retention scores of male and female student taught Social Studies using Jigsaw teaching strategy?

Hypotheses

1. There is no significant mean difference between the retention scores of students taught Social Studies using Jigsaw teaching strategy and those exposed to peer tutoring strategy
2. There is no significant difference between the mean retention scores of male and female student taught Social Studies using Jigsaw teaching strategy.

METHODOLOGY

The research design adopted for this study was quasi-experimental, specifically, non-randomized pre-test, post-test control group design. The study was carried out in Cross River

State Education Zone C. The area is made up of five Local Government Areas namely: Yala, Ogoja, Bekwara, Obudu and Obanliku. The population comprises 8,762 Upper Basic Il students of the government-owned co-educational basic secondary schools in the 2024/2025 academic session. The sample size for this study was 308 upper basic II students in six intact classes in six government owned universal basic secondary schools in the zone. Multi-stage sampling procedure was used to select sample. Social Studies Academic Performance Test (SOSAPT) Social Studies Retention Test (SSRT) and Lesson plans were used to collected data. The instrument were face valided by three experts. Kuder-Richardson (K-R20) formula was used to test the internal consistency reliability of SSAPT and the result was 0.98 and Cronbach Alpha was used to ascertain the reliability coefficient of SSRT which yielded a reliability coefficient of 0.89. The research questions were answered using descriptive statistics of mean and standard deviation, while all the hypotheses were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). The decision rule was that the null hypothesis will be rejected if p-value is less than 0.05, otherwise it will not be rejected.

Experimental Procedure

The procedure for undertaking the experiments in this study was as follows.

Training of Research Assistants:

The three Social Studies teachers in the sampled schools used as research assistants were trained by the researcher. The training programme which last for five days focused on the teaching of the topics: child trafficking, drug abuse, marriage and religion using Jigsaw and peer tutoring strategies. Day one of the training focused on familiarization with the lesson plans. The training served as a guide on how to teach using the pre-planned lessons based on the two instructional strategies. On day two of the training, the teachers were instructed on how to teach the topics using Jigsaw strategy. Day three of the training, the teachers were instructed on how to teach the topics using the peer tutoring strategy. Two hours were used on each of day for the training. The teachers took the lesson plans home for critical studies after the training.

On the fourth and fifth days of the training, the teachers were given an opportunity to teach the topics using the assigned instructional strategies. Guidance and correction were made during the session. Also, the teachers were guided on how and when to administer the pre-test and post-test to the students.

Treatment Procedure:

The treatment lasted for a period of four weeks. Treatment for the Jigsaw and peer tutoring strategies took place once a week for 80 minutes (Double period). The treatments for the groups involved instruction by the trained teachers. Before the treatment, a pre-test was be administered to the respondents in both the experimental and control groups.

Group A: This formed the experimental group I and students here were exposed to Jigsaw strategy (involving cooperative activities on the research topics).

Group B: This formed experimental group II and students here were exposed to peer tutoring strategy (involving students serving as tutor and tutees).

Group C: This group were taught conventionally (chalk and talk strategy). The teacher for this group taught the same topics with group A and B using the conventional method by way of verbal explanation. At the end of the treatment, a post-test and retention test were administered to the three groups.

Control of Extraneous Variables:

In order to ensure collection of valid data, variables that may pose as threat to the validity of the result of the study should be controlled. These include:

1. Teacher variables: Lesson plans were prepared by the researcher and handed over to the research assistants. The essence was to reduce research assistant's effect on lesson presentation. The researcher further used the research assistants with the same qualification and years of experience so as to minimize the differences that may arise in the treatment effects due to teacher characteristics. This ensured uniformity among the teachers in their approaches.
2. Hawthorne Effect: This happens when students adjust their behavior as they are conscious of the fact that they are involved in an experiment. To forestall the problem, the researcher used their teachers. In addition, the experimental and control groups were taught using same topics allotted in their time-table. The intention was to make students in all the groups feel that they are merely holding a normal lesson, a condition that is aimed at reducing Hawthorne effect. In order words, students will change their behavior if they are aware of being observed which may lead to bias results. To prevent this, the researcher did not teach but Social Studies teachers in the sampled schools.

3. Initial group differences and non-randomisation effect: This means the initial group difference that will be introduced as a result of the use of intact classes. This was controlled by the use of Analysis of Covariance (ANCOVA). ANCOVA helped to eliminate the initial differences in the students used for the research during statistical analysis.
4. Homogeneity of instructional situation across all groups. The researcher organised training session for the research assistants. The training was aimed at exposing Social Studies teachers to the demands of Jigsaw and peer tutoring strategies as well as the detailed lesson plans prepared by the researcher.
5. Effects of pre-test on post-test: The period between pretest and posttest was five weeks. This period was enough to prevent the pretest from affecting the posttest scores or to interfere with the experimental treatment. Pretest and posttest was the same in content but different in organization especially SOSAPT which was reshuffled after pre-test and post-test.

Presentation of Results

Research Question one: How will the mean retention scores of students taught Social Studies using Jigsaw teaching strategy and those exposed to peer tutoring strategy differ?

Table 1: Mean and Standard Deviation of Retention Scores of Students Taught Social Studies using Jigsaw Teaching Strategy and those Exposed to Peer Tutoring Strategy.

Group	N	Pre-Test		Retention		Mean Gain
		$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$
Jigsaw teaching strategy	103	25.36	6.02	66.95	4.88	41.59
Peer tutoring strategy	101	25.91	5.95	68.89	2.43	42.98
Mean Difference		0.55		1.94		1.39

Data in Table 1 reveals the mean retention scores of students taught Social Studies using Jigsaw teaching strategy to be 25.36 and 66.95 in pre-test and retention test with Standard deviations of 6.02 and 4.88 respectively. Students taught Social Studies using peer tutoring strategy had pre-test and retention test mean scores of 25.91 and 68.89 with corresponding standard deviations of 5.95 and 2.43 respectively. Summary data in the table also shows that students taught Social Studies using Jigsaw teaching strategy had mean gain of 41.59 while their counterparts that were taught using peer tutoring strategy had mean gain of 42.98 in the retention test scores with a mean difference of 1.39 in favour of students taught using peer tutoring strategy.

Research Question Fourteen: What is the difference in the mean retention scores of male and female student taught Social Studies using Jigsaw teaching strategy?

Table 2: Mean and Standard Deviation of Retention Scores of Male and Female Student Taught Social Studies using Jigsaw Teaching Strategy.

Group	n	Pre-Test		Retention-Test		Mean Gain
		$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$
Male	50	25.12	6.04	67.60	4.48	42.48
Female	53	25.58	6.04	66.34	5.20	40.76
Mean Difference		0.46		1.26		1.72

Table 2 indicates that male students taught Social Studies using Jigsaw teaching strategy had a mean performance score of 25.12 with standard deviation of 6.04 in the pre-test and mean retention test scores of 67.60 and standard deviation of 4.48 in the post-test. Female students taught Social Studies using Jigsaw teaching strategy had a mean performance score of 25.58 with standard deviation of 6.04 in the pre-test and mean retention scores of 66.34 and standard deviation of 5.20 in the post-test. Table 14 further reveals that male students taught Social Studies using Jigsaw teaching strategy had a mean gain of 42.48 while those of female students taught using Jigsaw teaching strategy had a mean gain of 40.76 with a mean gain difference of 1.72 in favour of male students taught Social Studies using Jigsaw teaching strategy.

Hypothesis one: There is no significant mean difference between the retention scores of students taught Social Studies using Jigsaw teaching strategy and those exposed to peer tutoring strategy.

Table 3: Summary of ANCOVA Result of retention scores of students taught Social Studies using Jigsaw teaching strategy and those exposed to peer tutoring strategy.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	289.431[a]	2	144.716	9.945	.000	.090
Intercept	44014.616	1	44014.616	3024.614	.000	.938
Pretest	97.579	1	97.579	6.705	.010	.032
Strategy	178.997	1	178.997	12.300	.001	.058
Error	2924.980	201	14.552			
Total	944064.000	204				
Corrected Total	3214.412	203				

a. R Squared = .090 (Adjusted R Squared = .081)

Table 3 reveals that F (1, 201) = 12.300; p = 0.001 < 0.05. This signifies that the probability level is less than the specified alpha level of .05. The null hypothesis is rejected. It shows that there was a significant difference between the mean retention scores of students taught using Jigsaw teaching strategy and those taught using peer tutoring strategy in Social Studies.

Hypothesis two: There is no significant difference between the mean retention scores of male and female students taught Social Studies using Jigsaw teaching strategy.

Table 4: Summary of ANCOVA Result of Retention Scores of Male and Female Student Taught Social Studies using Jigsaw Teaching Strategy.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	150.216[a]	2	75.108	3.293	.041	.062
Intercept	21290.011	1	21290.011	933.551	.000	.903
Pretest	109.345	1	109.345	4.795	.031	.046
Gender	46.159	1	46.159	2.024	.158	.020
Error	2280.542	100	22.805			
Total	464128.000	103				
Corrected Total	2430.757	102				

a. R Squared = .062 (Adjusted R Squared = .043)

Table 4 indicated that F (1, 100) = 0.024; p = 0.158 > 0.05. This signifies that the probability level is greater than the specified alpha level of .05. The null hypothesis is not rejected. This means that there was a significant difference between male and female students' retention scores when taught Social Studies using Jigsaw teaching strategy. This means that Jigsaw teaching strategy on retention is is gender friendly.

DISCUSSION OF FINDINGS

Findings of this study revealed that there was a significant difference between the mean retention scores of students taught using Jigsaw teaching strategy and those taught using peer tutoring strategies in Social Studies. This may have been that both strategies provide adequate opportunities to all students to participate actively, interact with each other during the lesson and are thus returned meaningfully information from memory. This study agrees with the results of Umar (2015) and Okeke (2017) who found that the use of Jigsaw IV and peer tutoring strategies have significant effect on learning retention by students. This finding

could be as a result of the fact that the level of knowledge retained by learners is directly impacted by the extent of creative learning and the extent to which students learn initially depends on the instructional approaches used by teachers. If the learners fail to learn concepts properly initially, they will concomitantly fail to retain the knowledge of those concepts properly (Ehsanpur & Razavi, 2022). Retention of knowledge by learners results from the amount of drill, practices during the learning process and interactive activities in Jigsaw and peer tutoring strategies.

The results of the study showed that there was no significant difference between male and female students' retention scores when taught Social Studies using Jigsaw teaching strategy. This finding agrees with that of Umar (2015) whose result obtained revealed that the use of Jigsaw IV has no significant effect on retention of learning by students based on gender. The finding also concords with Usman (2016) who found no significant difference between male and female students' retention scores in Physics. This finding could be because Jigsaw strategy engages male and female students to take responsibility for their personal assignment in class. This helps them to be more self-confidence, and show more positive attitudes for greater learning retention in Social Studies.

CONCLUSION

The findings have shown that jigsaw and peer tutoring enhances students' interest, academic performance and retention in Social Studies. Therefore, usage of the conventional strategy in teaching and learning Social Studies by teachers should be discouraged. Hence, adoption of jigsaw and peer tutoring will be appropriate for the teaching and learning of Social Studies and provide a way of overcoming deficiency in students' interest, academic performance and retention in the subject. Based on the findings of the study, both Jigsaw and peer tutoring are gender friendly as they do not discriminate against male or female students in terms of students' interest, academic performance and retention in Social Studies.

RECOMMENDATIONS

Based on findings of the present study, the following are the recommendations:

1. Social Studies teachers should use jigsaw and peer tutoring to enhance students' retention in the subject.
2. Principals and Supervisors of Social Studies teaching and learning encourage the use of Jigsaw and peer tutoring strategies to enhance male and female students' retention in the subject.

REFERENCES

1. Ayoola, I. (2016). Retention of learning and its impact on academic performance in Social Studies. *Journal of Educational Psychology, 14*(3), 170-175.\
2. Bennet, J., & Rebello, N. (2019). The role of retention in meaningful learning: Concepts and practices. *International Journal of Educational Psychology, 11*(4), 23-33.
3. Ehsanpur, S. & Razavi M.R. (2022). A Comparative analysis of learning, retention, learning and study strategies in the traditional and M-learning systems. *Innovative Research in Multidisciplinary Field*, 70 (6), 100605.
4. Farrant, J. (2020). *Effective teaching: Retention and learning outcomes in secondary education*. *Journal of Pedagogy, 9*(2), 118-128.
5. Francis, S. (2019). Promoting national unity through Jigsaw cooperative learning in multicultural classrooms. *Educational Review, 22*(1), 22-28.
6. Okeke, A. U. (2018). Effect of peer-tutoring technique on secondary slow learners' acquisition of keyboarding skills in Anambra State. *The Intuition, 8*(1), 34-45 .
7. Okoye, A. A. (2017). Effects of peer tutoring method on students' academic achievement in home economics. *Academic Journal of Interdisciplinary Studies,* 2 (5) 193-197.
8. Umar, M. (2015). Effects of Jigsaw cooperative learning strategy on students' achievement and interest in basic science. *International Journal of Education,* 11(6), 257-271.
9. Usman, G. A. (2017). Effects of Jigsaw IV learning strategy on students' achievement and interest in physics. *Innovative journal of Journal of Educational Trends,* 7(3), 368-374.