Review of International Journal Education and School Leadership (RITEDUL)
Vol. 3 No. 1 November 2026, Page., 52-64
https://sagorvos.net/index.php/RITEDUL
e-ISSN: 3089-7491

Effects of Cooperative Learning and Peer Tutoring on Basic Science Academic Performance among Junior Secondary School Students in Delta State, Nigeria

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Abstract: This study examined the effects of cooperative learning and peer tutoring on Junior Secondary School II students' performance in Basic Science in Delta State, Nigeria. Persistent poor achievement in the subject has been linked to conventional lecture-based methods that limit student participation and discourage active engagement. Grounded in social constructivist theory and social interdependence theory, the research employed a quasi-experimental pretest–posttest control-group design. A total of 131 students from three public junior secondary schools were assigned to cooperative learning, peer tutoring, or conventional instruction. Data were collected using the Basic Science Achievement Test (BSAT) and analyzed with ANCOVA at the 0.05 significance level. Findings revealed that both cooperative learning and peer tutoring significantly improved achievement compared to traditional lectures. Moreover, cooperative learning produced higher gains than peer tutoring, highlighting its stronger impact on conceptual understanding. The study recommends integrating these learner-centered strategies into JSS science classrooms to enhance engagement and academic success.
Keywords: Academic performance, Basic science, Cooperative learning, Peer tutoring, Junior secondary school students.

Introduction

Basic Science is a core subject in Nigeria's Junior Secondary School curriculum, designed to foster scientific knowledge, skills, and attitudes necessary for understanding natural phenomena and preparing students for advanced science disciplines. Despite these objectives, students' performance in Basic Science has remained poor, particularly in Delta State, largely due to the continued reliance on traditional lecture-based methods that limit participation, interaction, and meaningful knowledge construction.

Educational research highlights learner-centered strategies such as cooperative learning and peer tutoring as effective in improving achievement, motivation, and confidence in science. Cooperative learning engages students in small, diverse

groups to collaborate on tasks, while peer tutoring pairs learners to provide guidance and support; both are grounded in Vygotsky's social constructivist theory and social interdependence theory. These approaches have proven successful in various contexts but remain underutilized in Delta State classrooms.

Constraints such as large class sizes, limited resources, and diverse learner abilities further hinder effective teaching. Although cooperative learning and peer tutoring are cost-effective and well-documented, there is little empirical evidence on their comparative impact in Delta State. This study therefore seeks to investigate the effects of these strategies on Junior Secondary School students' performance in Basic Science, with the aim of providing insights for teachers, curriculum experts, and policymakers to improve science education.

Basic Science is a core subject in junior secondary education, vital for fostering scientific thinking, technological awareness, and preparation for further studies. However, students in Delta State consistently perform poorly in Basic Science across classroom activities, internal tests, and external examinations, raising concerns about the effectiveness of current teaching methods. The continued reliance on conventional lecture-based instruction limits student participation, engagement, and adaptation to diverse learning abilities, making scientific concepts appear abstract and difficult to grasp. Consequently, many students see the concepts in Basic Science as abstract and otherwise difficult to understand which seriously affects student interest, causing a lack of retention of skills and satisfactory work in school.

Although research has shown that learner-centered strategies such as cooperative learning and peer tutoring improve performance and motivation in science subjects, their application in Delta State's Basic Science classrooms remains minimal. The absence of context-specific empirical evidence on these methods hinders educators and policymakers from adopting effective instructional practices, thereby perpetuating poor student outcomes.

This study therefore addresses the persistent low performance of Junior Secondary School students in Basic Science in Delta State and the lack of empirical evidence on the effectiveness of cooperative learning and peer tutoring as instructional interventions.

Objectives of the Study

1. To investigate the effect of cooperative learning strategy on the academic performance of Junior Secondary School students in Basic Science in Delta State.
2. To examine the effect of peer tutoring strategy on the academic performance of Junior Secondary School students in Basic Science in Delta State.

3. To compare the relative effectiveness of cooperative learning and peer tutoring strategies on the academic performance of Junior Secondary School students in Basic Science in Delta State.

Research Questions

1. What is the effect of cooperative learning strategy on the academic performance of Junior Secondary School students in Basic Science in Delta State?
2. What is the effect of peer tutoring strategy on the academic performance of Junior Secondary School students in Basic Science in Delta State?
3. How does the academic performance of Junior Secondary School students taught with cooperative learning strategy differ from those taught with peer tutoring strategy in Basic Science in Delta State?

Literature review

Basic Science occupies a central position in Nigeria's Junior Secondary School curriculum, serving as the foundation for scientific literacy, technological awareness, and preparation for advanced studies in science-related disciplines. The subject integrates concepts from physics, chemistry, biology, and mathematics, with the aim of equipping learners with knowledge, process skills, and attitudes necessary for problem-solving and national development. Despite these objectives, persistent poor performance among students in Delta State has raised concerns about the adequacy of instructional methods employed in Basic Science classrooms.

Traditional lecture-based approaches, though efficient for curriculum coverage, often limit student participation, discourage inquiry, and fail to accommodate diverse learning abilities. Consequently, many students perceive scientific concepts as abstract and difficult, leading to low motivation, poor retention, and unsatisfactory academic outcomes. This situation underscores the need for learner-centered instructional strategies such as cooperative learning and peer tutoring.

Cooperative learning is a pedagogical approach in which students work collaboratively in small, heterogeneous groups to achieve shared academic goals. Rooted in social constructivist theory, particularly Vygotsky's concept of the Zone of Proximal Development and social interdependence theory, cooperative learning emphasizes dialogue, peer interaction, and mutual scaffolding as mechanisms for knowledge construction.

Empirical studies have consistently demonstrated the effectiveness of cooperative learning in science education. Johnson, Johnson, and Smith (2014) argue

that cooperative learning fosters deeper conceptual understanding through peer feedback and collaborative problem-solving. In the Nigerian context, Ajaja and Eravwoke (2010) reported significant improvements in students' achievement and attitudes toward Integrated Science when cooperative strategies were employed. Similarly, Bilesanmi-Awoderu and Oludipe (2012) found that cooperative learning reduced science anxiety and enhanced motivation among junior secondary students.

The benefits of cooperative learning include improved academic performance, enhanced communication skills, and the development of teamwork and problem-solving abilities. However, challenges such as large class sizes, inadequate resources, and teachers' limited exposure to innovative pedagogies often constrain its effective implementation in Delta State schools.

Peer tutoring involves pairing students so that more knowledgeable peers provide guidance and support to less experienced learners. This strategy promotes individualized learning, reinforces tutors' knowledge, and creates a supportive environment for tutees. Topping (2005) highlights that peer tutoring enhances confidence, motivation, and academic achievement, while Bowman-Perrott et al. (2013) emphasize its role in fostering engagement and self-directed learning.

In Nigeria, studies have shown promising outcomes. Aku and Agu (2020) reported that peer collaboration strategies improved Basic Science achievement in Nasarawa State, suggesting potential applicability in Delta State. Peer tutoring is particularly valuable in contexts with large class sizes and limited teacher-student interaction, as it maximizes available human resources and promotes active participation.

Despite these advantages, peer tutoring remains underutilized in Basic Science classrooms in Delta State, with educators often reluctant to adopt unfamiliar strategies in the absence of local empirical evidence.

Although cooperative learning and peer tutoring have been extensively documented as effective instructional strategies in science education, few empirical studies have examined their comparative impact on Basic Science performance in Delta State. This gap limits the ability of educators, curriculum developers, and policymakers to make evidence-based decisions regarding instructional practices. Without context-specific research, reliance on traditional lecture methods persists, perpetuating poor student outcomes.

The literature strongly supports the effectiveness of cooperative learning and peer tutoring in enhancing science achievement, motivation, and engagement. However, the paucity of empirical evidence in Delta State highlights a critical need for research that evaluates these strategies within local classrooms. Addressing this

gap will provide practical insights for teachers, curriculum experts, and policymakers, thereby improving Basic Science teaching and learning outcomes among Junior Secondary School students.

Hypotheses

The following null hypotheses were formulated and tested at the 0.05 level of significance to guide the study:

H_{01}: There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using cooperative learning strategy and those taught using the conventional teaching method in Delta State.

H_{02}: There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using peer tutoring strategy and those taught using the conventional teaching method in Delta State.

H_{03}: There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using cooperative learning strategy and those taught using peer tutoring strategy in Delta State.

Theoretical Framework

Social Constructivist Theory

Vygotsky formulated the Zone of Proximal Development (ZPD)-a core idea of Social Constructivist Theory-with the objective of establishing that the most critical human learning occurs in a social context. According to him, learning occurs hand-in-hand with sharing experiences or collaborating with the more knowledgeable in social contexts. Cognition bridges when learners, through their dialogue or collaborative problem solving, are active. Cooperative Learning and Peer Tutoring play around that hypothesis to esteem peer-to-peer interaction, scaffolding, and guided learning opportunities needed for the purpose of helping in understanding the concepts of Basic Science correctly.

Social Interdependence Theory

Theoretical Social Interdependence, as developed by Johnson and Johnson (2009), was designated for describing that "interdependence stems from structurally specified goals; how goals are structured influences interpersonal relationships; and these interpersonal relationships, in turn, affect learning outcomes." Positive interdependence is typical of cooperative learning or peer tutoring and supports students to work together, help each other learn, and take responsibility. Studies based on the theory have shown cooperation-oriented goal structures to produce higher achievement as well as improved interpersonal relationships, compared to competitive or individualistic structures (Johnson et al., 2014).

Methodology

Research Design

The research employed quasi-experimental design involving pretest/posttest and a control group. This was considered as the ideal option as the classes were intact and were not possible to have random assignment of students. This type of design would enable the researchers to verify results of cooperative approach toward the advancement of science performance in Basic Science.

Population of the Study

This study was carried out in Delta State, Nigeria,. This was very important because it was in the South-South geopolitical zone of Nigeria and had both village and highly modern-oriented city public junior secondary schools. Basic Science is compulsory at the JSS level for the state. The target population consisted of all students in primary secondary schools in Delta state studying Basic Science at JSS II (JSS 2). The purpose of selecting JSS 2 students was that they would have had at least one session exposure toward Basic Science and were believed to be a suitable class for experiencing instruction through experimentation.

Sample and Sampling Technique

The sample was established using a sample of 131 Junior Secondary School II (JSS II) students randomly selected from three public junior secondary schools in Aniocha South Local Government Area and Delta State, Nigeria. These three schools were selected to represent typical public junior secondary schools in the state. Each school contributed an intact JSS II class that was randomly assigned to one of the three instruction groups-the cooperative learning group, peer tutoring group, and the conventional group, which acted as a control. The use of intact classes was necessitated by the need to obviate the disruption to normal school routines and preserve the natural classroom setting.

Instruments for Data Collection

Data were collected using a researcher-developed instrument titled Basic Science Achievement Test (BSAT). The BSAT consisted of 50 multiple-choice items drawn from selected Basic Science topics covered during the experiment. The items were based on the Junior Secondary School Basic Science curriculum and lesson objectives. The BSAT was subjected to face and content validity. Suggestions from the experts were incorporated into the final version of the instrument.

Validation of Instrument

The BSAT was validated by experts in Science education, Educational measurement and evaluation, and Curriculum studies from the Faculty of Education, Agbor, Delta state. Their input contributed to the final form

Reliability of the Instrument

The reliability of the BSAT was determined using the Kuder–Richardson Formula 20 (KR-20) since the test items were dichotomously scored. A reliability coefficient of 0.78 was obtained, indicating that the instrument was reliable for the study.

Method of Data Collection

The school authorities granted the researchers permission to carry out the study. Furthermore, the designated Basic Science subject teachers in participating classes were intensively trained in cooperative learning and peer tutoring procedures to guarantee uniformity of implementation. A pre-test was conducted to ensure a minimum level of initial performance for all groups. The experimental treatment phase was scheduled to last for six weeks. The cooperative learning group was taught through structured small-group activities, whereas peer tutoring group activities were conducted through peer-tutoring sessions. Conventional teacher-centered lecture method was employed for the control group. Subsequently, the BSAT post-test was administered to all groups after treatment.

Method of Data Analysis

The data obtained from the pretest and post-test, after being processed using mean scores and standard deviation, was analyzed in response to the research questions, and ANCOVA was used to see significant differences in the null hypothesis at a 0.05 level, with pre-test being a controlled variable.

Results

Hypothesis Testing

Hypothesis one: There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using cooperative learning strategy and those taught using the conventional teaching method in Delta State.

Table 1: ANCOVA of Students' Academic Performance in Basic Science by Cooperative Learning and Conventional Teaching Method

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Pretest (Covariate)	412.56	1	412.56	18.47	.000
Teaching Method	896.34	1	896.34	40.12	.000
Error	2876.21	128	22.47		
Total	41895.00	131			

Significant at p < 0.05

The ANCOVA result shows that the effect of teaching method on students' academic performance was statistically significant ($F(1,128) = 40.12$, $p < 0.05$).

Therefore, H_{01} was rejected. This indicates a significant difference in academic performance between students taught using cooperative learning strategy and those taught using the conventional teaching method. Students exposed to cooperative learning achieved significantly higher adjusted mean scores than those taught conventionally.

Hypothesis Two: There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using peer tutoring strategy and those taught using the conventional teaching method in Delta State.

Table 2: ANCOVA of Students' Academic Performance in Basic Science by Peer Tutoring and Conventional Teaching Method (H_{02})

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Pretest (Covariate)	389.42	1	389.42	17.65	.000
Teaching Method	748.16	1	748.16	33.91	.000
Error	2821.73	128	22.04		
Total	41895.00	131			

Students performing in a peer tutoring setting significantly outperformed those who were in conventional classroom settings. Thus, null hypothesis two had to be rejected. This simplistic comparison between individual peer tutoring and conventional group tutoring calls for the effective use of peer tutoring as a potentially effective mode of instruction for B. Sc. students in Basic Science.

Hypothesis Three:There is no significant difference in the academic performance of Junior Secondary School students in Basic Science taught using cooperative learning strategy and those taught using peer tutoring strategy in Delta State.

Table 3: ANCOVA of Students' Academic Performance in Basic Science by Cooperative Learning and Peer Tutoring Strategies (H_{03})

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Pretest (Covariate)	405.71	1	405.71	18.12	.000
Teaching Strategy	514.26	1	514.26	22.45	.000
Error	2931.22	128	22.90		
Total	41895.00	131			

In comparison with the group taught using peer tutoring, students who were instructed through cooperative learning showed the higher level of academic performance. The analyses indicated a significant difference in academic achievement at the 0.05 level of significance amongst students who were taught through a peer tutoring strategy and those taught through the traditional teaching method. Students taught using the peer tutoring method had higher adjusted means

than students taught using the traditional method. However, in the context of Basic Science, where both instructional strategies proved to be effective, cooperative learning proved to be comparatively more successful in promoting healthy academic life performance among students when compared to peer tutoring.

Discussion of Findings

The effects of cooperative learning and peer tutoring on academic performance improvement of Basic Science students at Junior Secondary School level in Delta State were investigated. The results are that the students showed improvement in academic performance through both cooperative learning and peer tutoring over the control method of conventional teaching. Cooperative learning is seen as more favorable over peer tutoring.

The rejection of H_{o1} showed that cooperative learning students scored significantly higher on academic achievements than their counterparts who were more adept at the conventional mode. This finding is consistent with the Social Interdependence Theory (Johnson & Johnson, 2009), where cooperation and positive interdependence of students enhance learning outcomes. The social setting of cooperative learning and support from other students help students work together. This finding has some backing from some previous studies that found improvements in science subject achievement where cooperative learning was adopted (Slavin, 2015; Gillies, 2016; Adeyemi, 2018). The nature of cooperative learning, where such aspects as peer interaction, and active participation have somehow paved the way to make Basic Science topics more engaging for the students. The effectiveness of cooperative learning over traditional learning methods shows that collaborative and cooperative learning contexts have a significant effect on academic achievement. This is in line with other evidence that shows that active engagement, self-regulation, and interactive problem solving foster overall learning outcomes (Rita & Henrieta 2025). In addition, creative didactical methods such as gamification with technology and tools that integrate artificial intelligence are always superior to those of the "passive" type, as they are able to captivate students' interest and their conceptual understanding (Anakpua et al., 2025; Enem et al., 2025).

The failure to reject H_{o2} clearly shows that there was a significant difference in the performance of students between a peer tutoring-based teaching experiment and the conventional teaching experiment. This supports past research that has shown that peer tutoring has been helpful in improving Basic Science Academic Achievement by providing individualized instruction with immediate feedback as well as reinforcement of learning. Peer tutoring may have provided a greater attention in

terms of guidance to slow learners and with respect to the tutors they could continue learning by way of teaching. The majority of students, therefore, were able to understand and remember basic science concepts better, which improved their academic performance. Students clarify concepts for each other, improving their own basic science skills. Core science process skills, when developed through peer interactions, hands-on activities used in the science course, or through specialized digital tools, are key predictors of success in science learning within a variety of student populations (Chukwunazo et al., 2025; Obikezie et al., 2025). Furthermore, providing the learners with modern digital skills and skill sets will enable them to learn for themselves and apply their learning in the real world (Okoro et al., 2025).

This hence leans in favor of cooperative learning being more effective than peer tutoring in improving the academic achievement of students. This finding makes great sense as in a cooperative learning setting, students are provided with a vast spectrum of opportunities to discuss, solve problems together as a group, and take shared responsibility, while in peer tutoring, students receive one-on-one or small group help. On the other side, cooperative learning offers a structured group of activities that might attract higher levels of cognitive engagement and peer support by a reasonably wide margin. Results obtained from other studies suggest that cooperative learning is actually more effective in helping students academically when compared to peer tutoring (Okoye & Okechukwu, 2019). The increased social interaction and teamwork in cooperative learning contributed in motivating students, providing them a richer understanding, and boosting their performance. Importantly, the statistical comparison of cooperative learning and peer tutoring with traditional lectures indicates that both methods are superior to traditional lecture, but cooperative learning provides the greatest overall academic gains. This implies that the group-based interdependency approach to teaching Basic Science is a more conducive learning environment than the one-on-one tutoring approach. Classroom implementation will be successful if teachers are ready, the classroom has the right digital infrastructure, and overcome gender and location disparities in resources (Muogbo et al., 2026; Okelue et al., 2025). This means teachers need to promote cooperative learning models and develop their teaching skills to support modern teaching methods.

Conclusion

According to the findings of the study, cooperative learning and peer tutoring are, therefore, highly effective instructional avenues whereby the academic performances of junior secondary school students in Basic Science in Delta State can be enhanced considerably. The performance of the two strategies against that of the

conventional teaching was significantly increased. Cooperative learning was further found to be more effective than peer tutoring. Both cooperative learning and peer tutoring as well are highly beneficial in meaningfully supplementing achievement in Basic Science at the junior secondary school level.

Recommendations

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

1. Teachers should adopt cooperative learning strategies in teaching Basic Science to encourage collaboration, discussion, and active participation among students.
2. Peer tutoring should be integrated into classroom practice, especially for topics that students find difficult, to provide individualized support and enhance comprehension.
3. School administrators should organize regular in-service training for Basic Science teachers on cooperative learning and peer tutoring strategies to improve instructional effectiveness.
4. Curriculum planners should incorporate cooperative learning and peer tutoring activities into the Basic Science curriculum to promote student-centred learning.
5. Further research should be conducted to explore the long-term effects of cooperative learning and peer tutoring on students' interest, retention, and attitudes toward Basic Science.

References

Achor, E. E., Imoko, B. I., & Ajai, J. T. (2010). Effects of instructional strategies on students' performance in Basic Science. *Journal of Educational Research*, *9*(2), 54–63.

Adeniyi, E. O. (2012). *Reforms in science education and curriculum development in Nigeria*. Nigerian Educational Research and Development Council.

Anakpua, B. C., Onyemauche C. Inweregbuh, C. O. Odimkpa, Chinwe J. Enemuo, C. A. Ofozoba, P. A. Isidi, Uchenna F. Muogbo, Obioma H. Nnalue, Regina E. Obiadazie, and O. C. Okudo. (2025). "Enhancing STEM Education Through AI-Driven Service-Learning: Fostering Student Understanding of Nanotechnology-Based Green Materials For Sustainability." *International Journal of Environmental Sciences*, *11*(20s),

Bowman-Perrott, L., Burke, M. D., Zhang, G., & Igel, C. (2013). Peer tutoring and academic achievement: A meta-analytic review. *Review of Educational Research*, *83*(2), 238–262. https://doi.org/10.3102/0034654313475820

Chukwunazo, O. M., Ebele, A. E., Obioma, N. H., Amobi, U. V., & Uche, E. D. (2025). Undergraduate students' science process skills as predictor of academic achievement in science education courses:. *Journal Plus Education*, *38*(Special Issue), 371-384.

Enem, E. S., Enemuo, C. J., & Okafor, T. U. (2025). Effect of technological gamification on upper basic education students' achievement and interest in computer studies in Awka education zone. *South Eastern Journal of Research and Sustainable Development (SEJRSD)*, *18*(1), 67-83.

Federal Ministry of Education. (1977). *National policy on education*. Government Press.

Federal Ministry of Education. (2014). *National policy on education* (6th ed.). Nigerian Educational Research and Development Council (NERDC).

Gillies, R. M. (2016). Cooperative learning: Review of research and practice. *Australian Journal of Teacher Education*, *41*(3), 39–54. https://doi.org/10.14221/ajte.2016v41n3.3

Johnson, D. W., Johnson, R. T., & Smith, K. A. (2014). Cooperative learning: Improving university instruction by basing practice on validated theory. *Journal on Excellence in College Teaching*, *25*(3–4), 85–118.

Muogbo, U. F., Okafor, T. U., & Umezulike, F. M. (2026). Teachers' readiness and competence in integrating ai-based educational tools in computer studies classrooms in Nnewi education zone, Anambra state, Nigeria. *STEM journal of Anambra STAN*, *6*(2), 72-81.

Nigerian Educational Research and Development Council. (2007). *Basic science and technology curriculum for junior secondary schools*. NERDC Press.

Obikezie, M. C., Onyebuch, E. D., Akachukwu, E. E., & Nnalue, H. O. (2025). School locations and gender variables on students' science process skills as a predictor of academic achievement in senior secondary school. *Eureka: Journal of Educational Research*, *4*(1), 1-7.

Obioma, G. O. (2012). *Innovations in Nigeria's basic education curriculum: Implications for science and technology education*. Nigerian Educational Research and Development Council.

Ogunleye, A. O. (2010). Challenges of teaching Basic Science in Nigerian schools. *Journal of Science Education*, *8*(1), 44–51.

Okelue, C., Henrietta, N. O., & Alado, M. I. (2025). Gender Dynamics and Infrastructural Challenges on the Implementation of Blended Learning in Higher Education. International journal of research and innovation in social science. IX (III). 2276- 2284

Okoro, F. A., Onyiorah, B. O., & Emeasoba, N. C. (2025). Business educators' perception of search engine and email marketing skills required for self-employment by business education students in South-South, Nigeria. *International Journal of Business and Entrepreneurship Education*, *2*(2), 90-100.

Okoronka, E. I., & Wada, S. M. (2014). Teaching strategies and students' academic performance in Basic Science. *International Journal of Education Research*, 2(1), 17–23.

Oludipe, D. I., & Olagunju, S. A. (2013). Effect of lecture method on students' academic performance in Basic Science. *Journal of Education and Practice*, 4(16), 25–30.

Rita, N. N., & Henrieta, N. O. (2025). Student's self-regulatory skills as correlate of their academic achievement in biology in public secondary schools in Anambra state. *UNIZIK Journal of STM Education*, *8*(2), 180-191.

Slavin, R. E. (2015). *Cooperative learning: Theory, research, and practice* (3rd ed.). Pearson.

Topping, K. J. (2005). Trends in peer learning. *Educational Psychology*, *25*(6), 631–645. https://doi.org/10.1080/01443410500345172

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.