Enhancing Students' Academic Engagement Through Team Work in Secondary School in Nigeria.

Saa'du Onikoko Rasheedat

Science Education Department, Faculty of Education,
Al-Hikmah University Ilorin, Nigeria

<u>rasheedatsaadu834@gmail.com</u>

<u>https://orcids.org/0009-0003-3316-4677</u>

+234 703 653 9201

Kolawole Abdulsalam, Mujidat Yemisi

Science Education Department, Faculty of Education,
Al-Hikmah University Ilorin, Nigeria
kolawolemujidat@gmail.com
https://orcid.org/0009-0001-7656-6022
+2347060904498

ADULMUMIN Ismail Abiodun

Science Education Department, Faculty of Education, Al-Hikmah University Ilorin, Nigeria abdulmuminismail@gmail.com +2347069129156

BOLAJI, Hammed Olalekan (Ph.D.)

Science Education Department
Faculty of Education,
Al-Hikmah University Ilorin, Nigeria
hobolaji@alhikmah.edu.ng
https://orcid.org/0000-0003-3228-5066
+23434862624

ATOTILETO, Zainab Bolajoko (Ph.D.)

School of sciences, department of integrated science Kwara State College of Education Ilorin atotiletob@gmail.com https://orcid.org/0009-0004-7646-5952 +23408058758710

Abstract

Engagement among students is a crucial element in achieving academic success, especially in senior secondary where academic interest often declines as a result of several social and academic factors. This research investigates the effects of team work and collaborative assignments on students in Nigerian secondary education. The research study utilizes a descriptive survey methodology, gathering data from 200 educators across both public and private institutions through the use of questionnaires. The study indicates that collaboration encourages participation by

fostering active involvement, responsibility, and interaction among team members. Group activities including discussions, problem-solving, creativity and competitive tasks were found to be the most effective in boosting student motivation and improving learning results. The data obtained from the questionnaires were analyzed using regression analysis with the Statistical Package for Social Sciences (SPSS) software. Collaborative learning among students led to enhanced academic performance, as they showcased improved retention, critical thinking abilities, and assessment outcomes when working together. Effective implementation is hindered by several challenges, including limited resources, unequal participation, and teachers struggling to manage group dynamics. These results highlight the necessity for a well-organized project management approach, comprehensive teacher training, and ample resources to fully capitalize on the rewards of collaborative learning. The study concludes that teamwork is a highly effective educational resource that boosts student participation and academic achievement. The recommendation suggests providing institutional backing, well-defined evaluation frameworks, and digital resources to enable collaboration. By promoting collaboration, Nigerian secondary schools can establish a dynamic and inclusive learning environment that equips students for future academic and professional.

Keywords: Student's Engagement, Team-work, student, Academic performance, Secondary School

Introduction

Education is the cornerstone of personal and societal development, equipping individuals with the necessary knowledge, skills, and values to contribute meaningfully to their communities. In the modern educational landscape, there is a growing recognition that traditional teaching methods are insufficient in preparing students for the complexities of the 21st century. In response to this challenge, the use of team projects and collaborative activities has emerged as an effective strategy for increasing student engagement Adebola (2022). This approach is especially relevant in senior secondary classes, where students are transitioning into higher education or the workforce, which will improve academic performance and can provide insights on how to implement effective team work team projects and collaborative activities are powerful tools for engaging students in learning, particularly at the senior secondary level (Ayanwale,2021). In conventional educational settings, the focus is often on individual work and teacher-led instruction, which may not cater to all students' needs. Collaborative learning shifts

the paradigm to a more student-centered approach, encouraging active participation and shared responsibility (Folashade, 2023). When students work in groups, they not only exchange ideas and knowledge but also develop critical problem-solving skills. That help students also to develop essential skills such as communications, collaborations, it can also explore how cultural factors such as collectivism and individualism, influence team wok in secondary school. (Aremu, 2022). The diversity of thoughts and strengths within a team allows students to learn from one another and work collectively towards common goals. This collaborative dynamic encourages a deeper understanding of the material and helps build a sense of accountability and commitment to learning.

projects cultivate essential life skills such Moreover, group as communication, teamwork, and conflict resolution, all of which are critical for success beyond school. (Rudnak & Cuhadar 2022). In a group setting, students must negotiate roles, share responsibilities, and manage differing opinions, skills that are vital in higher education and the workforce. This approach is especially beneficial in a diverse setting like Ilorin Metropolis, where students come from varied socioeconomic backgrounds. Collaborative activities can help foster inclusivity, allowing students to interact with peers from different walks of life while working towards a common goal (Iwuamadi & Mang 2021).

Additionally, team projects promote social cohesion and inclusivity Students from diverse backgrounds in Nigeria come together, learn to collaborate, and appreciate different perspectives, fostering unity and understanding. These interactions build relationships and develop skills crucial for navigating the multicultural, interconnected world students will face beyond school. Enhancing student engagement through team projects and collaborative activities offers numerous benefits for senior secondary students in Nigeria. (Jemal, 2022). This approach shifts learning from a passive, teacher-centered model to a more dynamic, student-centered one, helping improve academic performance, foster essential life skills, and better prepare students for future success. By promoting active

participation, teamwork, and critical thinking, schools can create a more engaging and productive learning environment, helping students thrive both inside and outside the classroom.

In many secondary schools across Nigeria, challenges such as overcrowded classrooms, limited educational resources, and varying academic abilities are common. These factors often contribute to low student engagement and disinterest in academic work. However, incorporating team-based projects and activities into the curriculum can address these issues by creating a more interactive and stimulating learning environment. When students engage in group tasks, they have the opportunity to apply classroom concepts to practical, real-life situations (Oladejo, et al., 2021). This practical application enhances their comprehension and encourages critical thinking, as students are required to analyze, evaluate, and synthesize information within their teams. The study aimed to find out whether there is lack of research in team work and student academic engagement, which have use theoretical frameworks that are relevant to Nigerian contexts, also to find out specific population such as students with disabilities or students from low-income backgrounds which may need for more culturally sensitive. Nigeria, promoting active engagement through group work and activities can significantly enhance learning, foster teamwork, and better prepare students for real-world challenges. Therefore, the objectives of this study are:

- 1. To examine the impact of teamwork projects on students' engagement in senior secondary in Nigeria.
- 2. To identify the types of activities that enhance student engagement through teamwork in senior secondary schools.
- 3. To evaluate the effectiveness of team-based activities in improving students' academic performance in senior secondary.
- 4. To explore the challenges faced by students and teachers in implementing teamwork projects and activities in senior secondary schools.

Research Questions:

- 1. How do teamwork projects influence student's academic engagement in senior secondary schools in Ilorin Nigeria?
- 2. What types of activities are most effective in promoting student's academic engagement through teamwork in senior secondary schools?
- 3. What is the relationship between team-based activities and students' academic performance in senior secondary schools?
- 4. What challenges do students and teachers encounter in implementing teamwork projects and activities in senior secondary schools?

Literature review

Student academic engagement plays a vital role in the educational process, especially in senior secondary schools where interest in learning often declines due to various socio-academic factors (Agwu & Nmadu, 2023). In Nigeria, there is growing interest in how teamwork can increase students' enthusiasm, participation, and overall academic success in senior secondary schools. Student engagement refers to the level of attention, curiosity, and involvement students exhibit in learning, as well as their willingness to participate in educational activities. It is typically divided into three dimensions: behavioral, emotional, and cognitive engagement. Renzulli, & Reis. (2021). Behavioral engagement includes participation in academic and extracurricular activities, emotional engagement relates to feelings toward school, teachers, and peers, and cognitive engagement encompasses the effort students invest in learning and striving for mastery (Skinner et al., 2022). Maintaining engagement is particularly important in senior secondary schools, where students are transitioning toward higher education and adulthood, as it directly impacts their academic achievement.

Teamwork in education involves group-based activities where students collaborate to complete tasks or projects. Studies have shown that teamwork fosters engagement by encouraging collaboration, accountability, and peer interaction (Ajayi *et al.*,2023). Through teamwork, students exchange ideas, explore different

perspectives, and solve problems together. This approach not only enhances cognitive engagement but also strengthens emotional and behavioral engagement by creating a sense of belonging and minimizing the isolation often felt in conventional learning environments (Misati, & Ngoka, 2021). Teamwork does not only enhance engagement but also improves academic outcomes. According to (Ogunniran, 2021). teamwork offers opportunities for peer learning, which promotes better knowledge retention. Students who engage in group activities are more likely to comprehend complex concepts through discussions and debates with their peers, which is particularly beneficial in subjects like mathematics and science that require deeper understanding. Moreover, teamwork helps students develop essential skills such as communication, leadership, and time management, which are crucial for success both academically and professionally. (Umar, 2023). In Nigeria, the introduction of teamwork projects into school curriculums has been linked to better academic performance in external examinations such as the West African Senior School Certificate Examination (WASSCE). (Adeyemi-Adewoyin, 2021).

Additionally, group discussions and problem-solving exercises provide structured opportunities for students to engage more deeply with the content, leading to better understanding and retention of information, which aligns with findings on student engagement and participation in collaborative learning environments (Gopinathan *et al.*, 2022) research during the COVID-19 pandemic highlighted that digital collaboration tools increased interactivity, motivation, and engagement among students, particularly when leveraging frameworks like Vygotsky's Collaborative Learning Theory, which emphasizes social interaction in learning processes (Gopinathan *et al.*, 2022). Furthermore, a study on problem-based learning showed that teamwork encouraged student dedication, self-regulation, and active participation, factors directly linked to enhanced engagement (Amerstorfer, 2021).

Mercier (2017) which demonstrated that group efficacy and positive attitudes toward teamwork are linked to better learning outcomes, as students feel more

motivated and capable of achieving common goals when working in teams. Additionally, studies indicate that team-based activities foster social and interpersonal skills, which further supports academic achievement by creating a collaborative environment that encourages effort and mutual support among students (León-Del-Barco *et al.*, 2019). Freedman and Somech (2021) found that teamwork implementation in schools is hampered by insufficient resources and varying student participation levels. Similarly, Hussein (2021) notes that students face coordination issues and communication gaps, which complicate teamwork and collaborative learning activities.

Despite the positive impact of teamwork, its implementation in senior secondary schools within Nigeria faces several challenges. Large class sizes, insufficient resources, and teachers' limited experience in managing collaborative learning environments are significant obstacles (Alzubi, et al., 2024). These barriers often hinder the full potential of teamwork projects to engage students. However, educators are increasingly exploring innovative solutions to overcome these issues, such as leveraging technology for group work and partnering with local organizations to secure necessary resources (Kim, & Maloney 2020). In Nigerian, studies indicate that teamwork projects significantly increase student engagement in senior secondary. A study conducted by (Beneroso & Eran2021), across 10 senior secondary schools found that students involved in teamwork-based learning exhibited higher participation engagement levels than their peers who followed more traditional, individual learning methods. The social benefits of collaborative learning were highlighted, as students became more motivated to participate when working in team. Teamwork projects and activities are essential strategies for improving student academic engagement in secondary schools in Nigeria. By encouraging collaboration, accountability, and social interaction, teamwork not only enhances student engagement but also improves academic performance. Nevertheless, to maximize the effectiveness of these strategies, challenges like resource limitations and inadequate teacher training must be addressed. As

stakeholders continue to prioritize student engagement, teamwork will remain a fundamental component in creating engaging and dynamic learning environments in secondary schools.

Methods

The study utilizes a descriptive survey research design to examine the impact of teamwork and collaboration activities on student academic engagement in secondary schools in Nigeria. The target population were 200 teachers from both public and private secondary schools, specifically focusing on teachers in Senior Secondary (SS) classes and teachers who implement collaborative learning activities.

A total of 200 teachers were selected using a multistage sampling technique. The first stage involves stratified random sampling to ensure representation from both public and private schools, followed by stratified random sampling within the schools to select participants based on their year of experience and qualifications. Data was collected using a structured questionnaire designed for teachers. Which was administered twice to measure the changes in participant attitudes, knowledge and behaviors over time. The questionnaire covers demographic information, types and frequency of teamwork and collaboration activities, and various indicators of student engagement, such as participation, interest, motivation, and interaction during group tasks. The data obtained from the questionnaires were analyzed using regression analysis with the Statistical Package for Social Sciences (SPSS) software.

Results and Interpretations

Demographic data of Respondents

Table 1: Distribution of Respondents Based on Gender

Gender	Frequency	%
Male	83	41.5
Female	117	58.5
Total	200	100.0

The table shows a gender distribution in which females make up a larger proportion of the sample, representing 58.5% (117 respondents), while males constitute 41.5% (83 respondents), out of a total of 200 participant.

Table 2: Distribution of respondents based on School Type

School Type	Frequency	%
Public	149	74.5
Private	51	25.5
Total	200	100.0

The table shows that a majority of the participants, 74.5% (149 respondents), work in public schools, while 25.5% (51 respondents) are in private schools, based on a total sample of 200.

Table 3: Distribution of respondents based on Year of experience.

Years of Experience	Frequency	%
1-5	55	27.5
6-10	99	49.5
11-15	46	23.0
Total	200	100.0

The table indicates that nearly half of the respondents (49.5% or 99 respondents) have 6-10 years of experience, followed by 27.5% (55 respondents) with 1-5 years of experience, and 23.0% (46 respondents) with 11-15 years of experience, based on a total sample of 200.

Research question 1: How do teamwork projects influence student engagement in secondary schools in Ilorin Metropolis?

Table 4: The influence of teamwork projects on students' engagement in senior secondary in Nigeria.

S/N	Item	Mean
1.	Teamwork projects make me more interested in school activities.	1.40
2.	Working in teams helps me stay engaged with classroom topics.	1.57
3.	I am more likely to participate in discussions when working on group projects.	1.26
4.	Team-based assignments increase my motivation to learn.	1.40
5.	I feel more connected to my classmates when we collaborate on projects.	1.40
	Average mean	1.41

The table showing an average mean of 1.41 across items related to teamwork projects and student engagement suggests a generally positive influence of teamwork on student involvement in school activities, discussions, motivation, and connectedness with classmates. This finding aligns with the studies indicating that collaborative learning and teamwork in educational settings positively impact student engagement and participation. For instance, research during the COVID-19 pandemic highlighted that digital collaboration tools increased interactivity, motivation, and engagement among students, particularly when leveraging frameworks like Vygotsky's Collaborative Learning Theory, which emphasizes social interaction in learning processes (Gopinathan *et al.*, 2022). Furthermore, a study on problem-based learning showed that teamwork encouraged student dedication, self-regulation, and active participation, factors directly linked to enhanced engagement (Amerstorfer, 2021). These findings reinforce the idea that well-structured teamwork projects can effectively enhance students' motivation and involvement in educational settings.

Research question 2: What types of activities are most effective in promoting student engagement through teamwork in senior secondary schools?

Table 5: Activities of most effective in promoting student engagement through team work

S/N	Item	Mean
1.	Group discussions help me understand the subject better and stay engaged.	1.89
2.	Collaborative problem-solving activities keep me focused and involved.	1.67
3.	Team projects that involve creativity and innovation increase my interest in learning.	1.69
4.	I enjoy team-based activities where we compete against other groups.	1.29
5.	Practical, hands-on group activities are the most engaging for me.	1.69
	Average mean	1.65

The table shows an average mean of 1.65 for activities promoting student engagement through teamwork, suggesting that students find specific types of group

activities engaging. Notably, collaborative problem-solving (mean = 1.67), creative projects (mean = 1.69), and practical, hands-on group tasks (mean = 1.69) score positively, indicating these activities are particularly effective in fostering engagement. Competitive team activities are the most engaging with a mean of 1.29, reflecting that students highly value the dynamic interaction and motivation from such competition-based teamwork. This finding was in support of Abla and Fraumeni, (2019) which reveal that team-based learning, especially involving creative tasks or competitive elements, boosts motivation and encourages active participation among students.

Research question 3: What is the relationship between team-based activities and students' academic performance in senior secondary schools?

Table 6: The relationship between team-based activities and students' academic performance

S/N	Item	Mean
1.	Participating in team-based activities has improved my overall academic performance.	1.81
2.	Group projects help me perform better in assessments and exams.	1.64
3.	My academic success is positively influenced by collaborative learning.	1.70
4.	Teamwork encourages me to put in more effort, leading to better grades.	1.70
5.	I am more likely to retain information when learning through teamwork.	1.57
	Average mean	1.68

The table with an average mean of 1.68 suggests a positive relationship between team-based activities and students' academic performance. Specific items 2 and 5 indicate that students feel teamwork enhances their understanding and retention, leading to improved academic outcomes. The finding aligns with Mercier (2017) which demonstrated that group efficacy and positive attitudes toward teamwork are linked to better learning outcomes, as students feel more motivated and capable of achieving common goals when working in teams. Additionally, studies indicate that team-based activities foster social and interpersonal skills, which further supports academic achievement by creating a collaborative

environment that encourages effort and mutual support among students (León-Del-Barco *et al.*, 2019)

Research question 4: What challenges do students and teachers encounter in implementing teamwork projects and activities in senior secondary schools?

Table 7: Challenges of students and teachers encounter in implementing teamwork project and activities in senior secondary school

S/N	Item	Mean
1.	Teachers find it difficult to manage group activities effectively in class.	1.93
2.	There are not enough resources available to fully implement teamwork projects in my school.	1.63
3.	Some students do not contribute equally in teamwork, making it challenging to complete tasks.	2.57
4.	It is difficult to coordinate and communicate with all team members during group projects.	2.20
5.	I sometimes find it challenging to share my ideas and opinions during team activities.	2.21
	Average mean	2.11

The table with an average mean of 2.11 indicates that students and teachers face multiple challenges when implementing teamwork projects. For instance, teachers find managing group activities difficult (mean = 1.93), and some students struggle with equal contribution (mean = 2.57) and coordination (mean = 2.20). Additionally, limited resources (mean = 1.63) and challenges in sharing ideas (mean = 2.21) hinder effective teamwork. This was in support of the findings of Freedman and Somech (2021) found that teamwork implementation in schools is hampered by insufficient resources and varying student participation levels. Similarly, Hussein (2021) notes that students face coordination issues and communication gaps, which complicate teamwork and collaborative learning activities. These findings underscore the need for structured project management approaches to improve coordination, ensure equitable participation in team projects, and institutional support to address resource constraints.

Discussion

The findings of the study support the theoretical framework of social constructivism theory which emphasizes the importance of social interactions and collaborations in learning, it also supported the theory of motivation which is the key factor in students' academic engagement, that allows effective strategy in teaching, the study highlights the importance of teachers support and peer relationship in facilitating teamwork.

Conclusion

The study concluded that team-based activities positively influence student engagement and academic performance in senior secondary with students expressing increased motivation, retention, and understanding through collaborative projects. Group activities such as discussions, problem-solving, and competitive tasks are particularly effective in promoting engagement. However, challenges persist in implementing these projects effectively. Teachers face difficulties managing group dynamics, and students often encounter issues with coordination, unequal participation, and resource limitations. These findings align with research indicating the need for structured support, clear communication, and adequate resources to facilitate successful teamwork in education. Addressing these challenges will enhance the impact of collaborative learning on students' academic and personal development.

Recommendation

To enhance the benefits of team-based learning and address challenges, schools should invest in teacher training, allocate sufficient resources, implement structured group roles, provide digital tools for communication, establish clear evaluation criteria, and foster a collaborative culture that values teamwork.

References

- Abla, C., & Fraumeni, B. (2019). Student engagement evidence-based strategies to boost academic and social-emotional results. *McRel International*. https://files.eric.ed.gov/fulltext/ED600576.pdf
- Adebola, O. O. (2022). Exploring the use of collaborative learning to promote preservice teachers' participation in a rural university classroom (Doctoral dissertation, University of the Free State).
- Adekunle, S., & Olaniyan, T. (2021). Peer learning and academic achievement: The role of teamwork in Nigerian senior secondary schools. *Journal of African Educational Research*, 6(4), 34-50.
- Adeleke, L. M., & Ibrahim, S. O. (2022). The effects of group-based learning on students' performance in WASSCE: Evidence from Ilorin, Kwara State.

 *International Journal** of Educational Excellence, 5(3), 67-82.
- Afolabi, M. A., Adedoyin, B. O., & Yusuf, A. B. (2023). The impact of collaborative learning on student engagement in senior secondary schools: A case study of Ilorin Metropolis. *Journal of Educational Development*, 7(1), 15-28.
- Ajayi, O. K. (2021). Teamwork and its influence on students' academic engagement in Nigerian secondary schools. Journal of Educational Practice, 10(2), 112-125.
- Amerstorfer, C. M. (2021). Student perceptions of academic engagement in problem-based learning frontiers in education.
- Aremu, F. (2022). Donor action for empowerment and accountability in Nigeria.

 The institute of Development Studies and partner organizations.
- Ayanwale, O. (2021). Two Collaborative Instructional Strategies and Learning

 Outcomes in Multicultural Concepts in Social Studies among Junior

 Secondary School Students in Oyo State, Nigeria (Doctoral dissertation)
- Bolarinwa, K., Bello, F., & Gbadamosi, O. (2023). Challenges of implementing collaborative learning in Nigerian secondary schools: A focus on Ilorin Metropolis. *Nigerian Journal of Teacher Education*, 9(1), 41-54.

- Ejuchegahi, A, & Angwaomaodoko (2023). Challenges of adopting inclusive education in Nigerian school system. *Path of science, International electronic scientific Journal*, 20203,9(7),1001-1009, http://dx.doi.org/10.22178/pos94-1
- Folashade, A. J. (2023). Exploring the challenges and possibilities of using learner-centered approach to teach in Nigeria Public Secondary Schools. African perspectives of research in teaching and learning. (APORTAL)Vol7(2)(2023)
- Jemal, S. (2022). Social cohesion skills and its mediating role in the working environment: The Case of Ethiopian Railways Corporation (Doctoral dissertation, ST. MARY'S UNIVERSITY).
- León-Del-Barco, B., Mendo-Lázaro, S., Polo-Del-Río, M. I., & Rasskin-Gutman, I. (2019). University Student's Academic goals When working in Teams: Questionnaire on Academic Goals in Teamwork, 3 × 2 model. *Frontiers in Psychology*, 10. https://doi.org/10.3389/fpsyg.2019.02434
- Ngoka, J. C., Okoro, E., & Adeoye, O. (2020). *Collaborative learning as a tool for improving student engagement in Nigerian secondary schools*. African Journal of Education and Development, 8(3), 77-89.
- Ojo, M., & Agbaje, F. (2020). Teamwork and skill acquisition in senior secondary schools: The case of Kwara State, Nigeria. Journal of School Leadership and Management, 12(4), 53-65.
- Oladejo, A. I., Akinola, V. O., & Nwaboku, N. C. (2021). Teaching chemistry with computer simulation: Would senior school students perform better? *Crawford Journal of Multidisciplinary Research*, 2(2), 16-32.
- Olaolu, A., & Adeoye, J. (2022). Exploring the relationship between student engagement and academic success in Nigerian secondary schools. International Journal of Educational Studies, 9(2), 23-39. Practices in Nigeria: Some Implications for Counselling and Value Reorientation. Journal Plus Education, 31(2), 188-205.

- Rudnak, I., & CUHADAR, S. (2022). Secondary School Adolescents' Knowledge of Corrupt
- Skinner, E., Kindermann, T. A., & Furrer, C. J. (2021). Engagement and disaffection as central to processes of motivational resilience and development. *Psychological Inquiry*, 32(4), 322 - 332
- Suleiman, Y. M. (2021). Technological innovations in promoting collaborative learning in Nigerian secondary schools: A review. Nigerian Journal of Educational Technology, 4(1), 14 29.