

Challenges and Prospects of Integrating Collaborative Learning Models into Curriculum and Instruction in Teacher Education in Nigeria

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Abstract

This study focuses on the challenges and prospects of integrating collaborative learning (CL) models into the curriculum and instruction of teacher education in Nigeria. Collaborative learning is an instructional strategy that involves students working together to achieve shared educational goals, fostering communication, critical thinking, and problem-solving. This model is supported by the social constructivist theory (Vygotsky, 1978), is increasingly being identified as very important for the development of 21st-century skills among learners. Despite its numerous advantages, the implementation of CL in Nigerian teacher education, as a developing country, faces very many obstacles. Such obstacles include: inadequate infrastructure, lack of proper teacher training scheme in place, traditional teaching practices, and limited access to technology. This study adopts a ground theory research with qualitative and quantitative research methods to explore these challenges and highlight the potential prospects for effective utilization of collaborative learning in Nigerian teacher education programmes. By examining barriers such as infrastructural constraints, resistance to pedagogical shifts, and cultural issues, as well as opportunities like digital tools, policy reforms, and professional development programmes, this study aims to provide a comprehensive understanding of how CL can be integrated effectively into the Nigerian educational system.

Keywords: *Challenges, collaborative learning, teacher education, Curriculum, Instruction, prospects and policy reform*

INTRODUCTION

Teacher education is an important aspect of any education system that help to shape the future of education through the preparation of competent, skilled, and adaptable educators. In Nigeria, teacher education is particularly important, with regard to the country's diverse population, varied educational needs, and the evolving demands to be in line with the global economy. However, Nigerian teacher education programmes have traditionally been dominated by teacher-centered pedagogies that emphasizes content delivery than student engagement (Ajayi, 2020). This approach has encouraged a system where passive learning, note memorization, and lack of critical thinking are many emphasized.

Collaborative learning (CL), encourages interaction, peer-to-peer learning, and shared

problem-solving, alongside offering a promising shift towards more student-centered approaches (Johnson & Johnson, 2009). CL is particularly more relevant in the context of teacher education as it promotes social skills such as teamwork, communication, and critical reflection. These are skills that are highly important for future teachers to carry out effective policy implementation in their own classrooms (Darling-Hammond, 2017). Regardless of these identified benefits of CL, its integration into the curriculum and instruction of teacher education programmes in Nigeria remains limited. This paper seeks to explore the challenges and prospects associated with this integration, with a focus on the role of technology, teacher training, and institutional support.

Literature Review

1. The Concept of Collaborative Learning

Collaborative learning is hung on the idea that students learn more effectively when they work together to solve a set of identified problems, share knowledge, and support each other's learning (Vygotsky, 1978). The major principles of collaborative learning include positive interdependence (students are dependent on each other to achieve their identified goals), individual accountability (each student is responsible for their contribution to the learning process), and promotive interaction (encouraging face-to-face exchange of ideas) (Johnson & Johnson, 2009).

Research points to the fact that collaborative learning encourages cognitive, social, and emotional learning outcomes. It enhances students' engagement in higher-order thinking and enables them to develop skills such as negotiation, problem-solving, and critical reflection (Hakkarainen et al., 2017). In teacher education, collaborative learning will go a long way in preparing future educators to create inclusive, participatory, and dynamic classrooms where students are actively engage with each other, facilitating the development of essential social competencies and required social skills needed even at the larger world beyond the classroom, such as communication, teamwork, and adaptability.

Collaborative Learning

Engaging Students

Collaborative learning can be in either of these forms: peer-to-peer or in larger groups. Peer learning is a type of collaborative learning that involves students working in pairs or small groups to discuss concepts or find solutions to problems that are so identified. Similar to the idea that two or three good heads are better than one. Educational researchers have established that through peer instruction, students teach each other by specifically addressing misunderstandings and clarifying misconceptions that might arise in the course of their classroom interactions with their teachers in because the classroom. As students are more relax when they are with one another than when they are with their teachers (Klemm 2024).

Why use collaborative learning?

Researches have shown that educational experiences where students are actively involved and that are active, social, contextual, engaging, and student-owned lead to deeper learning and understanding on the part of the students. The benefits of collaborative learning include in the course of teaching and learning includes: (Aluwatayo & Adebule 2019)

- Development of higher-level thinking, oral communication, self-management, and leadership skills.
- Promotion of student-faculty interaction.
- Increase in student's retention, self-esteem, and responsibility.
- Exposure to and an increase in understanding of diverse perspectives as students have the opportunity of learning in a more emotionally relax atmosphere.
- It helps in preparation for real life social and employment situations.

The following steps are pre-preparative to engaging in collaborative learning in a school system

- Introduce group or peer work early in the semester to set clear student's expectations.
- Establish ground rules that will guide student's participation and contributions in a bid to effectively partake in the classroom interactions.
- Plan well for each stage of group work and interactions in the classroom.
- The teacher carefully explain to his/her students how groups or peer discussion will operate and how students will be graded.
- Help students develop the social skills they need to succeed in their classroom learning, such as using team-building exercises or introducing self-reflection techniques.
- Consider using written contracts to formally arrange for class participation.
- Involve self-assessment and peer assessment for group members to evaluate their own and others' contributions in the process of learning.

Getting started with collaborative learning

This begins with shorter in-class collaborative learning activities that generally involves a three-step process. This process can be as short as five minutes or longer, depending on the task at hand and the number of students that will be involved.

- Introduce the task. This can be as simple as instructing students to turn to their neighbour to discuss or debate a topic that is identified for discussion.
- Provide students with enough time to engage with the task. Walk around and address any question that may arise in the course of the classroom interactions as the need may be.
- Debrief. This involves call on a few number of students to share a summary of their conclusions. Address any misconceptions through clarifying any confusing points in the course of the classroom interactions. Open the floor for questions from the students arising from any misconceptions on the part of the students.

For a larger groups collaborative work, requires these strategies that can help ensure productive group dynamics:

- Provide opportunities for students to develop rapport and group cohesion through icebreakers, team-building, and reflection exercises.
- Give students sufficient time to create a group work plan allowing them to plan for deadlines and divide up their responsibilities.
- Let the students to establish ground rules. Students can create a contract for each member to sign. This contract can include agreed-upon penalties for those who fail to fulfill obligations. So that students will be treated equally in the course of their interactions.
- Assign roles to members of each group and change the roles periodically to tally with the need and timing of their interactions. For example, one student can be the coordinator, another the note-taker, another the summarizer, and another the planner of next steps.
- Allow students to rate each other's quality and quantity of contributions. This will make them to be better motivated to participate as the judgment is jointly made and not only by the teacher. Use these evaluations when giving individual grades, but do not let it weigh heavily on a student's final grade. Communicate clearly how peer assessment will influence their grades so that they will be more committed to their participation in collaborative learning.
- Check in with groups intermittently, encourage students to handle their own issues personally within the group, before coming to you for assistance only for knotty issues that cannot be resolved within the group (Puhag & Johnson 2023).

International studies on teacher education have shown that incorporating CL into teacher preparation programmes often lead to improved teaching effectiveness and better outcomes for both teachers and students (Darling-Hammond, 2017). For example, Finland's teacher education system places a strong emphasis on collaborative learning, as mark of matching with the requirement of the 21st century classroom teaching and learning. It helps in providing prospective teachers with opportunities to collaborate with peers, serve as mentors, and be experienced educators. Thus, fostering a culture of shared responsibility for learning as individual learner (Darling-Hammond, 2017).

Teacher education programmes in Nigeria need to prioritize equipping teacher educators with the skills and knowledge required to effectively incorporate collaborative learning into their teaching practice. As one cannot give what one does not have, First of all, the students themselves are unwilling to collaborate. Comprehensive school graduates are often not ready for further development of their knowledge and skills. Sometimes, the gap between the school programme and the university requirements is so big that the students cannot comprehend, analyse and classify the information received, all that are very essential aspects of collaborative learning. Thereby, losing the interest to learning (especially in case of low motivation) (Aajyi 2020).

Pedagogical interaction implies certain requirements that lecturers set for the students. If lecturers reduce their requirements the education may be less efficient. Therefore, there is often a contradiction between the requirements that the lecturer sets and the expectations that the students have. There are two ways to settle this contradiction: reinforcement and collaboration; the latter that is collaboration however, gives better results than the form reinforcement.

Many students think that their lecturers should entertain them during the lectures so that they could enjoy learning. As a matter of fact, learning has always been a hard work as it should be. It is impossible to master new knowledge without any intellectual efforts. Therefore, the students should attend the university and study. If, for any reasons, they cannot study independently, they can do the tasks in class together with their lecturers or peers. Learning is better enjoy when it carried out in the midst of others (Oyadonghan & Johnson 2024).

This approach, collaborative learning, to education promotes discussions of everyday real life problems and, thus, motivates students to participate in activities that are related to their learning actively and wholeheartedly.

Unfortunately, higher educational institutions usually pay little attention to self-directed learning of students and neither do they teach these techniques. At the same time, the information which the student obtained himself is much more valuable than the information received from the lecturer. Therefore, the lecturer should be responsible for checking and correcting the information obtained by the student. So that they do not keep on carrying about misconceptions and erroneous ideas of their interactions with their peers (Leonard & Leonard 2022).

The students think that there is a lack of practitioners, like lecturers who have a real life experience of work in the subject that they teach. For example, a lecturer of General Method of Teaching should have practical experience in order to share both theory and practice of teaching with his/her students.

There are different possible styles for lecturers to lead students in their activities. Due to different personal qualities, some lecturers are authoritarian, while others are more open to involve all the process participants in decision making, to coordinate actions of all the stake holders, which is more typical of a democratic style. Unfortunately, only few lecturers support this democratic style which is decisive for collaborative learning. Democratic style of lecturer's interaction pave a good way for effective collaborative learning. Unfortunately, some lecturers are very liberal, they either follow the students or escape communicating with them outside the classroom setting (Laal & Ghodsi 2022).

Students are right in their opinion that they should have an opportunity to do tasks in a distant form at home and to receive advice from their lecturers via e-mail or Skype. Collaborative learning requires more efforts, time for communicating with students and access to information technologies, and this is the only option today in this 21st century classroom.

An equal participation approach to education implies evaluation of both students and their lecturers. While students are traditionally evaluated by their lecturers, they do appreciate the

opportunity to evaluate their lecturers in turn. For this purpose, we have developed a special expert evaluation technique to confirm the performance of either of the group.

Students are given a number of parameters and skills to evaluate their lecturers according to a 7 point scale, where 7 corresponds to the highest level of the skill, 6 is a high level, 5 is a level above average, 4 is average, 3 is below average, 2 is low, and 1 is very low.

The parameters to be evaluated are as follows: knowledge of the subject (course) taught, diversity of the applied forms and methods of work, administrative skills and experience, interest of students to the subject taught, and respect towards the students. Every parameter is evaluated according to certain criteria.

The knowledge of the subject taught is evaluated according to the skills of presenting the materials to the students, giving bright and vivid examples, showing the real life applications of the knowledge obtained, drawing interdisciplinary connections so that the students can draw inferences and meaning from the different disciplines that are presented to them at school.

The diversity of the applied forms and methods of work is evaluated according to the skills of changing student teacher interaction forms, introducing new things at every class, using active learning methods.

The administrative skills and experience are evaluated according to the discipline level in the class, involvement of all students in the activities, collaboration with students, fair evaluation of the students' achievements.

Interest of the students to the subject taught is evaluated through the activity of the students in class, commitment of the students to ask questions and communicate with their lecturer outside their school setting, respect of the student towards their lecturer.

The respect of the lecturer towards the students is evaluated through his/her skills to raise interest in students and to be tolerated to the low achievement students. Teacher collaboration has been a common element of some school initiatives for years. Typically one or more of these three organisational models: common planning time, professional learning communities, and field groups are most commonly used (Darling Hammond 2017).

Each model is distinct, yet share common features. As they: 1) advance teacher's learning, 2) address context specific issues, 3) foster collegiality, 4) reduce teacher's isolation, and 5) lead teachers to greater insights about teaching and learning. The overarching, and arguably the most important common element is the goal of improved student learning.

What makes each organization model unique? First, the teachers are organized differently in each model: either as interdisciplinary teams, disciplinary teams, or self-directed teams. Second, the starting point for teachers' collaboration differs. In common planning for example, teacher teams begin with an analysis of the needs of the students, while in professional learning communities, the teacher teams begin with the analysis of students' academic progress, and in the critical friends groups, the teacher teams begin with an identified need or interest for

improved practice. The organisational features of each organization model are summarized in Table 1.

Table 1 Organisational Model That Promote Teacher Collaboration

| Common Time | Planning | Professional Learning Communities | Critical Groups | Friends |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Interdisciplinary teams— teachers share same students • Coordinate team policies and procedures • Discuss with students • Meet with parents • Plan team activities, thematic or cross-curricular units • Examine student work • Participate in professional development | | <ul style="list-style-type: none"> • Disciplinary teams • Ongoing process of collective inquiry and action research • Collective analysis of student assessed data in relation to specific learning targets • Use of data to inform and assess effectiveness of instruction | | <ul style="list-style-type: none"> • Group gathers voluntarily to improve practice through collaborative learning • Uses coaches and specific protocols to guide sessions • Identify school-specific student learning goals, reflect on practices for achieving the goals, collaboratively examine student work |

Adopted from Williams 2024

Strategies for Building Teacher Collaboration

Organisational models facilitate, but do not guarantee total collaboration. How teachers engage in a model can make a difference. Teachers' personal stance about whether they "have to" or "want to" participate in an organisational model is critical to successful collaboration. Equally important is understanding how to engage effectively in collaborative work with colleagues. As with other skills, we gain a greater capacity for collaboration with the opportunity to practice. To initiate or revitalize teacher collaboration in a school, these strategies will be useful: (Williams 2024)

1. Create a truly shared vision and goals. The level of ownership they feel in the process influences how much teachers actually invest in collaborative work. A shared vision and goals of the content of classroom learning can lead to these sense of ownership from the students. For example, identify your team's shared vision of caring for students and students' learning, set goals related to that vision, discuss how the team's work can help attain those goals, and check in often to assess the progress made. The strong connection between the work and the vision of the team can help individuals see purpose and assume ownership of their learning in the process.

2. Develop a sense of community. At its core, collaboration is rational. The students getting to know their colleagues, understanding their passions, and taking the time to connect one another on a personal level can help members gain mutual respect and look past the perceived eccentricities in others. Establishing shared values and commitments can unify the group and provide purpose for their collective work. Like all relationships, a collaborative community develops over time and requires work to maintain such unified community.

Trust influences the effectiveness of collaborative work. Respecting group commitments such as being fully present at meetings and seeing the best in others help establish trust and bind a cohesive community. Other ways to develop community include establishing traditions, celebrating accomplishments together, joining hands to find solutions to identified problems and recognising individual's contributions.

3. Identify group norms. Let's face it. Collaboration can be uncomfortable or stressful at times. When we are transparent about our work and our beliefs, our colleagues can see our limitations as well as our strengths, placing us in a position of vulnerability. Sharing with and trusting colleagues requires courage and humility. A climate of trust can help establish the safe environment that is necessary for open communication. Such open communication is very vital for the success of collaborative interactions.

Identifying and establishing group norms also can help to develop that safe environment needed for successful collaborative effort. Such norms may include defining roles and responsibilities of every member of the group, using protocols for interpersonal communication, and outlining parameters for time management.

Taking the time to get to know the most appropriate learning styles, needs, interests, fears, and hopes of each team member helps shape the norms for how the group engages in the shared work for a successful collaboration.

4. Use discussion and dialogue. Whether they are integrating curriculum, analysing data, or studying a new practice, whichever is involve among these, teams should understand the roles of, and differences between dialogue and discussion. They are equally important to the group process.

Discussion moves the conversation forward. In discussion, individuals state their opinions for the purpose of building consensus or taking joint decisions. The goal of dialogue is to share and broaden students' knowledge. Dialogue on the other hand invites multiple perspectives, values the exploration of biases and assumptions, questions the status quo and entertains new

ways of knowing and being. Dialogue requires active listening, willingness to state beliefs, the ability to bear the tension of ambiguity, and belief in the transformative potential in the process.

5. Work through conflict: Dialogue can cultivate deep professional learning as individuals and teams explore new ideas for practice. However, dialogue may also lead to conflict. It can be helpful for your team to develop a conflict management plan to monitor conflict as it arises. This is because, we are bound to disagree in an attempt to agree.

Teams can help manage conflict by providing time, space, and support for individuals as they work through their emotions. Individuals also should monitor their own emotions and practice self-care. So that the emerging conflicts will not be aggravated.

Using professional judgement, your team can determine when to explore the roots of conflict and when to provide space for reflection and cooling down. Sometimes, unfavourable conflict often provides growth opportunities.

Teacher Collaboration

Strong collaboration and collaborative cultures develop over time and so there a strong need for commitment to the process. While the benefits are clear, genuine collaboration is complex.

Patience in the moment and anticipation for the outcome can lead to deep teacher learning that translates into tangible student achievement. While teacher learn the act of relating to their students patiently, it has the added advantage of encouraging students' maximum learning as they are actively involved in the process of learning.

What will it take to maximize organisational models for productive teacher collaboration in your school? School leaders need to work together and commit to a collaborative culture. They need to ensure dedicated time for the organizational model within the school day.

Common planning time, professional learning communities, and critical friends groups, each require regular, dedicated time for teachers to collaborate. With time, teachers can develop authentic collaborative communities in which they address common issues, shared goals or school wide initiatives, engage in mutually beneficial endeavour using communal resources; and advance their skills, knowledge and dispositions related to students' learning.

Challenges of Integrating Collaborative Learning Models in Nigeria

Despite these advantages inherent in collaborative learning, the integration of collaborative learning into teacher education in Nigeria faces significant barriers. Among these are:

a) Inadequate Infrastructure

One of the most significant barriers to implementing collaborative learning in Nigerian teacher education institutions is the lack of relevant infrastructure. The country's educational institutions often lack the necessary physical and technological resources to support CL strategies. Many teacher education institutions operate with overcrowded classrooms, outdated textbooks, and inadequate access to modern technologies such as computers, internet facilities, that makes interactive learning platforms practically feasible (Akinyemi, 2019). Without these

essential resources, the full potential of CL models cannot be realized, as they require interactive technologies and flexible classroom environments.

b) Resistance to Pedagogical Change

The Nigerian education system is strongly attached to traditional, teacher-centered pedagogies that prioritize the transmission of knowledge from teacher to student. This system often values rote memorization over critical thinking and students' engagement. Changing these deeply entrenched educational practices presents a significant challenge. Faculty members, many of whom have been trained in and are familiar with traditional methods, may resist shifting to the more collaborative, student-centered approaches of the 21st century. This resistance is exacerbated by the perception that collaborative methods are less efficient or harder to manage in large classes (Ajayi, 2020).

c) Cultural Factors

Cultural norms within Nigeria settings also play a role in hindering the adoption of collaborative learning. In many parts of Nigeria, education is often viewed as an individual pursuit, where competition and individual success are emphasized. Therefore, students may be reluctant to collaborate with their mates, preferring to focus on their own academic achievements rather than working collectively. Additionally, there may be lack of social trust and willingness to share knowledge among students that have been used to normal practice of competition, which are essential elements for collaborative learning to thrive (UNICEF, 2020).

d) Teacher Training and Professional Development

A lack of comprehensive training of would be teachers in modern pedagogical approaches, including collaborative learning, is another critical barrier. Many educators in Nigeria have not received adequate training in the use of student-centered teaching methods. This observed gap in training affects not only teachers in pre-service programmes but also those in-service educators who may be expected to implement CL approaches in their classrooms without the necessary support or professional development (UNESCO, 2018). It becomes very important therefore for teachers in training to be well groomed in collaborative learning strategy and those in-service, for their knowledge to be adequately updated and their training should be from time to time regardless of the cost in finances and time.

3. Prospects of Integrating Collaborative Learning Models in Nigeria

Regardless of the endless list of hindrances to successful implementation of collaborative learning strategies, it has the following prospects that makes it imperative for the government to forge ahead, regardless of all odds to ensure that effective implementation of collaborative leaning in teacher education institutions.

a) Digital Technologies and Online Platforms

The proliferation of digital technologies presents a significant opportunity for advancing collaborative learning in Nigeria. Mobile phones, computers, and online platforms can facilitate communication and collaboration among students, especially in institutions where physical resources are limited. Online learning platforms such as Google Classroom, Zoom, and Moodle allow for real-time collaboration and feedback, making it easier for students and educators to engage in cooperative learning, even in the absence of physical proximity as was found in the time of Coronavirus epidemic across the globe. (UNICEF, 2020). As internet

access improves across the country, the potential for using digital tools in collaborative learning will continue to grow.

b) Policy Reforms and Government Support

The Nigerian government has acknowledged the need for reforms in the education sector, particularly in teacher preparation. As teachers remain important instrument for educational changes in the country. In the National Policy on Education (Federal Ministry of Education, 2014), there is a clear emphasis on the need to adopt more interactive, learner-centered teaching approaches for effective and meaningful classroom interactions between the teacher and his/her students. By aligning national educational policies with international best practices and prioritizing teacher professional development, there is significant potential to integrate collaborative learning into the teacher education curriculum across the country. Government support for infrastructure development, such as building modern classrooms and improving access to technology, is critical in realizing this vision.

c) Cross-Institutional and International Collaboration

Collaboration between Nigerian universities, international institutions, and educational organisations can enhance the effectiveness of teacher education programmes. These collaborations can provide access to resources, expertise, and technology that would otherwise be unavailable. For example, partnerships with universities in Finland, United Kingdom or the United States of America where collaborative learning is a cornerstone of teacher education, could provide Nigerian educators with the right knowledge and relevant skills necessary to adopt similar models in their own contexts. Furthermore, cross-institutional collaborations can help design curricula that are culturally relevant while incorporating best practices in teaching (World Bank, 2017).

d) Teacher Professional Development Programs

One of the most effective ways to ensure the successful integration of collaborative learning is through continuous professional development programmes. These programmes, could take the forms of workshops, seminars, or online training courses, would help educators develop the needed skills and confidence required to use CL strategies in their teaching. Furthermore, integrating collaborative learning into teacher education curricula at both undergraduate and postgraduate levels will ensure that future educators are well-equipped to adopt these methods in their own classrooms (Darling-Hammond, 2017)

Nowadays, one of the most important high priority problems of education is to motivate students for self-directed learning and development so as to become active participants of education and their own lives. The critical self-directed processes should raise their social responsibility for their own professional success.

These outcomes allow for a new design of engineering curricula and for an update of the existing programmes and approaches to teaching. In the long run, this gives good results in improving the efficiency of teacher education.

Collaborative learning technologies contribute to solving the problem of providing high education quality. This requires: finding good contact with students, which means addressing them by their first names, positive attitudes, trusting tone and smiles, showing special interest

and concern for the students. That is, attentive listening skills, encouraging students, more importantly those who have certain challenges and cannot cope adequately well with others.

Conclusion

Nowadays, one of the most important high priority problems of education is to motivate students for self-directed learning and development so as to become active participants in their education process and their own lives. The critical self-directed processes should raise their social responsibility for their own professional success.

These outcomes allow for a new design of teacher education curricula and for an update of the existing programmes from time to time as well as the approaches to teaching. In the long run, this gives good results in improving the efficiency of teacher education.

Collaborative learning technologies contribute to help in solving the problem of providing high education quality. This requires:

- finding good contact with students, which means addressing them by their first names, positive attitudes, trusting tone and smiles; showing constant interest in students, that is, attentive listening skills, encouraging students, especially those who have some challenges in their learning process

References

- Akinyemi, A. (2019). The challenges of teacher education in Nigeria: A critical review. *Journal of Nigerian Education, 15*(3), 45-60.
- Ajayi, K. (2020). Collaborative learning in teacher education: Overcoming challenges in Nigeria. *Journal of Educational Research, 18*(4), 21-36.
- Darling-Hammond, L. (2017). *Teacher education and the learning profession: A review of the evidence*. Stanford University Press.
- Federal Ministry of Education. (2014). *National Policy on Education* (6th ed.). Government Press.
- Hakkarainen, K., Palonen, T., & Lehtinen, E. (2017). Collaborative learning in teacher education: A Finnish perspective. *Learning and Instruction, 49*, 1-8.
- Johnson, D., & Johnson, R. (2009). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company.
- Oluwatayo, A., & Adebule, F. (2019). Examining the role of academic collaboration in improving educational standards. *African Journal of Education, 23*(2), 67-79.
- UNESCO. (2018). *The role of teacher collaboration in improving education systems*. United Nations Educational, Scientific and Cultural Organization.
- UNICEF. (2020). *Education and teacher collaboration: Transforming education systems through partnerships*. United Nations Children's Fund.
- World Bank. (2017). *Improving teacher quality in Africa: Lessons from international collaborations*. World Bank Group. Processing on achievement in cooperative groups. *J Soc Psycho*, 130 (4), 507-516.
- Klemm, W.R. (2024). Using a Formal Collaborative Learning Paradigm for Veterinary Medical Education. *Journal of Veterinary Medical Education*, 21(1), 2-6.

- Laal, M., & Ghodsi, S.M. (2022). Benefits of collaborative learning. *Journal of Procedia - Social and Behavioral Sciences*, 31, 486 – 490.
- Leonard, P. E. & Leonard, L.J. (2021). The collaborative prescription: Remedy or reverie? *International Journal of Leadership in Education*, 4(4); 383–99.
- MacGregor, J.T. (2000). Collaborative learning: Shared inquiry as a process of reform. In M.D., Svinicki (Ed.). *The changing face of college teaching, New Directions for Teaching and Learning No. 42*. San Francisco, USA: Jossey-Bass Publishing.
- Panitz, T. (2021). Benefits of Cooperative Learning in Relation to Student Motivation", In M., Theall (Ed.) *Motivationfrom within: Approaches for encouraging faculty and students to excel, New directions for teaching and learning*. San Francisco, CA: USA. Josey-Bass publishing.
- Pugach, M.C., & Johnson, L. J. (2023). *Collaborative practitioner's collaborative school*. Denver, Colorado, USA: Love Company Publishing.
- Williams D. (2024) Collaborative Teaching Models to meet student
- Oyadonghan T.E. & Timi-Johnny T (2024) Evidence Based Teaching and Classroom Management. *International Journal of Education and Evaluation*. 10(1), Pg 425-437