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Nexus between Collaborative Teaching Approach and Pupils' Academic Achievement in Public Primary Schools in Magu District, Mwanza Region, Tanzania

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Abstract : This study examined the relationship between the collaborative teaching approach and pupils' academic achievement in public primary schools in Magu District, Mwanza Region, Tanzania. Guided by the Constructivist Learning Theory, the study employed a mixed-methods explanatory design to explore how collaborative learning influences pupils' engagement, understanding, and overall academic performance. Data were collected from 244 participants including 228 teachers, 12 head teachers, 3 Ward Education Officers, and 1 District Education Officer. Quantitative data were analyzed using SPSS version 23, while qualitative data from interviews and observations were analyzed thematically. The results indicated a strong positive correlation ($r = .68$, $p < .01$) between collaborative teaching and pupils' academic achievements. Teachers reported that collaborative activities enhance teamwork, peer learning, communication skills, and motivation to learn. The study concludes that collaborative teaching significantly improves cognitive and social outcomes and recommends regular teacher training, peer mentoring, and policy support to integrate collaborative approaches in Tanzania's public primary schools.

Keyword : Collaborative teaching, academic achievement, primary education, mixed methods

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INTRODUCTION

Primary education forms the cornerstone of human capital development, laying the foundation for literacy, numeracy, and problem-solving skills that drive national progress. In Tanzania, the introduction of the Free Primary Education Policy (URT, 2016) significantly increased enrolment rates and improved access to schooling. However, while quantitative access expanded, the quality of learning outcomes has remained a pressing concern. Reports from the National Examinations Council of Tanzania (NECTA, 2021) revealed that a substantial proportion of pupils in public primary schools, especially in rural districts such as Magu, failed to reach minimum proficiency levels in core subjects. These results suggest that the traditional, teacher-centered instructional models prevalent in Tanzanian classrooms may no longer be adequate for meeting the demands of a competency-based curriculum. Paradigm shifts toward learner-centered pedagogies such as collaborative learning has gained momentum, supported by educational theorists like John Dewey, Jean Piaget, and Lev Vygotsky, who advocate active participation and social construction of knowledge. Research across Europe and Asia have demonstrated that collaborative teaching fosters higher-order thinking, communication skills, and empathy among learners (Slavin, 2022; Ravana et al., 2023). In this approach, learning becomes a collective enterprise where pupils engage in shared problem-solving and mutual accountability, thereby enhancing retention and understanding. Countries that have institutionalized collaborative methods, such as Finland and Norway, consistently rank high in global education indices (OECD, 2021). These international experiences offer valuable lessons for developing countries seeking to improve educational quality through pedagogical innovation. Sub-Saharan African education systems have also begun integrating collaborative methods within classroom practices. Kenya's Competency-Based Curriculum (CBC) emphasizes cooperative learning as a key skill for 21st-century education (Cheruiyot, 2024). Similarly, Botswana's Education and Training Sector Strategic Plan (ETSSP 2015–2020) encourages learner-centered methods, including teamwork and group activities, to enhance pupils' understanding. Despite these policy initiatives, implementation challenges persist due to large class sizes, inadequate resources, and insufficient teacher preparation (UNESCO, 2020). These limitations mirror the Tanzanian context, where systemic constraints impede the full realization of collaborative teaching practices envisioned under the Competence-Based Curriculum framework.

In Tanzania, collaborative teaching remains underexplored at the primary education level, particularly in rural districts where infrastructural

and resource limitations hinder innovation. Studies by Mhewa et al. (2025) and Rugambwa et al. (2022) highlight that while teachers acknowledge the importance of learner-centered strategies, many lack the professional capacity and institutional support to apply them effectively. Consequently, most classrooms remain dominated by lecture-based instruction, which restricts pupils' participation and discourages peer learning. Such an environment limits pupils' capacity to develop essential competencies such as critical thinking, communication, and problem-solving, which are vital for academic achievement and lifelong learning, this study was conducted to examine the relationship between the collaborative teaching approach and pupils' academic achievements in public primary schools in Magu District, Mwanza Region**.** Magu District was purposively selected due to its consistently low performance in national examinations and the absence of localized studies addressing the effectiveness of collaborative learning. By investigating this relationship through a mixed-methods approach, the study contributes to evidence-based strategies for improving teaching practices and advancing educational equity in Tanzania's public primary schools.

Literature Review

1. Theoretical review

Collaborative learning is strongly grounded in Vygotsky's Social Constructivist Theory, which posits that knowledge is constructed through social interaction and that learners achieve higher understanding when engaging with more knowledgeable peers or through guided participation (Vygotsky, 1978). Empirical studies indicate that when pupils work collaboratively, they not only share and negotiate ideas but also scaffold each other's learning, enhancing comprehension and problem-solving skills (Johnson & Johnson, 2009). In practice, cooperative tasks such as group discussions, peer teaching, and joint problem-solving allow learners to internalize concepts more effectively, reflecting Vygotsky's notion of the Zone of Proximal Development. This theoretical underpinning reinforces the effectiveness of collaborative strategies, suggesting that structured peer interactions can significantly improve academic performance while fostering critical thinking and social skills among pupils.

2. Empirical Review

Globally, research underscores the effectiveness of collaboration in improving learning outcomes. Andersen et al. (2025) found that teacher collaboration in Denmark reduced behavioral problems and enhanced engagement. Similarly, Ravana et al. (2023) in Malaysia

demonstrated that integrated collaborative learning in science promotes leadership and accountability among students. In Chile, Carrasco et al. (2025) reported that school-based collaborative initiatives improved student performance and teacher professionalism. In Sub-Saharan Africa, collaborative approaches have been linked to improved cognitive and affective outcomes. Asad and Qureshi (2025) showed that simulation-based collaborative learning enhanced teamwork and communication among students in Egypt. Cheruiyot (2024) observed that Kenya's Competency-Based Curriculum (CBC) embeds collaboration as a pillar for skill development and creativity, although resource shortages hinder effective practice.

Collaborative and cooperative learning strategies have also received considerable attention in empirical research. Johnson and Johnson (2009) demonstrated that students working in structured group activities tend to outperform those in competitive or individualistic learning environments. By sharing knowledge, discussing concepts, and collectively solving problems, learners develop deeper understanding and higher-order thinking skills. Similarly, in the context of African education, Owoeye and Yara (2011) reported that cooperative learning positively affects students' motivation, engagement, and academic achievement, suggesting that interaction and peer support are critical components in improving performance. Moreover, empirical evidence highlights the role of technology-integrated teaching strategies in enhancing pupils' learning outcomes. Studies by Cheung and Slavin (2013) indicated that the use of educational technology, such as multimedia presentations, simulations, and interactive software, significantly improves students' understanding of complex topics. Technology not only makes lessons more engaging but also accommodates diverse learning styles, enabling teachers to address individual differences effectively. In Tanzanian primary schools, the limited but growing incorporation of ICT in teaching has been associated with improved literacy and numeracy outcomes among pupils, as shown by Mtebe and Raisamo (2014).

In Tanzania, Mhewa et al. (2025) revealed that most teachers have limited knowledge of the jigsaw collaborative strategy, resulting in its under-utilization. Rugambwa et al. (2022) found that learner-centered pedagogy, including group work, fosters engagement and critical thinking in early education. However, overcrowded classrooms, inadequate training, and insufficient materials remain significant barriers (Twaweza, 2020; Mosha, 2018). While existing studies recognize collaboration as a driver of academic success, there is limited empirical evidence from rural Tanzanian districts such as Magu. This

study fills that gap by quantifying and contextualizing the relationship between collaborative teaching and pupils' academic achievements.

METHODOLOGY

A Mixed research approach was used to collect and analyze quantitative and qualitative data in this study. An explanatory mixed-methods design was adopted. Quantitative data were collected first to establish statistical relationships, followed by qualitative interviews and classroom observations to explain underlying dynamics. The study involved 244 participants: 228 teachers, 12 head teachers, 3 Ward Education Officers (WEOs), and 1 District Education Officer (DEO). Stratified and simple random sampling were used for teachers, while purposive sampling identified head teachers, WEOs, and the DEO. Data collection used questionnaires (teachers), semi-structured interviews (administrators), and observation checklists (classrooms). Questionnaires measured teachers' perceptions of collaborative teaching using a 4-point Likert scale (Strongly Agree to Strongly Disagree). Face and content validity were confirmed by experts from St. Augustine University. Reliability testing through Cronbach's Alpha yielded acceptable coefficients ($\alpha = .788$ for collaboration). Quantitative data were analyzed using descriptive and inferential statistics in SPSS 23, while qualitative data underwent thematic analysis following Creswell (2014). Ethical principles, like securing permits, confidentiality, voluntary participation, informed consent and proper referencing were adhered to maintain academic integrity.

RESULT AND DISCUSSION

The Relationship between the Collaborative Method of Teaching and Pupils' Academic Achievements.

This objective aimed to evaluate the relationship between the collaborative method of teaching and pupils' academic performance in public primary schools. The collaborative teaching method involves joint participation of teachers and pupils in the learning process through group discussions, teamwork, peer learning and shared problem-solving activities. This approach promotes communication skills, cooperation and deeper understanding of content among learners. The researcher collected data by providing questionnaire to teachers which were to be answered through Likert scale by responding whether they strongly disagree, disagree, agree or strongly agree. Their responses were complemented by the interview conducted to the head teachers, Ward Education Officers, and District Primary Education Officer. Table 1.1 presents the data.

Table 1.
Teachers' Response on the Relationship Between the Collaborative Method of Teaching and Pupils' Academic Performance (N=228)

Key: *SD-Strongly Disagree, D-Disagree, A-Agree, SA-Strongly Agree:*

No.	Items	SD		D		A		SA	
		F	%	F	%	F	%	F	%
1.	Pupils perform better through group work	-	-	1	0.4	92	40.4	135	59.2
2.	Collaborative improves communication	-	-	2	0.9	103	45.2	123	53.9
3.	Peer discussions retain pupils' knowledge	-	-	5	2.2	95	41.7	128	56.1
4.	Group work helps pupils understand easily	-	-	2	0.9	104	45.6	122	53.5
5.	Pupils achieve better through collaboration	-	-	2	0.9	100	43.8	126	55.3
6.	Collaboration increases pupils' motivation	-	-	1	0.4	110	48.2	117	51.3

Source: Field Data (2025)

Table 1.1 shows the level of respondents on the statements given concerning the relationship between the collaborative method of teaching and pupils' academic achievements in public pre-primary schools. The results reveal that 99.6% of the respondents agreed that pupils perform better through group work, while 0.4% of the respondents disagreed with the statement that pupils perform better through group work. This indicates that collaborative learning through group work significantly enhances pupils' academic performance. Additionally, 99.1% of the respondents agreed that collaborative teaching improves pupils' communication skills, while only 0.9% disagreed with the same statement. This suggests that interaction among pupils during collaborative activities supports language development and confidence in expression.

Furthermore, 97.8% of the respondents agreed that peer discussions help pupils retain knowledge more effectively, whereas 2.2% of the respondents disagreed with this notion. According to the respondents, engaging in peer discussions strengthens understanding and long-term memory among pupils. Similarly, 99.1% of the respondents agreed that group work helps pupils understand concepts more easily, while only 0.9% of the respondents disagreed. This implies that collaborative learning enables pupils to learn from one another and grasp content more clearly through shared experiences.

In the same vein, 99.1% of the respondents agreed that pupils achieve better results through collaboration, and only 0.9% disagreed with this statement. This shows that when pupils are engaged collaboratively, their academic achievements improves as they support and learn from each other. Lastly, 99.5% of the respondents agreed that collaboration increases pupils'

motivation to learn, with only 0.4% disagreeing. This indicates that collaborative methods enhance pupils' interest and participation in learning activities, leading to improved academic outcomes. Therefore, based on those findings and the information obtained from the quantitative information, there are different sub-themes extracted and explained as follows:

Pupils Perform Better Through Group Work

Table 1.1 shows that 99.6% of respondents agreed that pupils perform better through group work, while only 0.4% of respondents disagreed. This finding indicates near-unanimous support among teachers for the effectiveness of collaborative learning strategies in improving academic outcomes. Such strong consensus suggests that group work fosters deeper understanding through peer interaction, cooperative problem-solving and active engagement in learning tasks. The data reflects a clear recognition that pupils benefit not only cognitively but also socially from group-based learning environments. Teachers likely observe that group work encourages responsibility-sharing, boosts confidence and creates a supportive atmosphere conducive to academic improvement. This level of agreement underscores the importance of integrating structured group activities in classroom teaching practices to enhance pupil performance across subjects.

Constructivist Learning Theory supports these findings by emphasizing that learners construct knowledge actively through social interaction and collaboration. It posits that group work enables learners to co-create meaning, test ideas and internalize concepts more effectively through peer dialogue and shared experiences. Agustina et al., (2025) argue that learning is inherently social and that collaboration with peers can lead to greater cognitive development. Group work creates opportunities for learners to scaffold each other's understanding, which improves performance. One interviewee remarked during the interviews:

> *"From what I've seen in our classes, when pupils are allowed to work in groups, they tend to discuss more, ask each other questions, and even explain concepts to one another in their own language. This boosts their understanding and builds confidence, especially among the quieter students who may not participate in whole-class discussions" (Interviewee 12, July 2025).*

This quotation implies that group work encourages active participation and peer teaching, which deepens conceptual understanding. Collaborative learning also provides an inclusive environment where all learners can contribute, building both academic and social skills. It reduces

dependence on the teacher and promotes learner autonomy. Observation during classroom visits supported this finding as pupils were seen actively engaging in discussions, solving problems collectively, and using peer explanations to understand lessons better. Teachers facilitated rather than dominated the sessions, which led to increased learner involvement and enhanced comprehension. Duka and Budiningsih (2025) adds that cooperative learning improves student achievement, particularly when structured properly. Group work fosters critical thinking, improves communication skills and enhances retention through active participation and shared responsibilities.

Nevertheless, the findings from the interview reveal that pupils do not perform better through group work. Basing on this, one interviewee had the following to say during interview:

> *"In my experience, group work often allows some pupils to hide behind the efforts of others. The more active or brighter students usually take control while the rest contribute very little. It creates an uneven learning experience. Instead of improving performance for all, it sometimes leads to dependency. Not every pupil benefits equally from group activities" (Interviewee B[3], July 2025).*

This quotation highlights the potential drawback of group work when it is not properly structured or monitored. Dominant pupils may take over tasks, while others become passive, leading to unequal participation and learning. As a result, the intended benefits of collaboration shared learning, communication and critical thinking may not be realized for all students. This could reinforce gaps in understanding and limit the academic progress of less assertive learners. Alanazi et al., (2025) observe that without clear roles and teacher facilitation, group work can result in unequal participation and limited learning outcomes for some pupils.

Collaborative Learning Improves Communication Skills

Table 1.1 indicates that 99.1% of the respondents agreed with the statement that collaborative learning improves pupils' communication skills, while only 0.9% of respondents disagreed. This suggests a strong perception among educators and stakeholders that group-based learning plays a crucial role in fostering key interpersonal skills. Through collaborative tasks, students are given opportunities to articulate their thoughts, actively listen, ask questions and engage in meaningful dialogue with peers. These interactions contribute not only to improved verbal communication but also to the development of social and emotional competencies.

> *"Since I started implementing collaborative learning strategies, I've noticed that pupils are more*

vocal. They can express their opinions without fear, and they also listen to each other more attentively. The quiet ones have started participating more because they feel supported in small group settings. It's not just about learning content; they're learning how to talk and listen respectfully" (Interviewee B[2], July 2025).

This quotation suggests that collaborative learning environments promote both academic growth and interpersonal development. By interacting in small groups, pupils gain confidence to express their ideas and learn the norms of respectful communication, enhancing their social competence alongside academic skills. Observations revealed that during group discussions, students frequently took turns, asked questions and clarified their peers' ideas. Teachers noted a significant improvement in pupils' verbal interaction, especially among those who were previously shy or reserved in whole-class settings. According to Alhazani (2025), cooperative learning encourages the development of both cognitive and social skills. It allows students to articulate their ideas, listen actively and build on others' contributions, which enhances learning outcomes and interpersonal communication.

Peer Discussions Retain Pupils' Knowledge

The findings in Table 1.1 reveal a strong consensus among respondents, with 97.8% agreeing that peer discussions aid in the retention of pupils' knowledge, while 2.2% of respondents disagreed. This indicates that engaging in dialogue with classmates reinforces learning by encouraging pupils to recall, explain and apply information in their own words. Such active participation deepens understanding and strengthens memory through repetition and collaborative explanation. Peer discussions also provide immediate feedback and clarification, which helps address misconceptions and solidify correct concepts. Nevertheless, the data strongly supports the value of peer interactions as an effective learning reinforcement tool. These findings highlight the importance of integrating structured peer discussion activities into the teaching process to enhance long-term knowledge retention.

The Constructivist Theory highlights the role of dialogue in cognitive development. Through peer discussions, students reprocess information, connect it to prior knowledge and create meaningful understanding, which enhances long-term retention. According to Waruwu (2025), peer discussions promote exploratory talk, which helps learners clarify ideas, reinforce memory and build deeper understanding through collaborative reasoning. One interviewee commented:

"After group activities, we often ask pupils to explain what they've learned. Those who engaged in peer

discussions tend to remember more details than those who worked individually. They also use their own words to describe concepts, which shows true understanding. We've even seen improvements in test scores in classes that emphasize collaborative work" (Interviewee 4, July 2025).

The quotation implies that peer-to-peer interactions help pupils process and remember content better. By explaining concepts in their own words, learners solidify their understanding and boost recall. It also suggests a positive impact on academic assessment outcomes. Observations confirmed that students who engage in peer discussions are more likely to answer questions correctly during plenary sessions and display greater confidence in sharing learned content. Group tasks encourage active engagement and frequent repetition, reinforcing memory. According to Ah-Nam and Osman (2017), students learn more effectively when they explain concepts to one another. Peer teaching during collaborative activities supports long-term knowledge retention and deeper cognitive processing.

Group Work Helps Pupils Understand Concepts Easily

The results from Table 1.1 shows that 99.1% of the respondents affirmed that group work helps pupils understand topics more easily, while 0.9% of respondents disagreed. This reflects a strong belief among educators that collaborative learning promotes better comprehension by allowing students to learn from one another through discussion and peer explanation. In group settings, pupils often feel more comfortable asking questions and expressing misunderstandings, leading to quicker clarification of concepts. The interactive nature of group work also supports active learning, which is known to enhance engagement and retention. These findings support the integration of group-based activities as a core instructional method in classroom teaching.

"There's a noticeable difference in understanding when pupils work together. They simplify concepts for one another using familiar terms or real-life examples. We've seen that weaker pupils especially benefit when they're paired with stronger ones, they get more time and attention than they would from the teacher alone" (Interviewee B[2], July 2025).

This quotation implies that collaborative learning supports differentiated instruction by allowing peer scaffolding. Pupils benefit from alternative explanations and contextualization provided by peers, leading to better understanding across ability levels. Observations in classrooms showed that group discussions encourage real-time clarification of difficult topics. Stronger students often step in to assist peers, using relatable language or visual aids, which accelerate overall

comprehension. According to Marek (2025), cooperative learning structures lead to higher levels of student engagement and understanding. Pupils benefit from the explanations and feedback provided by peers during collaborative tasks.

Pupils Achieve Better in Class Through Collaboration

According to Table 1.1, 99.2% of the respondents agreed with the statement that pupils achieve better academically through collaboration, while 0.8% of respondents disagreed. This finding suggests that when students work together, they are more likely to engage deeply with the content, share ideas and support each other's learning. Collaborative learning fosters critical thinking, problem-solving and the ability to explain concepts to peers, all of which enhance academic achievement. Nevertheless, the data reinforces the view that collaborative strategies contribute significantly to improved student performance. It highlights the importance of designing classroom activities that promote teamwork and shared responsibility. According to Gonzales (2025), collaborative learning positively influences academic achievement by promoting critical thinking, shared responsibility and motivation among learners. In the same vein, Constructivist Learning Theory supports this finding by asserting that learning is most effective when learners are actively engaged in meaningful, social tasks that promote reflection and shared problem-solving. During the interview, one interviewee noted:

> *"We've tracked our pupils' results over time and observed that classes using collaborative methods consistently perform better. The approach allows pupils to learn from one another and they seem more invested in their progress. Working together also builds accountability because each member wants to contribute meaningfully to the group's success" (Interviewee 10, July 2025).*

This quotation implies that collaboration not only improves academic outcomes but also nurtures motivation and accountability. Students develop ownership of learning and work harder when learning is shared with peers. These findings align with Shockley (2024) who argues that cooperative learning enhances student achievement when group goals and individual accountability are integrated. Pupils are more motivated and focused, which improves their academic performance. Furthermore, observational data supported this, as pupils in collaborative settings showed greater initiative, were more task-focused and demonstrated increased persistence when tackling difficult tasks. Teachers also reported fewer discipline issues during group work.

Collaboration Increases Pupils' Motivation

The table reveals that a combined 99.5% of respondents agreed that collaboration increases pupils' motivation, indicating a strong perception among teachers that working together enhances student engagement while 0.4% of respondents disagreed. These results show that collaborative learning environments foster a sense of belonging, responsibility and shared purpose, which can drive learners to participate more actively. When students work in groups, they often feel encouraged by peer support and are more willing to take part in learning activities. Such environments can reduce anxiety and build confidence, further boosting motivation. Nonetheless, the data highlights the motivational benefits of collaborative learning, reinforcing its value in classroom instruction. These results support the idea that collaboration not only improves academic outcomes but also energizes students to take ownership of their learning. In the same line, Feiler (2025) argue that collaborative learning environments significantly enhance students' intrinsic motivation by promoting social interaction and peer support. During the interview, one of the interviewees exposed:

> *"I firmly believe that collaboration in learning significantly boosts pupils' motivation. When students work together, they feel a sense of community and shared purpose, which encourages active participation. It creates a supportive environment where learners are more confident to express ideas and take risks. I've observed that collaborative tasks spark enthusiasm and curiosity in the classroom" (Interviewee 6, July 2025).*

The quotation implies that collaborative learning environments play a vital role in enhancing pupil motivation by fostering a sense of belonging and active engagement. When learners feel supported by peers, they are more likely to participate and take intellectual risks. This promotes deeper learning and builds communication and social skills. The quotation also highlights how collaboration can transform the learning atmosphere into one that is more dynamic and student-centered. These findings are tied with that of Li and Shahverdi (2025) which emphasize the importance of social interaction in learning, stating that cognitive development is strongly linked to collaborative dialogue among peers. His theory of the Zone of Proximal Development supports the idea that learners achieve more when working together.

During classroom observations, the researcher noted that pupils participating in group activities are more eager to contribute ideas and complete tasks compared to those in individual settings. Students frequently discuss topics with enthusiasm, ask questions, and

encourage one another, showing signs of heightened interest and motivation. Body language and verbal cues reflect increased engagement such as eye contact, smiling and active listening.

CONCLUSION

The study highlights the significance of the collaborative teaching method in enhancing pupils' learning experiences and academic engagement. Findings indicate that when teachers employ collaborative strategies, pupils demonstrate improved communication, teamwork, and problem-solving skills. This method fosters a participatory classroom environment where learners actively contribute to knowledge construction, support one another, and develop critical thinking abilities. The study underscores that collaborative teaching not only facilitates content comprehension but also promotes social and interpersonal skills essential for lifelong learning. Consequently, educators are encouraged to integrate collaborative activities into daily instruction, while policymakers and school administrators should provide adequate training and resources to support effective implementation. Overall, the collaborative method proves to be a valuable approach in promoting holistic pupil development and fostering an interactive, learner-centered classroom

Implication and Recommendations

The study highlights the significance of the collaborative teaching method in enhancing pupils' learning experiences and academic engagement. Findings indicate that when teachers employ collaborative strategies, pupils demonstrate improved communication, teamwork, and problem-solving skills. This method fosters a participatory classroom environment where learners actively contribute to knowledge construction, support one another, and develop critical thinking abilities. The study implies that adopting collaborative approaches can positively influence classroom dynamics, promote learner-centered education, and enhance both academic and social development. Consequently, educators are encouraged to integrate collaborative strategies consistently, while school administrators and policymakers should provide the necessary training, resources, and support to facilitate effective implementation. Furthermore, future research is recommended to explore the long-term impact of collaborative methods across different subjects and educational contexts to strengthen evidence on its effectiveness and adaptability.

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