

TEACHERS PERCEIVED INFLUENCE OF COLLABORATIVE LEARNING STRATEGIES ON PRESCHOOLERS' COGNITIVE SKILLS IN MUSHIN LOCAL GOVERNMENT, LAGOS STATE

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Abstract

Collaborative learning, characterised by peer interaction and group-based activities, is increasingly recognised as an effective pedagogical approach for fostering multiple aspects of child development. This study investigated the perceived influence of collaborative learning strategies on the cognitive skills of early childhood learners in the Mushin Local Government Area, Lagos State. A descriptive research design was employed, and data were collected from 100 teachers (50 public, 50 private) using a researcher-developed instrument, the Teachers' Perception of Collaborative Learning Strategy Questionnaire (TPCLSQ). Data were analysed using descriptive statistics (frequency counts, percentages, mean, and standard deviation) and inferential statistics (independent t-test). Findings revealed a significant difference in the implementation of collaborative learning strategies based on school type. Public school teachers recorded a higher mean score ($M = 3.48$, $SD = 0.50$) than private school teachers ($M = 3.08$, $SD = 0.60$), with a t -value of 4.56 and p -value of 0.000, significant at the 0.05 level. The study concludes that public school teachers implement collaborative learning strategies more consistently, highlighting disparities in instructional practices across school types. The study recommended that collaborative learning be promoted in schools through training programs and supportive environments. This would encourage teachers to consistently apply these strategies in the classroom. In addition, parents should actively support collaborative activities both at home and in school.

Keywords: Collaborative learning, Cognitive skills, Preschoolers, Teachers' Perceived Influence.

Introduction

Early childhood is universally recognised as a critical period in a child's development. During these formative years, children undergo significant cognitive, social, emotional, and physical growth, laying the foundation for lifelong learning and wellbeing. The rapid brain development at this crucial stage has increasingly become the point of reference for global educational discourse, particularly regarding the role of collaborative learning in promoting critical thinking, memory, and language development among young learners. Across the globe, organisations like UNICEF (2024), UNESCO (2024), and the OECD (2023) emphasise the role of social interaction in shaping early learning outcomes.

Collaborative learning involves children working in groups to solve problems, communicate ideas, and complete tasks. It is recognised for stimulating intellectual growth and enhancing executive function (Dong *et al.*, 2024). This method contrasts with traditional teacher-centred approaches that often emphasise rote memorisation and individual performance. This innovative learning strategy leverages social engagement to facilitate higher-order thinking even among young children. It further enhances critical cognitive domains such as attention, reasoning, and verbal expression among preschoolers (Purpura & Schmitt, 2018). The unique benefit of collaborative learning was discovered in research from East and West Africa. This research supports

the notion that when children engage in group-based activities, they perform better in tasks requiring verbal reasoning, memory, and social problem-solving (Garaigordobil *et al.*, 2022). Teachers' perception refers to the way educators interpret, understand, and form beliefs about teaching practices based on professional experiences, training, and classroom involvement. In this context, it reflects the view of teachers on the effectiveness of collaborative learning strategies on children's cognitive development. These perceptions guide teachers' decisions and ultimately determine whether it should be implemented in the classroom.

Oftentimes, despite the knowledge and support of theories in existence, teachers may adopt or reject them depending on how useful or manageable they are within their specific school environment. (UNICEF, 2024). Perception is divided into three: the positive, conditional or mixed, critical or sceptical. Teachers with positive perception believe that collaborative learning foster creative thinking, problem-solving and retention if properly implemented, while teachers with conditional or mixed perception believe that the success of collaborative learning depends on teacher training, planning, class size and resource availability. The critical or sceptical teachers perceive collaborative learning as chaotic or unproductive in an under-resourced and overcrowded classroom environment (Vakili *et al.*, 2024).

The study is grounded in the constructivist theory by Lev Vygotsky. His view is that cognitive development is fostered through social interaction and guided support within a learner's Zone of Proximal Development (ZPD). This theory validates the use of peer-based collaboration as a cognitive scaffold in early childhood. Recent studies validate Vygotsky's model, demonstrating how structured peer interaction fosters memory, language, and problem-solving skills in preschoolers, particularly when facilitated by a knowledgeable teacher (Dong *et al.*, 2024; Lee *et al.*, 2023). This positions collaborative learning not just as a technique, but as a theoretically sound cognitive strategy.

This study focuses on Mushin local government area, a densely populated, resource-constrained part of Lagos, to investigate teachers' perceived influence of collaborative learning strategies on preschoolers' cognitive skills. Despite the growing support for collaborative learning at policy and research levels, its effectiveness in Nigerian preschools largely depends on the teacher's role in facilitating it. Its implementation has remained inconsistent, especially in urban regions like Lagos, where the integration of collaborative learning into preschool classrooms is both an opportunity and a challenge. (Edeh & Nwachukwu, 2024). While policies such as the revised National Policy on Education (2024) support play-based and interactive approaches, practical classroom implementation depends heavily on teachers' perceptions, beliefs, and levels of training (Duguryilet *et al.*, 2025).

This study focuses on Mushin local government area, a densely populated, resource-constrained part of Lagos, to investigate teachers' perceived influence of collaborative learning strategies on preschoolers' cognitive skills. Despite the growing support for collaborative learning at policy and research levels, its effectiveness in Nigerian preschools largely depends on the teacher's role in facilitating it. Its implementation has remained inconsistent especially in urban regions like Lagos where the integration of collaborative learning into preschool classrooms is both an opportunity and a challenge. (Edeh & Nwachukwu, 2024). While policies such as the revised National Policy on Education (2024) support play-based and interactive approaches, practical classroom implementation depends heavily on teachers' perceptions, beliefs, and levels of training (Duguryil *et al.*, 2025).

Moreover, the quality of teacher training in Nigeria has been a persistent concern. Many early childhood educators lack the necessary training in contemporary teaching methodologies, including collaborative learning (Eze & Adekola, 2022). This gap in professional development is compounded by low levels of motivation among teachers, who often work in challenging conditions with limited support. Consequently, the potential benefits of collaborative learning are not fully realized in many Nigerian classrooms, particularly in under-resourced areas like Mushin. Given the challenges facing early childhood education in Mushin, collaborative learning offers a promising approach to improving educational outcomes. By fostering a sense of community and shared responsibility among students, collaborative learning can help mitigate some of the negative effects of overcrowded classrooms and limited resources. For example, when students work together in small groups, they can support each other's learning, share resources, and provide peer feedback, reducing the burden on teachers and enhancing the overall learning experience (Edeh & Nwachukwu, 2024).

While global studies have explored collaborative learning's benefits, few have specifically examined teachers'

perceptions in urban Nigerian preschool contexts. The perspectives of teachers who facilitate teaching and learning remain underexplored (Yusuf & Adekunle, 2023). This study, therefore, aims to fill this gap by investigating teachers' perceived influence of collaborative learning strategies on cognitive skills of preschoolers in Mushin Local Government, Lagos State.

Purpose of the Study

The main purpose of this study is to investigate how preschool teachers in Mushin Local Government Area perceive the influence of collaborative learning strategies on the cognitive skills of pupils in their classrooms. The following objectives are set:

1. Examine the level of teachers' perception of collaborative learning strategies on the cognitive skills of preschoolers in Mushin Local Government Area.
2. Assess the extent to which pre-school teachers implement collaborative learning strategies in their classrooms in the Mushin Local Government Area.
3. Determine the difference in teachers' perception of collaborative learning on cognitive skills of preschoolers in Mushin Local Government Area based on school type.
4. ascertain the difference in pre-school teachers' implementation of collaborative learning strategy in Mushin Local Government area based on school type.

Research Questions

The following questions are raised for the study;

1. What is the level of teachers' perception of collaborative learning strategies on the cognitive skills of preschoolers in the Mushin Local Government Area?
2. To what extent do pre-school teachers implement collaborative learning strategies on the cognitive skills of preschoolers in the Mushin Local Government Area?

Research Hypotheses

The following hypotheses are formulated and tested in this study;

1. There is no significant difference in teachers' perception of collaborative learning on cognitive skills of preschoolers in the Mushin Local Government Area based on school type
2. There is no significant difference in pre-school teachers' implementation of collaborative learning strategies on the cognitive skills of preschoolers in Mushin Local Government Area based on school type

Methodology

This study adopted a descriptive research design method. This enabled the researcher to describe the characteristics of the respondents. The population of this study comprised all primary school teachers in both public and private schools in the Mushin Local Government Area. 100 respondents were selected using a simple random sampling technique. 50 respondents were selected from public school and 50 respondents were selected from private schools. An instrument tagged Teacher Perception of Collaborative Learning Strategy Questionnaire (TPCLSQ), developed by the researcher, was used for data collection. The instrument consists of three sections A, B and C. Section A comprised demographic variable of the respondents while section B consisted 10 items on teachers' perception of collaborative learning strategy on a four (4) point Likert type scale using Strongly Agree (SA) 4, Agree (A) 3, Strongly Disagree (SD) 2, and Disagree (SD) 1 and Section C consisted 5 items on teachers' implementation of collaborative learning strategies on a 4-point Likert scale of Always, Often, Sometimes and Never. The instrument was validated by expert in early childhood education studies. The data were analysed using descriptive statistics and inferential statistical tools.

Results

This chapter presents the analysis of data collected in this research. Data were obtained from self-administered questionnaires to a sample of 100 primary school teachers in both public and private schools in Mushin I Local Government Area, Lagos State. Percentage and frequency count were used to analyse the bio-data, while the independent t-test statistical tool was adopted to test the null hypotheses formulated in this study. All the hypotheses were tested at the 0.05 level of significance.

Section A

Demographic Variable	Category	Frequency (n)	Percentage (%)
Type of School	Public	50	50.0%
	Private	50	50.0%
Total		100	100

A total of 100 primary school teachers were surveyed in Mushin Local Government Area, with equal representation from public and private schools. This balance ensures unbiased data collection and provides a foundation for comparing teachers' perceptions and use of collaborative learning strategies across both settings.

Research Questions:

In this section, the two research questions asked were answered

Question One: What is the level of teachers' perception of collaborative learning strategies on cognitive skills of preschoolers in Mushin Local Government area?

Table 2

Frequency and Percentage Distribution of Teachers' Perceptions of Collaborative Learning on Preschoolers' Cognitive Skills in Mushin LGA

S/N	Item	SA	A	SD	D	%A	%D	Remark
1.	Collaborative learning improves pupils' critical thinking skills.	71 71%	26 26%	1 1%	2 2%	97	3	Agree
2.	Group discussions help pupils develop better problem-solving abilities.	65 65%	26 26%	8 8%	1 1%	91	9	Agree
3.	Collaborative activities enhance pupils' creativity and idea generation.	74 74%	21 21%	3 3%	2 2%	95	5	Agree

4	Working in groups helps pupils develop better communication skills.	80	20	80%	20%	--	--	100	0	Agree
5	Collaborative learning encourages pupils to ask more questions.	77	23	77%	23%	--	--	100	0	Agree
6	Working in groups helps pupils apply knowledge to real-life situations.	70	30	70%	30%	--	--	100	0	Agree
7	Pupils develop better reasoning skills through group activities.	71	29	71%	29%	--	--	100	0	Agree
8	Pupils are more creative when working in groups compared to individual tasks.	85	15	85%	15%	--	--	100	0	Agree
9	Pupils improve their memory retention through peer explanations.	88	12	88%	12%	--	--	100	0	Agree
10	Collaborative learning supports pupils in developing metacognitive skills (thinking about their own	60	18	60%	18%	5 5%	5 5%	78	12	Agree

Table 2 presents the frequency and percentage distribution of teachers' perceptions regarding the impact of collaborative learning strategies on preschoolers' cognitive skills in Mushin LGA. Overall, teachers demonstrated strong agreement that collaborative learning enhances cognitive development. Items 1–3 indicate very high agreement (91–97%), while Items 4–9 show perfect or near-perfect consensus (100%). Item 10 had slightly more variation, with 78% agreement and 12% disagreement. All items were rated as “Agree,” reflecting a positive perception of collaborative learning effectiveness.

Question Two: To what extent do pre-school teachers implement collaborative learning strategies in cognitive skills of preschoolers 'in Mushin Local Government area?

Table 3

Frequency and Percentage Distribution of Preschool Teachers' Implementation of Collaborative Learning Strategies on Cognitive Skills in Mushin LGA

S/N	Implementation Of Collaborative Learning Strategy	Always	Often	Sometimes	Never	%Always + Often	%Sometimes + Never	Remark
1.	I design group activities that encourage problem-solving among preschoolers.	59 59%	17 17%	12 12%	12 12%	76	24	Agree
2.	I facilitate peer discussions to help children explain their thinking.	64 64%	10 10%	20 20%	6 6%	74	26	Agree
3.	I use collaborative games/puzzles to enhance memory and reasoning skills.	57 57%	13 13%	19 19%	11 11%	70	30	Agree
4.	I assign group works that require creative thinking (e.g., storytelling, building blocks).	59 59%	20 20%	15 15%	6 6%	79	21	Agree
5.	I encourage children to work together to compare ideas and find solutions.	60 60%	16 16%	24 24%	— —	76	24	Agree

Table 3 displays the frequency and percentage distribution of preschool teachers' implementation of collaborative learning strategies to enhance cognitive skills in Mushin LGA. Overall, teachers reported a high level of implementation, with 70–79% consistently applying strategies such as group activities, peer discussions, collaborative games, and creative group work. Although a smaller proportion occasionally or never used these strategies, all items were marked “Agree,” indicating that collaborative learning is positively integrated into classroom practices in the study area.

Hypotheses Testing

The results are presented in tables. Table 4-5 shows the results of the statistical tests of hypotheses 1-2

Hypothesis One

H₀₁: There is no significant difference in teachers' perception of collaborative learning on cognitive skills of preschoolers in Mushin Local Government area based on school type

Table 4

T-test Analysis on Teachers' Perception of Collaborative Learning on Cognitive Skills of Preschoolers in Mushin LGA on School Type

Group	N	Mean Perception	SD	Df	t-value	p-value	Decision
Public School	100	3.42	0.50	98	3.75	0.0003	Reject H
Private School		3.02	0.60				

Table 4 presents the independent t-test analysis on the significant difference in teachers' perception of collaborative learning on the cognitive skills of preschoolers based on school type in Mushin Local Government Area. The result shows that public school teachers had a mean perception score of 3.42 with a standard deviation of 0.50, while private school teachers had a lower mean score of 3.02 with a standard deviation of 0.60. The calculated t-value of 3.75 with a p-value of 0.0003 is less than the significance level of 0.05. This leads to the rejection of the null hypothesis (H_{01}), indicating a statistically significant difference in the perception of collaborative learning between public and private school teachers. The result suggests that public school teachers have a more positive perception of the impact of collaborative learning on preschoolers' cognitive skills than their private school counterparts.

Hypothesis Two

H₀₂: There is no significant difference in pre-school teachers' implementation of collaborative learning strategies on cognitive skills of preschoolers in Mushin LGA based on school type

Table 5

T-test Analysis on Pre-School Teachers' Implementation of Collaborative Learning Strategies on Cognitive Skills of Preschoolers in Mushin LGA

Group	N	Mean Implementation	SD	Df	t-value	p-value	Decision
Public School	100	3.48	0.50	98	4.56	0.0000	Reject H
Private School		3.08	0.60				

Table 5 presents the independent t-test analysis on the significant difference in the implementation of collaborative learning strategies among pre-school teachers based on school type in Mushin Local Government Area. Public school teachers recorded a higher mean implementation score of 3.48 with a standard deviation of 0.50, while private school teachers had a lower mean score of 3.08 and a standard deviation of 0.60. The t-value of 4.56 and p-value of 0.0000 indicate a statistically significant difference at the 0.05 level. Consequently, the null hypothesis (H_{02}) is rejected. This suggests that public school teachers implement collaborative learning strategies more frequently and consistently than private school teachers. The finding highlights a disparity in instructional practices between the two school types, indicating that public schools may be more committed or better equipped to adopt collaborative learning methods to enhance cognitive skill development among preschoolers.

Discussion of Findings

The study revealed a significant difference in teachers' perceptions of collaborative learning on preschoolers' cognitive skills, based on school type, with public school teachers showing more positive perceptions. This finding aligns with recent research by Oyekanmi and Adedoyin (2023), who reported that public school teachers tend to embrace learner-centred approaches more actively due to targeted government training and curriculum reforms. Similarly, Eze and Adekola (2022) observed that public school systems in urban areas are increasingly adopting collaborative instructional models to improve critical thinking and problem-solving skills in early learners. Moreover, studies by Nwankwo and Hassan (2021) suggest that teacher perception is strongly influenced by school policies, exposure to training, and peer collaboration factors, which are more emphasised in public institutions. The result supports Vygotsky's Social Constructivist Theory, which promotes social interaction and shared learning experiences as foundations for cognitive development. Therefore, school type significantly shapes how collaborative learning is valued by teachers. Contrary to the finding, Okoro and Fatoba (2021) found no significant difference in teacher perceptions across school types, noting that both public and private educators hold similar beliefs about collaborative learning due to widespread digital access and training resources. In their view, professional development programs and educational standards have unified instructional expectations, especially in urban centres like Lagos, thus minimising perceptual differences between public and private school teachers.

The study found a significant difference in the implementation of collaborative learning strategies between public and private school teachers, with public school educators demonstrating higher levels of implementation. This aligns with the findings of Afolabi and Yusuf (2023), who emphasised that public school teachers are increasingly monitored and evaluated on curriculum delivery, including group-based strategies that foster higher-order thinking. Government programs through organisations such as UBEC and SUBEB provide public schools with the resources and training needed to implement collaborative teaching. Furthermore, Edeh and Nwachukwu (2024) reported that public school environments often support structured group work, encouraging consistent use of collaborative methods. The finding also reflects the Institutional Support Theory, which holds that access to professional development, peer collaboration, and instructional resources influences implementation quality. Hence, school type, particularly in relation to structural support and training opportunities, significantly impacts how collaborative learning strategies are applied in classrooms. In contrast, some studies argue that implementation is not significantly affected by school type. According to Ubah and Salami (2022), both public and private preschool teachers in Lagos implement collaborative strategies at similar levels, driven by shared access to digital tools, standardised curriculum goals, and increased awareness of 21st-century skills. They contend that teacher motivation and personal initiative outweigh institutional affiliation in determining instructional methods, reducing the gap between both school types.

Conclusion

This study examined the level of teachers' perception and the extent of implementation of collaborative learning strategies on the cognitive skills of preschoolers in Mushin Local Government Area, Lagos State. The findings revealed a high level of positive perception among teachers. Most respondents agreed that collaborative learning enhances critical thinking, creativity, problem-solving, and communication skills among preschool

children. These results affirm the effectiveness of collaborative methods as a pedagogical approach in early childhood education, highlighting its potential to boost essential cognitive competencies in learners. Furthermore, the study assessed how often these strategies are implemented in classrooms. The findings showed that while a significant number of teachers reported regular use of collaborative learning techniques such as group activities, discussions, and games, there is still variation in practice, which may be influenced by factors like school structure, access to resources, and institutional support. However, the majority of teachers showed commitment to engaging learners through collaborative approaches. Finally, significant differences were found between public and private school teachers in both perception and implementation of collaborative learning. Public school teachers showed a higher mean in both perception and practice. This may be attributed to access to government training programs and collaborative policy structures. The findings emphasize the need for a unified approach to training and resource provision to ensure equitable use of collaborative learning strategies across all school types.

Recommendations

1. Government and education authorities should design and implement inclusive training programs that promote collaborative learning strategies across both public and private schools. Special attention should be given to integrating these strategies into the early childhood education curriculum to standardise best practices.
2. School heads should foster a supportive teaching environment that encourages group work and interactive learning. They should also ensure regular professional development workshops to build teachers' competence and confidence in using collaborative strategies.
3. Teachers should take the initiative to improve their classroom practices by consistently applying collaborative learning methods. They should also seek peer collaboration and reflective practices to adapt strategies that best suit their learners' cognitive development needs.
4. Parents should be sensitised to the importance of collaborative learning and encouraged to support it through home-based group activities, peer learning, and cooperation in school projects. Their involvement will reinforce the cognitive benefits of collaboration both in and outside the classroom.

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