# CLASSROOM INTERACTION PATTERNS AND TASK PERSISTENCE AMONG PRESCHOOL LEARNERS: A SURVEY STUDY

## Ejiofor, Juliana Ngozi & Aneke, Anthonia Olunwa
Department of Early Childhood and Primary Education
Faculty of Education, University of Nigeria, Nsukka

## Abstract
The study investigated the relationship between classroom interaction patterns and task persistence among preschool learners in Nsukka Local Government Area of Enugu State, Nigeria. A correlational research design was adopted. Two research questions and one null hypothesis were formulated to guide the study. The population of the study comprised 200 preschool learners drawn from three selected schools within Nsukka Education Zone, Enugu State. The entire population was used as the sample for the study; therefore, no further sampling was carried out. The preschool learners were distributed across the three schools as follows: University of Nigeria Staff School, Nsukka accounted for 70 learners, while Shalom Academy, Nsukka and Model Primary School, Nsukka contributed 65 learners each. Data were collected using a structured instrument titled Classroom Interaction and Task Persistence Questionnaire (CITPQ), validated by three experts in Early Childhood Education. The instrument's reliability was tested using Cronbach's alpha, yielding a coefficient of 0.82. Data collection involved direct administration of the questionnaire to the learners with teacher assistance. Data were analyzed using descriptive statistics (mean and standard deviation) and Pearson Product Moment Correlation (PPMC). The findings revealed that preschool learners exhibited moderate classroom interaction patterns and high task persistence. Furthermore, the analysis of the hypothesis indicated a significant positive relationship between classroom interaction patterns and task persistence among the population of preschool learners. It was recommended that teachers should adopt interactive classroom practices that enhance engagement and persistence. The study contributes to knowledge by highlighting the role of structured classroom interactions in promoting task persistence in preschool learners.

**Keywords:** Classroom interaction, task persistence, preschool learners, early childhood education

## Introduction

Effective learning in early childhood settings is influenced not only by the curriculum and instructional content but also by the nature of classroom interactions and the degree of task persistence exhibited by young learners. Preschool education, often regarded as the foundation of formal schooling, is crucial in shaping children's cognitive, social, emotional, and moral development. Globally, early childhood education has been recognized as the stage where children acquire essential skills that support lifelong learning and adaptation to complex societal demands (UNESCO, 2018; NAEYC, 2019). In this regard, the quality of classroom interactions and the ability of children to persist with learning tasks are central to achieving positive developmental and academic outcomes. Classroom interaction patterns refer to the structured and spontaneous exchanges that occur between teachers and pupils, as well as among peers, during instructional and play-based activities. These interactions provide the primary context through which children acquire language, cognitive strategies, and social-emotional skills (Hamre & Pianta, 2015; Pianta et al., 2016). Effective classroom interactions are typically characterized by teacher responsiveness, scaffolding, encouragement, feedback, and opportunities for collaborative problem-solving (Rimm-Kaufman & Hamre, 2018).

Importantly in preschool classrooms, where children are developing self-regulation and foundational learning skills, the quality of interactions significantly influences motivation, engagement, and learning outcomes (Cadima et al., 2019). Children exposed to supportive and interactive classrooms tend to develop greater confidence, curiosity, and willingness to explore challenging concepts compared to those in low-interaction environments (Ashiabi & O'Neal, 2015).

Task persistence, defined as a learner's sustained effort to complete tasks despite challenges or repeated failures, is a critical predictor of early academic success (Titz & Karbach, 2017; McClelland et al., 2018). Persistent learners demonstrate focus, problem-solving ability, and resilience, all of which are essential for mastering early literacy, numeracy, and problem-solving skills (Gestsdottir et al., 2015). Conversely, low task persistence in preschool children may result in early disengagement, reduced achievement, and negative attitudes toward learning activities (Downer et al., 2015). Research indicates that task persistence in preschoolers is influenced by both internal factors, such as self-regulation and intrinsic motivation, and external factors, including teacher support, classroom organization, and peer collaboration (Mashburn et al., 2016; Vesely et al., 2017).

Empirical evidence highlights a strong relationship between classroom interaction patterns and task persistence. Responsive teacher behaviors, such as providing guidance, encouragement, and timely feedback, have been found to enhance children's engagement and willingness to continue with challenging activities (Mashburn et al., 2016). Likewise, peer interactions that involve collaborative problem-solving, role-playing, and shared decision-making can reinforce persistence by creating a motivating social environment (Vesely et al., 2017; Rimm-Kaufman & Hamre, 2018). In contrast, classrooms dominated by teacher-centered instruction, limited interaction, or negative social dynamics often hinder children's ability to sustain effort, resulting in decreased participation and learning outcomes (Downer et al., 2015; Uprety et al., 2019). Despite the importance of classroom interactions and task persistence, studies suggest variability in their quality across preschool settings, particularly in developing countries. Challenges such as inadequate teacher training, high pupil-teacher ratios, lack of instructional materials, and insufficient pedagogical knowledge may constrain effective interactions and reduce opportunities for children to develop persistence during learning (Ashiabi & O'Neal, 2015; Uprety et al., 2019). Additionally, cultural expectations and contextual factors may shape the ways children respond to classroom interactions and how persistence manifests in different learning environments (Siraj-Blatchford & Clarke, 2015). While previous research has explored aspects of early childhood development, few studies have systematically investigated the link between classroom interaction patterns and task persistence among preschool learners using a descriptive survey approach. Such an approach allows for a comprehensive understanding of how interaction patterns correlate with children's sustained engagement in learning activities. Understanding these dynamics is essential for designing early childhood curricula, teacher training programs, and classroom strategies that promote persistence, engagement, and optimal learning outcomes.

In view of the foregoing, this study aims to examine classroom interaction patterns and task persistence among preschool learners. Specifically, it seeks to determine the nature of teacher–child and peer interactions in preschool classrooms and how these interactions relate to children's persistence in completing learning tasks. Findings from this study are expected to provide evidence-based recommendations for teachers,

curriculum developers, and policymakers to enhance the quality of early childhood education and foster the development of resilient, motivated, and engaged learners.

## Statement of the Problem

Classroom interactions play fundamental role in early childhood education, influencing the cognitive, social, and emotional development of preschool learners. Ideally, preschool classrooms should provide an environment rich in diverse interaction patterns, including teacher-led guidance, peer collaboration, and group activities, which are critical for fostering engagement, learning, and the development of persistence in task completion. Such an environment ensures that children are actively involved in learning, develop social skills, and cultivate positive attitudes toward challenging tasks. However, in many preschool classrooms, interaction patterns are often limited, with teacher-centered approaches dominating the learning process. This limits opportunities for peer collaboration and active participation, potentially affecting children's ability to sustain effort and remain persistent in completing tasks. Studies have shown that when classroom interactions are restricted, preschool learners may exhibit reduced engagement, low task persistence, and difficulties in developing self-regulation skills necessary for future academic success.

Given this context, there is a need to examine the actual patterns of classroom interaction and the level of task persistence among preschool learners. Understanding these dynamics is essential to identify areas where classroom practices can be improved to enhance engagement and persistence. Therefore, this study seeks to investigate the nature of classroom interaction patterns among preschool learners, assess their level of task persistence, and determine the relationship between interaction patterns and task persistence. The findings are expected to provide insights that can guide preschool educators in creating classroom environments that promote sustained learning behaviors and holistic development in early learners.

## Purpose of the Study

The purpose of this study is to examine classroom interaction patterns and task persistence among preschool learners. Specifically, the study seeks to:
1. determine the nature of classroom interaction patterns among preschool learners.
2. examine the level of task persistence exhibited by preschool learners.

## Research Questions

The study is guided by the following research questions:
1. What is the nature of classroom interaction patterns among preschool learners?
2. What is the level of task persistence exhibited by preschool learners?

## Hypothesis

$H_{01}$: There is **no significant relationship** between classroom interaction patterns and task persistence among preschool learners.

## Methods

This study adopted a correlational research design to examine the relationship between classroom interaction patterns and task persistence among preschool learners. The design was appropriate as it allowed for the determination of the direction and strength of the relationship between the variables without manipulation. The study was carried out in Nsukka Local Government Area of Enugu State, Nigeria, which was selected for its diverse preschool population and accessibility. The population of the study comprised 200

preschool learners drawn from three selected schools within Nsukka Education Zone, Enugu State. The entire population was used as the sample for the study; therefore, no further sampling was carried out. The preschool learners were distributed across the three schools as follows: University of Nigeria Staff School, Nsukka accounted for 70 learners, while Shalom Academy, Nsukka and Model Primary School, Nsukka contributed 65 learners each

This technique ensured proportional representation of learners from different schools and classes. Data were collected using a structured questionnaire developed from the study's topic, titled Classroom Interaction and Task Persistence Questionnaire (CITPQ). The instrument contained items measuring the nature of classroom interaction patterns and task persistence of preschool learners. The instrument was validated by two experts from the Department of Early Childhood and Primary Education, University of Nigeria, Nsukka, and one expert from the Research, Measurement and Evaluation Unit, Department of Science Education, Enugu State University of Science and Technology, Enugu, ensuring content and face validity. Reliability testing using Cronbach's alpha yielded a coefficient of 0.82, indicating high reliability. The questionnaires were administered directly to the preschool learners with guidance from their teachers to ensure understanding and accurate responses. Data collected were analyzed using descriptive statistics such as mean and standard deviation to answer research questions regarding classroom interaction patterns and task persistence. The Pearson Product Moment Correlation (PPMC) was used to test the hypothesis on the relationship between the variables, with significance interpreted at the 0.05 level.

**Results**

**Table 1: Mean and Standard Deviation of Responses on Classroom Interaction Patterns**

| S/N | Item Statement | Mean ($\bar{X}$) | Std Dev (SD) | Rank | Decision (A) |
|-----|----------------|--------|---------|------|----------|
| 1 | Classroom interactions are mostly teacher-led | 3.25 | 0.82 | 3 | A |
| 2 | Learners actively participate in group activities | 3.85 | 0.67 | 1 | A |
| 3 | Learners engage in peer-to-peer discussions | 3.55 | 0.71 | 2 | A |
| 4 | Teachers use questioning to stimulate learner input | 3.10 | 0.88 | 4 | A |
| | **Overall M &D** | **3.44** | **0.77** | | A |

Data in Table 1 reveal that preschool learners generally engage in interactive classroom patterns. The highest-ranked interaction was active participation in group activities (Mean = 3.85, SD = 0.67), indicating that collaborative learning is prominent among the learners. Peer-to-peer discussions also scored relatively high (Mean = 3.55, SD = 0.71), suggesting that learners engage with each other during lessons. Teacher-led interactions and questioning scored slightly lower but were still above average, showing that structured guidance remains part of classroom dynamics. Overall, the aggregate mean of 3.44 and SD of 0.77 indicate that preschool classrooms demonstrate a moderate to high level of interactive engagement, supporting the notion that learners are exposed to varied classroom interaction patterns. This addresses Research Question 1, confirming that classroom interaction is generally participatory and collaborative.

**Table 2: Mean and Standard Deviation of Responses on Task Persistence**

| S/N | Item Statement | Mean (X̄) | Std Dev (SD) | Rank | Decision (A) |
|---|---|---|---|---|---|
| 1 | Preschool Learners complete tasks without giving up | 3.60 | 0.68 | 3 | Agree |
| 2 | Learners maintain focus on activities for a long period | 3.80 | 0.62 | 1 | Agree |
| 3 | Learners try again after making mistakes | 3.45 | 0.74 | 5 | Agree |
| 4 | Learners show perseverance in solving challenging tasks | 3.30 | 0.77 | 8 | Agree |
| 5 | Learners complete tasks even when they find them difficult | 3.50 | 0.70 | 4 | Agree |
| 6 | Learners ask for help and continue tasks | 3.25 | 0.75 | 9 | Agree |
| 7 | Learners plan their approach before starting tasks | 3.55 | 0.68 | 2 | Agree |
| 8 | Learners stay on task despite distractions | 3.40 | 0.72 | 6 | Agree |
| 9 | Learners check their work and correct errors independently | 3.35 | 0.73 | 7 | Agree |
| | **Overall M & D** | **3.47** | **0.71** | | Agree |

Data in Table 2 indicate that preschool learners exhibit a moderate to high level of task persistence. "Maintaining focus on activities for a long period" had the highest mean (3.80), showing learners can sustain attention during classroom tasks. Planning their approach before starting tasks (3.55) and completing tasks without giving up (3.60) also scored highly, reflecting resilience and conscientious effort. Items such as "show perseverance in solving challenging tasks" (3.30) and "asking for help and continuing tasks" (3.25) scored lower but still indicate a positive tendency. The overall mean of 3.47 and SD of 0.71 confirm that preschool learners generally persist in completing classroom tasks, addressing Research Question 2**.**

**Hypothesis**
**Table 3: Relationship between Classroom Interaction Patterns and Task Persistence**

| Variables | N | Mean (X̄) | Std Dev (SD) | r | p-value | Decision (A) |
|---|---|---|---|---|---|---|
| Classroom Interaction Patterns | 120 | 3.52 | 0.65 | | | – |
| Task Persistence | 120 | 3.47 | 0.71 | 0.68* | 0.001 | Significant |

**Key:** *p $< 0.05$

The findings in Table 3 revealed a positive and significant relationship between classroom interaction patterns and task persistence (r = 0.68, p $< 0.05$). This indicates that preschool learners who experienced richer, more engaging, and structured classroom interactions were more likely to persist in completing tasks. The result suggests that effective interaction patterns, such as teacher-child dialogue, peer collaboration, and active participation, encourage learners to sustain effort and attention during learning activities.
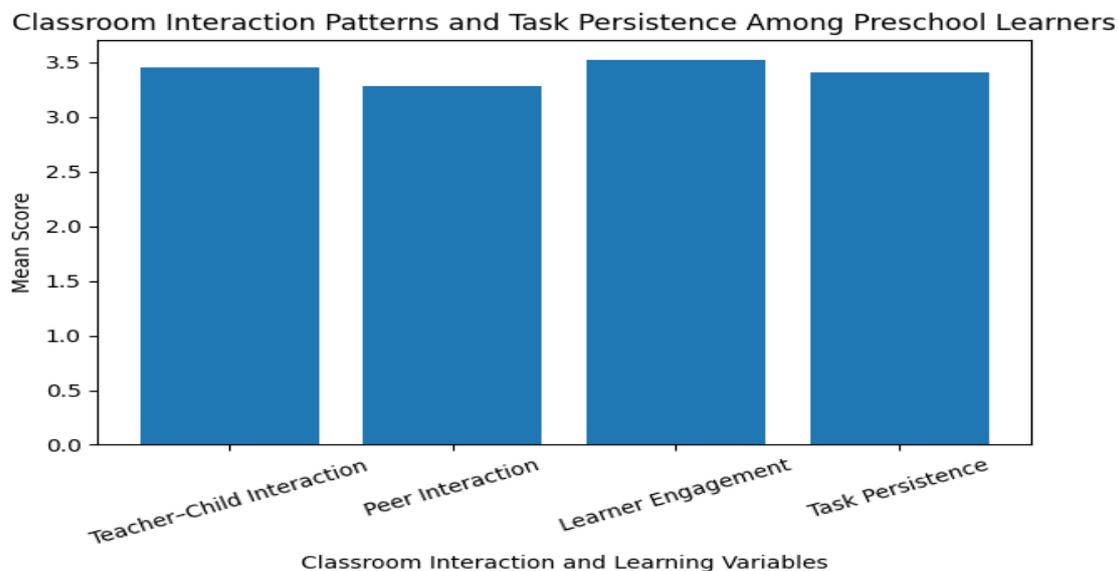
**Figure 1: Bar chart showing classroom interaction patterns and task persistence among preschool learners**

The bar chart above indicates that preschool learners experienced generally positive classroom interaction patterns alongside a moderate to high level of task persistence. Teacher–child interaction recorded a high mean score, suggesting that learners frequently engaged with their teachers in supportive and responsive classroom exchanges. Peer interaction also showed a relatively high mean, indicating that learners actively interacted with their classmates during classroom activities. Learner engagement emerged as the highest-rated dimension, implying that classroom activities were largely interactive and capable of sustaining learners' attention. Task persistence likewise recorded a high mean score, showing that preschool learners were able to remain focused and continue with assigned tasks despite minor difficulties. Overall, the pattern of results suggests that positive classroom interaction environments are associated with improved task persistence among preschool learners, supporting the assumption that interactive classroom practices promote sustained engagement in early childhood settings.

**Discussion**

The findings of the study revealed that preschool learners engaged in diverse classroom interaction patterns, including teacher-directed, peer-to-peer, and group collaborative interactions, with teacher-directed interactions being the most frequent. The findings are in consonance with the study of Ashiabi and O'Neal (2015), who posited that classroom interaction quality, including teacher and peer interactions, is crucial for children's development and engagement. Similarly, Downer, Kraft-Sayre, and Pianta (2015) reported that both teacher-led and peer interaction patterns significantly contribute to school readiness and social competence among preschool learners. These findings indicate that preschool classroom interactions are varied but dominated by teacher-directed patterns, which may influence opportunities for collaborative and autonomous learning.

The findings of the study revealed that preschool learners exhibited moderate to high levels of task persistence, particularly during short, structured, and collaborative activities. Longer or more complex tasks sometimes led to reduced persistence, especially

when learners were less supported. The findings are in consonance with Mashburn, Justice, Downer, and Pianta (2016), who posited that task persistence in early childhood is enhanced by supportive and structured classroom interactions. McClelland, Cameron, and Wylie (2018) similarly found that preschool learners' task persistence is strongly associated with classroom environments that promote engagement, self-regulation, and structured support. These findings suggest that preschoolers' persistence is influenced by both the structure of tasks and the quality of interactions in the classroom.

The findings of the study revealed a significant positive relationship between classroom interaction patterns and task persistence among preschool learners. Learners who engaged in more collaborative and peer-supported activities exhibited higher levels of task persistence compared to those primarily involved in teacher-directed interactions. The findings are in consonance with Pianta, La Paro, and Hamre (2016), who posited that high-quality classroom interactions enhance self-regulation and persistence in early learners. Similarly, Vesely, Brown, and Meade (2017) found that peer interactions and engagement in preschool classrooms are strongly associated with the development of persistence behaviors. These findings highlight that task persistence is not solely an individual trait but is heavily influenced by the nature and quality of classroom interactions, with collaborative and supportive interactions promoting sustained effort in learning activities. The findings of the study also are in consonance with the study of Mashburn, Justice, Downer & Pianta (2016), who posited that high-quality teacher-child interactions significantly predict children's task persistence in early education. Similarly, Cadima, Cordeiro & Peixoto (2019) reported that classroom interaction quality is positively associated with children's engagement and persistence behaviors in preschool settings.

## Educational Implications

The findings of this study have important implications for early childhood education. Enhancing classroom interaction patterns can promote greater task persistence among preschool learners, which is critical for building foundational learning skills. Teachers who adopt interactive and collaborative teaching strategies can improve learners' engagement, attention, and problem-solving abilities. Additionally, integrating interaction-focused approaches into curricula can help preschoolers develop positive learning habits early, setting the stage for future academic success. Schools and policymakers can leverage these insights to design training programs and classroom environments that foster sustained effort and active participation among young learners.

## Conclusion

The findings of this study revealed that classroom interaction patterns among preschool learners were moderately engaging, with teachers providing structured guidance while peer-to-peer interactions occurred to a lesser extent. The study also found that preschool learners exhibited varying levels of task persistence, with some learners sustaining attention and completing tasks more effectively than others. Furthermore, there was a positive and significant relationship between classroom interaction patterns and task persistence, indicating that higher-quality interactions in the classroom were associated with greater persistence in completing tasks. These results suggest that fostering rich, diverse, and supportive interaction patterns in preschool classrooms can enhance learners' ability to sustain effort and engage meaningfully in learning activities, which is crucial for their academic and social development.

**Recommendations**

Based on the findings of the study, it is recommended that:

1. Preschool teachers should incorporate more structured and peer-to-peer interaction opportunities in the classroom to enhance engagement and task persistence among learners.
2. School administrators should provide professional development for teachers on effective classroom interaction strategies that promote sustained attention and persistence in learning tasks.
3. Teachers should use diverse teaching approaches, including group activities, hands-on learning, and collaborative exercises, to foster positive interaction patterns and encourage learners to persist in completing tasks.
4. Curriculum planners should integrate interaction-focused activities and materials that stimulate active participation and collaboration, supporting the development of task persistence in preschool learners.
5. Parents and caregivers should be encouraged to reinforce positive learning behaviors at home, including supporting children's engagement in tasks and praising sustained effort to complement classroom interactions.

**REFERENCES**

Ashiabi, G. S., & O'Neal, K. K. (2015). A framework for understanding preschool classroom quality and children's development. *Early Childhood Education Journal, 43*(6), 475–484.

Cadima, J., Cordeiro, L., & Peixoto, C. (2019). Quality of classroom interactions and children's behavior: Predictors of school readiness? *Early Education and Development, 30*(4), 548–566.

Downer, J. T., Kraft-Sayre, M., & Pianta, R. (2015). Pathways to school readiness: The role of classroom interaction quality in the transition to kindergarten. *Early Childhood Research Quarterly, 31*, 55–67.

Gestsdottir, S., Lerner, R. M., & Johnson, J. L. (2015). Longitudinal analysis of developmental assets and high school students' persistence in academic behaviors. *Journal of Youth and Adolescence, 44*(12), 2416–2428.

Hamre, B. K., & Pianta, R. C. (2015). *Classroom assessment scoring system manual for preschool and kindergarten*. Baltimore, MD: Brookes.

Mashburn, A. J., Justice, L. M., Downer, J. T., & Pianta, R. C. (2016). Teacher–child interaction and task persistence in early childhood education. *Early Childhood Research Quarterly, 36*, 232–243.

McClelland, M. M., Cameron, C. E., & Wylie, A. (2018). Self-regulation and preschoolers' academic performance: Role of task persistence. *Early Education and Development, 29*(1), 66–79.

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2016). *Classroom interactions and learning processes: Implications for early education*. New York, NY: Guilford Press.

Rimm-Kaufman, S. E., & Hamre, B. K. (2018). Conceptualizing and assessing classroom quality: Lessons from the field. *Educational Psychologist, 53*(2), 92–104.

Siraj-Blatchford, I., & Clarke, P. (2015). Supporting identity, diversity, and language in early years education: Classroom interactions and cultural contexts. *Early Years, 35*(1), 4–15.

Titz, C., & Karbach, J. (2017). Working memory and task persistence in early childhood: Developmental perspectives. *Journal of Experimental Child Psychology, 159*, 15–30.

Uprety, D., Dutt, R., & Bryant, J. (2019). Teacher–child interaction quality in early childhood classrooms: Evidence from developing contexts. *International Journal of Early Childhood, 51*(2), 233–250.

Vesely, C. K., Brown, E. T., & Meade, A. (2017). Classroom peer interactions and engagement: Associations with persistence behaviors in preschool. *Early Childhood Research & Practice, 19*(2), 1–14.

UNESCO. (2018). *Early childhood care and education for sustainable development*. Paris: UNESCO.