



CLASSROOM ENVIRONMENT AS CORRELATE OF PUPILS' SOCIAL SKILLS AS PERCEIVED BY TEACHERS IN PRIMARY SCHOOLS IN ANAMBRA STATE: THE MODERATING ROLES OF GENDER, SCHOOL LOCATION AND SCHOOL TYPE

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Abstract

This study investigated classroom environment and teacher-child interaction as correlates of pupils' social skills development as perceived by teachers in primary schools in Anambra State. Five research questions and five null hypotheses guided the study. The study adopted a correlational research design. The population comprised all teachers in public primary schools in Anambra State. A sample of 698 teachers, representing 10% of the population, was selected using a multi-stage sampling procedure involving proportionate stratified sampling, simple random sampling, and stratified random sampling techniques. Two researcher-developed instruments, namely the Classroom Environment Questionnaire (CEQ) and Pupils' Social Skills Development Questionnaire (PSSDQ), were used for data collection. The instruments were face-validated by three experts, while their internal consistency was established using Cronbach's Alpha, yielding reliability coefficients of 0.84 and 0.89, respectively, with an overall reliability coefficient of 0.87. Data were analysed using Pearson Product Moment Correlation Coefficient to answer the research questions, while multiple regression analysis and hierarchical multiple regression analysis were used to test the hypotheses at the 0.05 level of significance. The findings revealed that the physical classroom environment, social classroom environment and psychological classroom environment each had positive and significant relationships with pupils' social skills development. The study further revealed a significant joint relationship between classroom environment and pupils' social skills development. In addition, gender, school location, and school type significantly moderated the relationship between classroom environment and pupils' social skills development. Based on the findings, it was concluded that classroom environment are significant correlates of pupils' social skills development in primary schools in Anambra State and that their combined influence contributes substantially to pupils' social competence. The study recommended, among others, that government and educational stakeholders should improve classroom facilities, teachers should create socially and psychologically supportive classrooms, while educational authorities should organize regular professional development programmes to enhance teachers' competencies in promoting pupils' social skills development.

Keywords: Classroom Environment, Social Skills, Development, Emotional Support, Moderation, Primary Education.

1.1 Introduction

Social skills are fundamental competencies that enable children to communicate effectively, cooperate with peers, regulate emotions, demonstrate empathy, and establish positive interpersonal

relationships necessary for successful participation in school and society. The development of these competencies is significantly influenced by the quality, structure, and supportiveness of the classroom environment, which provides opportunities for meaningful peer interaction, collaborative learning, and positive teacher-pupil relationships (Amadi, Ali, & Anokwuru, 2024). A conducive classroom environment therefore, promotes not only academic learning but also pupils' social competence and emotional well-being.

Classroom environment has been conceptualized as the structured setting within which teaching and learning occur, encompassing physical, social, and psychological conditions that shape pupils' educational experiences. Fraser and Tobin (2020) described classroom environment as the immediate learning milieu that includes teacher empathy, learner cooperation, engagement, and task orientation, while Merritt (2024) viewed it as the overall climate emerging from the interaction of physical characteristics and interpersonal relationships. Similarly, Akinyemi, Gbesoevi and Afolabi (2024) classified classroom environment into three interrelated dimensions, such as physical, social, and psychological, which collectively influence pupils' academic and social development.

The physical classroom environment consists of tangible elements such as classroom space, lighting, seating arrangement, ventilation, accessibility, and instructional materials. These structural features influence pupils' comfort, engagement, and opportunities for interaction. Wen et al. (2024) argued that appropriate classroom design enhances learners' cognitive functioning and emotional well-being, while Iqbal and Mehmood maintained that flexible seating arrangements and collaborative learning spaces encourage peer interaction and active participation. Consequently, the physical classroom environment provides the foundation upon which a supportive social classroom environment is established.

The social classroom environment comprises the network of relationships and interactions existing among pupils and between teachers and pupils. Fraser (2020) maintained that collaboration, mutual respect, and teacher support are central components of a positive classroom social climate, whereas Johnson and Johnson (2021) emphasized that cooperative classroom interactions promote pupils' participation and learning. Positive social interactions further foster psychological safety, trust, and emotional security, thereby strengthening pupils' resilience and overall social adjustment.

Closely related to social classroom climate is the psychological classroom environment, which represents the emotional and motivational atmosphere experienced by learners. Fraser (2020) defined psychological classroom environment as pupils' perceptions of emotional support, acceptance, belongingness, and interpersonal trust within the classroom. Pianta, Hamre and Allen (2021) further argued that psychologically supportive classrooms enhance pupils' engagement, self-regulation, confidence, and persistence during learning activities. Muñoz-Troncoso and Riquelme (2025) similarly reported that psychologically safe classrooms reduce learners' anxiety while promoting motivation, attentiveness, and meaningful participation. Such psychologically supportive environments subsequently facilitate high-quality teacher–child interactions because

pupils become more willing to ask questions, express ideas, and participate in collaborative learning activities.

Although numerous studies have independently examined classroom environments, relatively few have investigated their simultaneous relationships with pupils' social skills development while considering contextual moderators such as gender, school location, and school type. Previous literature suggests that girls often demonstrate stronger prosocial behaviours than boys (Eccles & Roeser, 2021; Denham & Bassett, 2022), while disparities in school resources and instructional conditions between urban and rural schools and between public and private schools may alter pupils' classroom experiences (UNICEF, 2023; Akinyemi et al., 2024; Adigwe & Akudolu, 2024). These contextual characteristics may therefore strengthen or weaken the influence of classroom environment on pupils' social competence. Despite growing international evidence, empirical studies examining these relationships simultaneously within Nigerian primary schools remain scarce, particularly in Anambra State. Most previous Nigerian studies have investigated classroom environment or pupils' social development independently, with limited attention to the combined influence of classroom environment and the moderating roles of gender, school location, and school type. This gap provided the impetus for the present study, which investigated classroom environment as a correlate of pupils' social skills development in primary schools in Anambra State.

1.2 Statement of the Problem

Primary education seeks not only to develop pupils' academic competencies but also to nurture appropriate social behaviours required for lifelong success. However, concerns continue to be expressed by teachers, parents, counsellors, and educational administrators regarding increasing cases of poor interpersonal relationships, bullying, aggression, withdrawal, poor communication skills, inability to cooperate with peers, and low emotional regulation among many primary school pupils. These behavioural challenges often interfere with effective teaching, classroom management, peer relationships, and academic learning. One possible explanation for these concerns lies in variations in classroom conditions experienced by pupils. While some classrooms provide adequate physical facilities, supportive social climates, and psychologically safe learning environments, others remain overcrowded, poorly equipped, and less conducive to positive interaction. Similarly, considerable differences exist in teachers' interaction styles. Some teachers consistently provide warmth, emotional support, encouragement, and constructive instructional guidance, whereas others maintain more authoritarian or less supportive classroom relationships.

Although previous empirical studies have examined classroom environments separately, evidence regarding their combined influence on pupils' social skills development remains limited in Anambra State. Furthermore, little is known about whether these relationships differ according to pupils' gender, school location, and school type. This gap provided the basis for the present study.

1.3 Research Questions

The following research questions guided the study:

1. What relationship exists between physical classroom environment and pupils' social skills development?
2. What relationship exists between social classroom environment and pupils' social skills development?
3. What relationship exists between psychological classroom environment and pupils' social skills development?
4. What is the joint correlation between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State?
5. What moderating influence do gender, school location, and school type have on the relationship between classroom environment, teacher-child interaction, and pupils' social skills development?

1.4 Hypotheses

The following null hypotheses were tested at the 0.05 level of significance.

1. There is no significant relationship between physical classroom environment and pupils' social skills development.
2. There is no significant relationship between social classroom environment and pupils' social skills development.
3. There is no significant relationship between psychological classroom environment and pupils' social skills development.
4. There is no significant joint correlation between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State.
5. Gender, school location, and school type do not significantly moderate the relationship between classroom environment, teacher-child interaction, and pupils' social skills development.

2. Methods

The study adopted a correlational research design. The population comprised all teachers in public primary schools in Anambra State. A sample of 698 teachers, representing 10% of the population, was selected using a multi-stage sampling procedure involving proportionate stratified sampling, simple random sampling, and stratified random sampling techniques. Three researcher-developed instruments, namely the Classroom Environment Questionnaire (CEQ), Teacher-Child Interaction Questionnaire (TCIQ), and Pupils' Social Skills Development Questionnaire (PSSDQ), were used for data collection. The instruments were face-validated by three experts, while their internal consistency was established using Cronbach's Alpha, yielding reliability coefficients of 0.84, 0.87, and 0.89, respectively, with an overall reliability coefficient of 0.87. Data were analysed using Pearson Product Moment Correlation Coefficient to answer the research questions, while multiple regression analysis and hierarchical multiple regression analysis were used to test the hypotheses at the 0.05 level of significance.

3. Results

Research Question 1: What is the correlation between physical classroom environment and pupils' social skills development in primary schools in Anambra State?

Table 1: *Pearson (r) on the Correlation between Physical Classroom Environment and Pupils' Social Skills Development in Primary Schools in Anambra State*

Variables	N	Physical classroom environment	Social skills development	Remarks
Social skills development	672	1.00	.812**	Very strong positive relationship
Physical classroom environment	672	.812**	1.00	

Results in Table 1 reveal that there is a very strong positive correlation between physical classroom environment and pupils' social skills development in primary schools in Anambra State. This is evident in the value of Pearson's Correlation Coefficient (r), which is 0.812.

Research Question 2: What is the correlation between social classroom environment and pupils' social skills development in primary schools in Anambra State?

Table 2: *Pearson (R) on the Correlation between Social Classroom Environment and Pupils' Social Skills Development in Primary Schools in Anambra State*

Variables	N	Social classroom environment	Social skills development	Remarks
Social skills development	672	1.00	.804**	Very strong positive relationship
Social classroom environment	672	.804**	1.00	

Table 2 shows that the Pearson's (r) = 0.804, indicating that there is a very strong positive correlation between social classroom environment and pupils' social skills development in primary schools in Anambra State.

Research Question 3: What is the correlation between psychological classroom environment and pupils' social skills development in primary schools in Anambra State?

Table 3: *Pearson (R) on the Correlation between Psychological Classroom Environment and Pupils' Social Skills Development in Primary Schools in Anambra State*

Variables	N	Psychological classroom environment	Social skills development	Remarks
Social skills development	672	1.00	.736**	Strong positive relationship
Psychological classroom environment	672	.736**	1.00	

Table 3 shows that there is a strong positive correlation between psychological classroom environment and pupils' social skills development in primary schools in Anambra State. This is shown in the value of Pearson's Correlation Coefficient (r), which is 0.736.

Research Question 4: What is the joint correlation between classroom environment, teacher child interaction, and pupils' social skills development in primary schools in Anambra State?

Table 4: *Multiple Correlation between Classroom Environment, Teacher-Child Interaction and Pupils' Social Skills Development*

Variables	N	R	R ²	Adjusted R ²	Remarks
Classroom environment and teacher-child interaction jointly predicting pupils' social skills development	672	.864	.746	.744	Very strong positive joint relationship

The results in Table 4 reveal that the combined relationship between classroom environment and teacher-child interaction and pupils' social skills development is very strong and positive, as indicated by the multiple correlation coefficient ($R = .864$). The coefficient of determination ($R^2 = .746$) indicates that 74.6% of the variation in pupils' social skills development is jointly associated with classroom environment and teacher-child interaction, while the remaining 25.4% may be attributed to other variables not investigated in the study. This finding suggests that classroom environment and teacher-child interaction jointly have a substantial relationship with pupils' social skills development in primary schools in Anambra State.

Research Question 5: What is the moderating influence of gender, school location, and school type on the relationship between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State?

Table 5: Moderating Influence of Gender, School Location and School Type

Moderator	β	t	p-value	Decision
Gender	.084	2.481	.013	Significant
School Location	.132	3.647	.000	Significant
School Type	.097	2.918	.004	Significant

The results in Table 5 show that gender ($\beta = .084$, $p = .013$), school location ($\beta = .132$, $p = .000$), and school type ($\beta = .097$, $p = .004$) significantly moderate the relationship between classroom environment, teacher-child interaction, and pupils' social skills development. This implies that the strength of the relationship between the independent variables and pupils' social skills development varies according to pupils' gender, the location of the school, and the type of school attended.

Hypothesis 1: There is no significant correlation between physical classroom environment and pupils' social skills development in primary schools in Anambra State.

Table 6: *Pearson (R) Analysis on the Significant Correlation between Physical Classroom Environment and Pupils' Social Skills Development*

Variables	N	Physical classroom environment	Social skills development	P-value	α	Remarks
Social skills development	672	1.00	.812**			
Physical classroom environment	672	.812**	1.00	.000	.05	Sig.

The results of the test of hypothesis one reveal that the r-value is 0.812 and the p-value (0.000) is less than the level of significance (0.05); ($p < 0.05$). As a result of this, the null hypothesis was not upheld while the alternative hypothesis was upheld. Thus, there is significant correlation between physical classroom environment and pupils' social skills development in primary schools in Anambra State.

Hypothesis 2: There is no significant correlation between social classroom environment and pupils' social skills development in primary schools in Anambra State.

Table 7: *Pearson (R) Analysis on the Significant Correlation between Social Classroom Environment and Pupils' Social Skills Development*

Variables	N	Social classroom environment	Social skills development	P-value	α	Remarks
Social skills development	672	1.00	.804**			
Social classroom environment	672	.804**	1.00	.000	.05	Sig.

The results of the test of hypothesis Two indicate that the Pearson r-value is 0.804 and the p-value (0.000) was less than 0.05 level of significance; ($p < 0.05$). On this point, the null hypothesis was not accepted while the alternative hypothesis was accepted. Therefore, there is significant correlation between social classroom environment and pupils' social skills development in primary schools in Anambra State.

Hypothesis 3: There is no significant correlation between psychological classroom environment and pupils' social skills development in primary schools in Anambra State.

Table 8: *Pearson (R) Analysis on the Significant Correlation between Psychological Classroom Environment and Pupils' Social Skills Development*

Variables	N	Psychological classroom environment	Social skills development	P-value	α	Remarks
Social skills development	672	1.00	.736**			
Psychological classroom environment	672	.736**	1.00	.001	.05	Sig.

The results of the test of hypothesis three reveal that the Pearson r-value is 0.736 and the p-value (0.000) was less than 0.05 level of significance; ($p < 0.05$). In this regard, the null hypothesis was not upheld while the alternative hypothesis was upheld. Thus, there is significant correlation between psychological classroom environment and pupils' social skills development in primary schools in Anambra State.

Hypothesis 4: There is no significant joint correlation between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State.

Table 9: *Multiple Regression Analysis on the Significant Joint Correlation between Classroom Environment, Teacher-Child Interaction and Pupils' Social Skills Development*

Source	R	R ²	F	p-value	α	Decision
Regression	.864	.746	324.618	.000	.05	Significant

The results in Table 9 indicate that the joint correlation between classroom environment, teacher-child interaction, and pupils' social skills development is statistically significant ($R = .864$; $R^2 = .746$; $F = 324.618$; $p < .05$). Since the p-value (.000) is less than the 0.05 level of significance, the null hypothesis was rejected, while the alternative hypothesis was accepted. Therefore, there is a significant joint correlation between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State.

Hypothesis 5: Gender, school location, and school type do not significantly moderate the relationship between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State.

Table 10: *Hierarchical Multiple Regression Analysis on the Moderating Influence of Gender, School Location and School Type*

Model	ΔR^2	F-change	p-value	Decision
Moderation Model	.028	8.912	.000	Significant

The results in Table 10 reveal that the inclusion of gender, school location, and school type as moderating variables produced a statistically significant improvement in the prediction of pupils' social skills development ($\Delta R^2 = .028$; $F\text{-change} = 8.912$; $p = .000$). Since the p-value (.000) is less than the 0.05 level of significance, the null hypothesis was rejected, while the alternative hypothesis was accepted. Therefore, gender, school location, and school type significantly moderate the relationship between classroom environment, teacher-child interaction, and pupils' social skills development in primary schools in Anambra State.

4. Discussion

The present study examined the relationships between classroom environment and pupils' social skills development in primary schools in Anambra State, Nigeria. The findings demonstrated that classroom environment is an important determinant of pupils' social competence. Specifically, physical classroom environment, social classroom environment, psychological classroom environment were positively associated with pupils' social skills development. Furthermore, gender, school location, and school type significantly moderated these relationships, suggesting that contextual characteristics influence how classroom experiences shape pupils' social development. The finding is consistent with Rahaman and Kaji (2025), who reported a significant relationship between school environment and pupils' educational outcomes, and with Akomolafe and Adesua (2015), who found that classroom environment significantly

influenced students' learning. Likewise, Emenike (2026) reported that favourable physical classroom conditions enhanced pupils' educational outcomes. The consistency among these studies suggests that physically supportive classrooms provide learners with opportunities for meaningful interaction, cooperation, and social participation.

The study further revealed that the social classroom environment significantly enhanced pupils' social skills development. This finding demonstrates that classrooms characterized by cooperation, mutual respect, inclusiveness, teacher support, and positive peer relationships facilitate children's acquisition of communication skills, empathy, teamwork, and conflict-resolution abilities. Such environments encourage pupils to participate confidently in classroom activities while fostering a sense of belonging and emotional security. The result also supports Bronfenbrenner's ecological perspective that interpersonal relationships within the classroom constitute one of the strongest influences on children's development. The present finding is consistent with Maryam (2026), who established positive relationships between peer interaction and pupils' communication, cooperation, and emotional well-being. Similarly, Odey, Boniface and Odey (2025) reported that cooperative play significantly promoted pupils' social competence, while Obijiofor and Ugwele (2025) concluded that supportive classroom relationships enhanced children's emotional regulation and peer interactions. Collectively, these findings reinforce the importance of positive classroom relationships in promoting children's holistic development.

The findings also showed that the psychological classroom environment significantly predicted pupils' social skills development. Classrooms characterized by trust, acceptance, fairness, emotional safety, and encouragement were found to promote pupils' confidence, classroom participation, emotional regulation, and interpersonal competence. The result corroborates Zhang and Liu (2022), who found that emotionally secure classrooms enhanced children's adaptive social behaviours, and Liu and Nasri (2024), who reported that psychologically supportive classroom climates promoted pupils' engagement and prosocial behaviours. Similarly, Akalin and Yildiz (2025) found that children who maintained warm relationships with teachers demonstrated higher levels of social competence. The agreement among these studies suggests that emotionally supportive classrooms create conditions that enable pupils to interact confidently with teachers and peers while developing socially acceptable behaviours.

Another important contribution of this study is the evidence that gender, school location, and school type significantly moderated the relationships between classroom environment, teacher-child interaction, and pupils' social skills development. This finding indicates that the influence of classroom experiences on children's social competence varies according to individual and school characteristics. The result is consistent with Bronfenbrenner's Ecological Systems Theory, which explains that children's development results from continuous interactions between individual characteristics and environmental contexts. The finding also supports previous empirical evidence. Akalin and Yildiz (2025) found that girls generally demonstrated stronger teacher-child relationships and higher social competence than boys, while Rahaman and Kaji (2025) reported significant differences in educational outcomes according to gender and school type. Similarly, Liu, Wang, Liu, Ding and Wang (2022) demonstrated that learner characteristics

moderated the influence of classroom environment on educational outcomes. The present finding extends previous research by showing that contextual variables not only influence academic outcomes but also shape the relationship between classroom processes and pupils' social skills development.

The findings demonstrate that pupils' social skills development is not determined by a single classroom factor but by the interaction of supportive physical, social, and psychological classroom environments. These classroom characteristics create opportunities for pupils to communicate, collaborate, regulate emotions, resolve interpersonal conflicts, and establish positive peer relationships that are essential for holistic development. The significant moderating effects of gender, school location, and school type further suggest that interventions aimed at promoting pupils' social competence should be context-sensitive and responsive to the diverse realities of learners and schools. Consequently, improving classroom environments a practical strategy for enhancing pupils' social skills development in primary schools.

5. Conclusion

This study investigated the relationships between classroom environment and pupils' social skills development in primary schools in Anambra State, Nigeria. The findings established that physical classroom environment, social classroom environment, psychological classroom environment each had positive and significant relationships with pupils' social skills development. The study further demonstrated that gender, school location, and school type significantly moderated these relationships, indicating that the influence of classroom experiences on pupils' social competence varies across learner and school contexts. The findings underscore the importance of creating learning environments that are not only physically conducive but also socially supportive and psychologically safe. Consequently, pupils' social skills development is best promoted through an integrated approach that combines quality classroom environments. The study concludes that improving classroom conditions and strengthening teachers' interpersonal and emotional support competencies should be prioritized by educational stakeholders as practical strategies for enhancing pupils' social skills development. In addition, interventions designed to improve social competence should be context-sensitive by considering differences associated with gender, school location, and school type. Such efforts will contribute to the development of socially competent pupils who are better prepared for successful academic learning, healthy interpersonal relationships, and responsible participation in society.

6. Recommendations

Based on the findings of this study, the following recommendations are made:

1. Government and educational authorities should prioritize the provision and maintenance of adequate classroom infrastructure, including spacious classrooms, proper lighting, ventilation, furniture, and instructional resources, to create physical learning environments that support pupils' social skills development.
2. Primary school teachers should foster positive social and psychological classroom environments by promoting mutual respect, cooperation, inclusiveness, and effective peer

interaction through collaborative learning, group activities, and learner-centred instructional approaches that encourage pupils to develop communication, empathy, and teamwork skills.

3. Educational policymakers and curriculum developers should incorporate social-emotional learning and structured social skills development programmes into the primary school curriculum to provide pupils with consistent opportunities to develop communication, cooperation, conflict-resolution, and interpersonal relationship skills.
4. Government and school managers should implement context-specific interventions that address disparities associated with gender, school location, and school type by ensuring equitable distribution of educational resources, improving classroom conditions in underserved schools, and promoting inclusive teaching practices that meet the diverse social and emotional needs of all pupils.
5. Future researchers should extend this study by examining additional dimensions of classroom environment, employing longitudinal or experimental research designs, and including private primary schools or other geopolitical zones to enhance the generalizability of the findings.



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