



Influence of Primary School Playgrounds on Pupils' Physical Skill Acquisition

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ABSTRACT

Playgrounds are essential environments for developing children's physical, social, and cognitive skills. This study examined the influence of primary school playgrounds on pupils' physical skill acquisition in Ilorin West Local Government Area, Kwara State, Nigeria. A descriptive survey research design was adopted, involving 376 pupils selected from 20 public and private primary schools using simple random sampling. Data were collected through a validated checklist and rating scale, and analyzed using descriptive statistics and a t-test. Results revealed that most schools had adequate playground space and safety conditions, yet pupils' overall physical skill acquisition remained low. Playground quality and activities significantly influenced pupils' physical skills, while no significant difference was found based on gender or school type. The study concludes that adequate, well-equipped playgrounds enhance pupils' holistic physical development. It recommends increased provision, supervision, and teacher engagement in structured playground activities to promote physical education outcomes.

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1. INTRODUCTION

Playground, by nature, is capable of stimulating all areas of children's development and improving their senses, emotions, and skills. During playground activities, some physical skills might be acquired that help the child grow and develop holistically. Playground use supports children's social interaction and cooperation, contributing to their overall well-being. Research has demonstrated that regular playground activities make children healthier, stronger, and happier than those who do not engage in them. Playground activities are essential in childhood as they allow young children to use their whole bodies while playing. Physically engaged children are more likely to explore energetic activities at home, unlike sedentary peers who spend more time on computer games or television. As children interact with playground equipment, they experience opportunities that stimulate age-appropriate physical development (Brown, 2001). Physical interaction in playgrounds improves children's motor skills and social communication as they converse, imitate, and collaborate during play.

Play is essential to cognitive and emotional growth. Seventy-five percent of the brain develops after birth, making play a vital component for healthy brain development. Play stimulates neural connections between nerve cells, helping children develop gross motor skills like walking, running, and jumping, as well as fine motor skills such as writing and manipulating small tools. The World Health Organization, in 2014, defines physical skill as any bodily movement produced by skeletal muscles that requires energy expenditure during work, play, or recreation. A well-designed and managed playground gives children opportunities to improve motor coordination, social competence, and decision-making through imaginative and fantasy play (Alqudah, 2003). Skill acquisition is both context-dependent and socially constructed (Smith, 2011). Thus, playgrounds not only enhance physical development but also nurture collaboration, creativity, leadership, and perseverance. Most primary schools remain havens of innocence, where cooperative play such as skipping ropes and clapping games fosters equality and mutual respect among pupils.

In Nigeria, however, the condition of school playgrounds remains a concern. Many schools lack adequate playground space or facilities to support children's physical and holistic development. Poor management, inadequate equipment, and insufficient teacher involvement limit the benefits of physical play. Traditionally, physical development was viewed through a maturational lens, emphasizing biological readiness, but more recent perspectives, such as Piaget's theory and the perceptual-motor model, stress the reciprocal relationship between motor behavior and cognitive growth. Physical activity has been consistently linked to children's health and learning outcomes (Hope, 2007). Yet, many Nigerian schools still neglect the playground as a learning environment.

Based on our previous studies (Sulyman, 2021; Sulyman *et al.*, 2022a; Sulyman *et al.*, 2022b; Sulyman *et al.*, 2022c; Sulyman *et al.*, 2022d; Sulyman *et al.*, 2022e; Sulyman *et al.*, 2022f; Sulyman & Oladoye, 2022; Sulyman *et al.*, 2022g), this study, therefore, investigates the influence of primary school playground qualities and activities on pupils' physical skill acquisition in Ilorin West Local Government Area, Kwara State. Its novelty lies in empirically analyzing both physical and contextual factors (including playground quality, activity type, and school ownership) to understand how they shape children's physical skill development within the Nigerian primary education system.

2. LITERATURE REVIEW

2.1. Theoretical Framework: Affordance Theory

This study is anchored on the Affordance Theory, which emphasizes the relationship between the environment and the individual's capacity for action. Affordance refers to the potential actions that an environment offers to an organism, independent of the individual's ability to recognize them. In the context of this study, preschool children are viewed as agents who perceive and interact with their physical surroundings. A well-designed playground affords opportunities for climbing, swinging, balancing, and jumping, which stimulate both perceptual and motor development. For instance, a monkey bar affords climbing and hanging, while a swing affords movement, pumping legs, and coordination. Through these activities, children make decisions based on environmental cues such as the height of structures, the safety of surfaces, or the accessibility of materials. Affordance theory thus provides a framework for understanding how playground environments shape children's physical engagement and learning, highlighting the connection between perception and motor action. Teachers, as supervisors, play a guiding role in helping children safely explore and maximize the affordances of their play environment.

2.2. Concept and Structure of Education in Nigeria

Education in Nigeria operates at multiple levels (pre-primary, primary, secondary, and tertiary), each contributing to national development goals. The word education originates from the Latin terms *educere* ("to lead out") and *educare* ("to bring up"), signifying the process of nurturing latent skills and guiding learners toward intellectual and moral growth. Primary education, as the foundation of the entire educational system, caters to children aged six to eleven and aims to build literacy, numeracy, scientific thinking, and moral discipline (Federal Republic of Nigeria, 2004). The National Policy on Education identifies goals such as developing manipulative skills, adaptability, reflective thinking, and citizenship education. These objectives align with the role of playgrounds as spaces for experiential learning and holistic development. Education must cultivate both intellectual and practical competencies to prepare children for lifelong learning and participation in society.

2.3. Concept of Playground and Its Educational Importance

A playground is defined as an outdoor space designed for play, learning, and recreation, typically intended for children but also inclusive of people with disabilities. The playground provides a natural environment that supports physical, emotional, and social growth. Four major benefits of playground activities include social-emotional development, physical fitness, creativity, and learning through play. Social and emotional benefits arise from peer interaction, cooperation, and empathy as children engage in group games. Physically, playground activities such as climbing, sliding, or swinging enhance balance, coordination, flexibility, and muscular strength. Imagination and creativity are also stimulated through make-believe play, where children learn problem-solving and self-expression. Moreover, learning through play fosters cognitive, linguistic, and teamwork skills essential to holistic development. Play, therefore, contributes significantly to intellectual, physical, and adaptive growth in children.

2.4. Qualities and Facilities of Playgrounds

The effectiveness of playgrounds depends on their quality and available facilities. Good playgrounds promote motion and encourage children to run, jump, throw, slide, and climb.

They should incorporate natural elements such as sand, water, and green space to stimulate sensory and manipulative skills. Accessibility, safety, and inclusivity are also critical to ensure equal play opportunities for all learners. A playground should provide soft ground surfaces, balance elements, and equipment such as swings, climbing frames, and slides that foster upper-body development. Well-equipped playgrounds with protective surfacing, fencing, and internal routes enhance children's participation and safety. Outdoor environments not only improve physical skills but also support creativity and emotional intelligence. The design and management of playgrounds thus determine the extent to which physical activity becomes a meaningful educational experience.

2.5. Empirical Studies on Physical Skill Acquisition

Several studies have established clear links between playground activities and children's physical skill development. Physical activity contributes directly to children's health, social well-being, and learning outcomes (Hope, 2007). Schoolchildren generally have positive attitudes toward physical education and sport, though many still spend their free time in non-physical activities (Maksimović & Osmanović, 2019). These findings align with research emphasizing that skill acquisition is socially situated and depends on environmental and contextual factors (Smith, 2011). Playgrounds also influence children's attachment to school and their sense of belonging (Aybuke & Zekiye, 2017). In the Nigerian context, limited playground facilities constrain children's opportunities for active play and holistic development (Sulyman et al., 2022). Collectively, these studies affirm that well-planned and adequately equipped playgrounds enhance children's motor coordination, balance, confidence, and overall learning outcomes.

3. METHODS

This study adopted a descriptive survey research design to investigate the influence of primary school playgrounds on pupils' physical skill acquisition in Ilorin West Local Government Area of Kwara State. The population consisted of all pupils from both public and private primary schools within the area. According to the Annual School Census Report in 2018-2019, there were fifty-four public and two hundred and thirty-eight private schools, totaling two hundred and ninety-two institutions. Using a simple random sampling technique, twenty schools (comprising eight public and twelve private schools) were selected to ensure equal representation and objectivity.

A total of 376 pupils participated in the study. Two research instruments were developed by the researcher: the Checklist on Primary School Playground and Playground Activities (CPSPPA) and the Rating Scale for Pupils' Physical Skill Acquisition (RSPPSA). The checklist gathered information on playground quality and facilities, while the rating scale assessed pupils' physical skills such as balance, coordination, and motor control. Both instruments were validated by experts in Early Childhood and Primary Education to ensure content and construct validity. Corrections and suggestions were incorporated before administration.

To establish reliability, a test-retest procedure was applied over a two-week interval, and the results were analyzed using Pearson Product-Moment Correlation (PPMC). A reliability coefficient of 0.75 was obtained, which was considered acceptable for field studies. Data collection was facilitated through an introductory letter from the Department of Early Childhood and Primary Education, Kwara State University, requesting cooperation from school authorities. Ethical considerations were maintained by ensuring anonymity and voluntary participation.

Data were analyzed using both descriptive and inferential statistics. Frequency counts, percentages, and means were employed to summarize demographic data and respond to the research questions. Inferential analyses, including t-test and regression, were applied to test the hypotheses at a 0.05 level of significance. Decision rules were set such that a weighted mean of 2.5 and above indicated a high level, 2.0-2.49 indicated an average level, and below 1.9 indicated a low level of physical skill acquisition. This methodological approach ensured a reliable, quantitative assessment of the relationship between playground environments and pupils' physical development outcomes.

4. RESULTS AND DISCUSSION

This section presents the findings of the study based on the research questions and hypotheses that examined the influence of primary school playgrounds on pupils' physical skill acquisition in Ilorin West Local Government Area of Kwara State. Descriptive and inferential statistical methods were used to analyze the data to understand how playground quality, activities, and materials relate to pupils' physical development outcomes.

4.1. Demographic Characteristics of Respondents

Table 1 shows the distribution of schools based on their type. Out of the 18 sampled schools, eight (41.2%) were public, while ten (58.8%) were private. This distribution indicates that private schools outnumber public schools in the study area, reflecting the general pattern of educational ownership within Ilorin West, where private institutions play a significant role in basic education.

Table 1. Distribution of Schools Based on Types.

School Type	Frequency	Percentage
Public	8	41.2%
Private	10	58.8%
Total	18	100%

Table 2 presents the gender distribution of respondents. Among the 376 pupils sampled, 174 (46.3%) were male, and 202 (53.7%) were female, indicating a fairly balanced representation. Such a distribution ensures comparability between male and female pupils when analyzing gender-based differences in physical skill acquisition.

Table 2. Distribution of Respondents Based on Gender.

Gender	Frequency	Percentage
Male	174	46.3%
Female	202	53.7%
Total	376	100%

4.2. Qualities of Primary School Playgrounds

The first research question focused on assessing the physical qualities of playgrounds in primary schools. The results are summarized in **Table 3**.

The results show that all schools (100%) have enough space for children to play, and most are safe, secure, and free from waterlogging. Additionally, 77.8% of respondents reported the presence of natural grass, which enhances safety and environmental quality. This reflects a generally conducive setting for children's physical activity, although some schools still have

minor safety issues, such as hazardous objects. Properly designed playgrounds should allow children to move freely, climb, slide, and jump within a safe environment. The findings indicate that while spatial and safety conditions are largely satisfactory, the absence of functional diversity in playground equipment limits children's ability to engage in varied and complex physical movements that promote balance, flexibility, and coordination.

Table 3. Qualities of Primary School Playgrounds.

S/N	Qualities	Yes	No
1	Enough space for children to play	18 (100.0)	0 (0.0)
2	Free from dangerous objects	14 (77.8)	4 (22.2)
3	Waterlogged	0 (0.0)	18 (100.0)
4	Safe and secure	16 (88.9)	2 (11.1)
5	Presence of grass	14 (77.8)	4 (22.2)

4.3. Playground Activities and Pupils' Engagement

Table 4 presents the playground activities observed among pupils in the study area. The data reveal that the most common activities include running, hide and seek, passing, and kicking balls. These games emphasize gross motor skills involving large muscle groups. However, creative or cooperative games that enhance fine motor control and teamwork were less frequent. This suggests that pupils' physical engagement is limited to basic movement activities, providing less opportunity for complex skill refinement. Similar findings were reported by Baines and Blatchford, who concluded that spontaneous, unstructured activities such as running dominate children's playground behavior and are beneficial mainly for endurance and basic coordination ([Baines & Blatchford, 2012](#)). The lack of structured supervision and instructional play, however, reduces opportunities for advanced skill acquisition and guided interaction that foster both physical and social growth.

Table 4. Playground Activities in Ilorin West.

S/N	Playground Activities	Often	Always	Never
1	Running	4 (22.2)	11 (61.1)	3 (16.7)
2	Rainbow tag	10 (55.6)	2 (11.1)	6 (33.3)
3	Hide and seek	6 (33.3)	10 (55.6)	2 (11.1)
4	Passing ball	4 (22.2)	11 (61.1)	3 (16.7)
5	Dodge ball	6 (33.3)	3 (16.7)	9 (50.0)
6	Kicking ball	8 (44.4)	9 (50.0)	1 (5.6)

4.4. Availability of Playground Materials

The availability of playground equipment was assessed to determine whether schools possessed adequate materials for promoting active play. The results are shown in **Table 5**.

The findings show that swings, play sand, and natural grass are the most available materials. However, advanced equipment such as slides, monkey bars, and see-saws is scarce, and none of the schools had modern safety surfaces like rubber tiles or artificial turf. This limited availability reduces the variety of motor challenges pupils encounter during play. Effective playgrounds require diverse materials that support sensory development and motor creativity through interaction with different textures, heights, and movements. The absence of such diversity limits opportunities for problem-solving and physical exploration, resulting in reduced motor development potential ([Hope, 2007](#)).

Table 5. Playground Materials in Ilorin West.

S/N	Playground Materials	Yes	No
1	Swings	10 (55.6)	8 (44.4)
2	Slides	3 (16.7)	15 (83.3)
3	Climbers	2 (11.1)	16 (88.9)
4	See-saws	1 (5.6)	17 (94.4)
5	Merry-go-rounds	1 (5.6)	17 (94.4)
6	Spring riders	0 (0.0)	18 (100.0)
7	Tubes	0 (0.0)	18 (100.0)
8	Spinners	2 (11.1)	16 (88.9)
9	Play sand	11 (61.1)	7 (38.9)
10	Pea gravel	3 (16.7)	15 (83.3)
11	Rubber tiles	0 (0.0)	18 (100.0)
12	Natural grass	14 (77.8)	4 (22.2)
13	Artificial grass	5 (27.8)	13 (72.2)
14	Wood chips and mulch	1 (5.6)	17 (94.4)
15	Giant stride	0 (0.0)	18 (100.0)
16	Monkey bars	2 (11.1)	16 (88.9)

4.5. Level of Pupils' Physical Skill Acquisition

Table 6 presents the descriptive results of pupils' physical skill acquisition as rated across ten key indicators. The weighted mean of 1.57 indicates a low level of physical skill acquisition among pupils. Children showed relatively stronger performance in climbing and swinging, which involve gross motor coordination, but weaker skills in catching and balancing, which require fine motor precision. This pattern implies that while children are physically active, the diversity and challenge level of their activities are insufficient for comprehensive motor development. Play is essential to brain development and neural connectivity; limited opportunities for complex play can therefore hinder the establishment of advanced motor and coordination skills. Furthermore, insufficient teacher supervision and integration of structured movement sessions reduce the potential for physical learning transfer to classroom settings. According to the perceptual-motor model proposed by Piaget, motor behaviors are foundational to cognitive development, highlighting the interdependence of physical activity and learning outcomes.

Table 6. Level of Pupils' Physical Skill Acquisition.

S/N	Physical Skill	Always	Sometimes	Never	Mean
1	Climbing on/off objects	198 (52.7)	131 (34.8)	47 (12.5)	1.60
2	Jumping on/off	181 (48.1)	182 (48.4)	13 (3.5)	1.55
3	Swinging	178 (47.3)	135 (35.9)	63 (16.8)	1.69
4	Practicing fine motor (gripping)	192 (51.1)	108 (28.7)	76 (20.2)	1.69
5	Putting things together	208 (55.3)	158 (42.0)	10 (2.7)	1.47
6	Skiping	147 (39.1)	124 (33.0)	105 (27.9)	1.89
7	Balancing on one leg	177 (47.1)	165 (43.9)	34 (9.0)	1.62
8	Throwing objects	222 (59.0)	144 (38.3)	10 (2.7)	1.44
9	Catching	252 (67.0)	110 (29.3)	14 (3.7)	1.37
10	Catching up and balancing	258 (68.6)	94 (25.0)	24 (6.4)	1.38
Weighted Mean					1.57 (Low)

4.6. Influence of Playground Qualities on Pupils' Physical Skill Acquisition

To test the first hypothesis, a regression analysis was conducted to determine whether playground qualities significantly influenced pupils' physical skill acquisition. The result is presented in **Table 7**. The result showed that playground quality accounted for 4.3% of the variance in pupils' physical skill acquisition. The F -value (0.719) with $p < 0.05$ confirms a significant relationship between playground quality and pupils' motor development. This means that the physical layout and safety of a playground directly affect how effectively children acquire motor skills. Open, safe, and properly designed playgrounds encourage children to engage in varied physical activities that strengthen endurance, balance, and coordination.

This finding aligns with the Affordance Theory, which states that the environment provides opportunities for movement and exploration that shape learning and development. Playgrounds that afford climbing, swinging, or balancing allow children to develop corresponding motor abilities through active exploration. The result also supports previous research indicating that playground quality is a predictor of physical engagement and health outcomes among primary school pupils (Sulyman *et al.*, 2022). Therefore, improving playground design, safety, and maintenance can significantly enhance both physical education and child development outcomes (Hope, 2007).

Table 7. Regression Analysis of Playground Qualities and Pupils' Physical Skill Acquisition.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.779	1	1.779	0.719	0.005
Residual	928.977	375	2.478		
Total	930.756	376			
R	R Square	Adjusted R Square	Std. Error of Estimate		
0.207	0.043	0.040	1.574		

4.7. Influence of Playground Activities on Pupils' Physical Skill Acquisition

The second hypothesis examined whether playground activities significantly influenced pupils' physical skill acquisition. The regression result is displayed in **Table 8**. The result indicates a significant but weak positive relationship between playground activities and pupils' physical skill acquisition ($p < 0.05$, $R^2 = 0.001$). This means that regular participation in playground activities contributes to pupils' physical skill development, though the overall effect is small. Active involvement in structured play improves coordination, balance, and strength. Interaction with playground equipment provides opportunities for children to develop age-appropriate physical competencies (Brown, 2001).

Table 8. Regression Analysis of Playground Activities and Pupils' Physical Skill Acquisition.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.004	1	0.004	0.110	0.005
Residual	930.752	375	2.483		
Total	930.756	376			
R	R Square	Adjusted R Square	Std. Error of Estimate		
0.026	0.001	-0.002	1.577		

The low coefficient value suggests that while participation matters, other variables (such as teacher supervision, quality of materials, and play environment) also influence skill

outcomes. Students' physical development depends not only on participation but also on the level of organization, safety, and guidance provided by educators (Maksimović & Osmanović, 2019). The finding implies that unstructured free play alone may not be sufficient to promote holistic physical skill acquisition without teacher facilitation and intentional learning design (Hope, 2007).

4.8. Gender Differences in Pupils' Physical Skill Acquisition

The third hypothesis explored whether gender differences existed in pupils' physical skill acquisition. The result of the *t*-test analysis is presented in **Table 9**. The result shows that the calculated *t*-value of -2.698 at the 0.05 level was not significant, indicating that gender had no significant effect on pupils' physical skill acquisition. Both male and female pupils performed at similar levels.

This finding aligns with research showing that physical skill development is more influenced by environmental and instructional factors than by gender. Equal access to playgrounds and shared activities may account for the similarity in performance between boys and girls. Equal opportunities for play exposure and teacher encouragement have been shown to result in comparable physical competence among genders (Aybuke & Zekiye, 2017). The result reinforces the idea that gender equality in learning environments contributes to balanced development in children's physical, cognitive, and social skills (Smith, 2011).

Table 9. t-Test Analysis of Gender and Pupils' Physical Skill Acquisition.

Gender	N	Mean	Std. Deviation	df	t	Sig. (2-tailed)
Male	174	1.58	0.52	374	-2.698	0.05
Female	202	1.56	0.51			

4.9. Differences in Pupils' Physical Skill Acquisition Based on School Type

The fourth hypothesis examined whether school type (public or private) influenced pupils' physical skill acquisition. The *t*-test result is shown in **Table 10**. The result reveals no significant difference between public and private schools ($p > 0.05$). This suggests that pupils from both school types acquire similar levels of physical skill. Comparable playground structures and accessibility across schools may explain the result. Recent initiatives to standardize physical education and school facilities have minimized disparities between public and private institutions (Sulyman *et al.*, 2022).

The result implies that physical skill development depends less on school ownership and more on how effectively playground resources are used and supervised. The quality of physical engagement and maintenance practices strongly influences outcomes regardless of institutional type (Hope, 2007). Enhancing teacher participation, scheduling regular physical activities, and maintaining equipment are therefore more critical than structural ownership differences.

Table 10. t-Test Analysis of School Type and Pupils' Physical Skill Acquisition.

School Type	N	Mean	Std. Deviation	df	t	Sig. (2-tailed)
Public	174	1.58	0.52	374	-2.698	0.05
Private	202	1.56	0.51			

4.10. Discussion

The overall findings demonstrate that playgrounds significantly influence pupils' physical skill acquisition, though the extent depends on the quality of the environment, diversity of activities, and supervision. Most playgrounds in Ilorin West were found to be spacious and relatively safe, but lacked sufficient equipment diversity and structured play programs. Consequently, children's physical development was largely limited to basic locomotor activities such as running and ball games.

Physical literacy (the ability to move with competence and confidence) relies on exposure to varied play opportunities that encourage coordination, flexibility, and balance. Schools that provide enriched playground environments promote greater motivation for physical engagement, which enhances both health and academic outcomes. This finding aligns with Sustainable Development Goals (SDGs), such as SDG 3 on Good Health and Well-being and SDG 4 on Quality Education, underscoring that play contributes to holistic child development and lifelong learning.

The absence of significant gender and school-type differences suggests that equitable access to play facilities enables uniform developmental outcomes. Equal participation opportunities allow all pupils, regardless of gender or institutional background, to benefit equally from playground-based learning experiences (Aybuke & Zekiye, 2017). This underscores the importance of inclusive physical education policies and safe, accessible environments that promote equality and engagement.

Playgrounds should thus be recognized as dynamic learning environments rather than mere recreational spaces. With proper supervision, they foster not only motor skills but also creativity, teamwork, and problem-solving abilities (Smith, 2011). Teachers should be trained in play pedagogy to integrate structured physical activities into daily routines, transforming play into a purposeful extension of classroom learning. Maintaining safe, diverse, and inclusive playgrounds can significantly enhance pupils' readiness for lifelong learning and contribute to their cognitive, social, and physical well-being (Hope, 2007).

Recommendations are as follows:

- (i) **Improvement of Playground Facilities:** School administrators and government agencies should upgrade playgrounds with diverse and durable equipment that promotes both gross and fine motor skills. The inclusion of slides, climbing frames, and soft landing surfaces can improve safety and encourage active participation.
- (ii) **Teacher Involvement and Supervision:** Teachers should be actively engaged in organizing structured and guided play sessions. Proper supervision ensures that play becomes both educational and safe, facilitating the development of physical, social, and cognitive skills.
- (iii) **Integration of Play into Curriculum:** Physical play should be integrated into daily school routines and curriculum planning. Linking playground activities with classroom learning can promote a balanced development of cognitive and physical competencies.
- (iv) **Policy Enforcement and Funding:** Educational authorities should enforce policies that mandate the inclusion and maintenance of playgrounds in all primary schools. Regular inspections and adequate funding should be provided to sustain quality and safety standards (Sulyman *et al.*, 2022).
- (v) **Training and Capacity Building:** Teachers and caregivers should receive training in play pedagogy to enhance their ability to design, supervise, and evaluate playground activities that support holistic child development (Smith, 2011).

Community Participation: Parents and local communities should be involved in maintaining school playgrounds and organizing recreational programs. Collaborative efforts can foster

shared responsibility and sustainability in promoting active learning environments (Aybuke & Zekiye, 2017).

5. CONCLUSION

This study investigated the influence of playground quality and activities on pupils' physical skill acquisition in primary schools within Ilorin West Local Government Area of Kwara State, Nigeria. The findings revealed that most schools possess adequate playground space and basic safety measures, yet the diversity and quality of playground equipment remain limited. Pupils' overall level of physical skill acquisition was low, particularly in areas involving coordination, balance, and fine motor control. Regression analysis confirmed that playground quality and frequency of activities significantly influenced pupils' physical skill acquisition, although their contributions were modest.

The absence of significant differences across gender and school type indicates that equitable access to playgrounds allows pupils to develop similar physical abilities when conditions are comparable. These results emphasize that the provision of safe, inclusive, and well-maintained playgrounds is essential for improving children's physical, social, and cognitive development. Playgrounds are not merely recreational spaces but educational environments that enhance holistic growth and contribute directly to achieving SDGs related to health, education, and well-being (Hope, 2007).

The study contributes to the growing recognition of playgrounds as vital components of physical education and early childhood development. By ensuring that playground environments are inclusive, safe, and pedagogically rich, schools can nurture pupils' lifelong habits of physical activity and healthy living. Furthermore, the findings support ongoing advocacy for integrating SDGs into educational practices, emphasizing the role of play in achieving physical well-being, quality education, and social inclusion.

Overall, enhancing playground design, teacher involvement, and supervision represents a strategic pathway toward strengthening physical education outcomes and promoting holistic learning in Nigerian primary schools and beyond.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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