The Effect of Observational Learning on Bating Skill Among Primary School Pupils in Obio-Akpor LGA of Rivers State

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Abstract
This study investigated the effect of observational learning on bating skill perforance among Primary Six pupils at Community Primary School, Nkpolu, Obio/Akpor Local Government Area of Rivers State. A quasi-experimental pretest–posttest control group design was adopted. The population comprised 76 Primary Six pupils, from which 20 pupils were selected using purposive and simple random sampling techniques and assigned to experimental and control groups. The experimental group received a four-week observational learning intervention conducted three times weekly, involving teacher demonstrations, peer modelling, and video demonstrations, while the control group received conventional teacher-centred instruction. Data were collected using the bating skill Performance and Observational Learning Assessment Instrument (BSPOLAI), including the bating skill Performance Assessment Checklist (BSPAC). The instrument was subjected to expert validation, while reliability was established using the test–retest method and Pearson Product Moment Correlation. Mean and standard deviation were used to answer the research question, while Analysis of Covariance (ANCOVA) was used to test the hypothesis at the 0.05 level of significance. The results showed an improvement in pupils' bating skill performance, with the mean score increasing from 0.90 (SD = 0.64) at pretest to 1.78 (SD = 0.42) at posttest, indicating a shift from partially demonstrated to adequately demonstrated performance. The ANCOVA result further showed a statistically significant effect of observational learning on bating skill performance, $F(1, 17) = 36.291$, $p < .001$, after controlling for pretest differences. The study concluded that observational learning is an effective instructional strategy for improving bating skill performance among Primary Six pupils. It was recommended that physical education teachers integrate structured teacher demonstrations, peer modelling, and appropriate video demonstrations with active practice and corrective feedback during bating skill instruction.

Keywords: *Observational learning, bating skill, primary school pupils, physical education, motor performance, motor competence.*

Introduction

Motor skill acquisition is a fundamental objective of physical education, as it enables children to develop the competence and confidence required for lifelong participation in physical activity and sports. During the primary school years, pupils experience rapid physical, cognitive, and social development, making this period particularly suitable for learning and refining fundamental movement skills. Batting, which involves striking a moving or stationary ball with an implement,

is a complex manipulative motor skill that requires the coordinated integration of visual perception, timing, balance, hand-eye coordination, and body control. Mastery of batting skills contributes not only to successful participation in games such as baseball, softball, and cricket but also enhances overall motor competence, physical fitness, and self-confidence among children. Recent evidence suggests that structured physical education programmes that provide appropriate learning opportunities significantly improve children's motor skill development and academic engagement (Gallotta et al., 2024). Likewise, batting has been recognized as an essential striking skill that supports the development of fundamental movement competencies in primary-aged children (Graziani & Kozub, 2024).

Among the various instructional strategies used in physical education, observational learning has gained considerable attention as an effective method for facilitating motor skill acquisition. Rooted in Bandura's Social Cognitive Theory, observational learning occurs when learners acquire new behaviours or motor skills by watching competent models and subsequently reproducing the observed actions. The process involves four interconnected components—attention, retention, motor reproduction, and motivation which collectively enable learners to imitate and refine observed performances. Through demonstrations by teachers, coaches, peers, or video models, learners develop accurate mental representations of movement patterns before engaging in physical practice. Contemporary research continues to affirm that observational learning enhances skill acquisition across diverse sporting contexts by improving movement accuracy, decision-making, and performance efficiency. A recent review of skill acquisition interventions also concluded that observational learning remains one of the most effective evidence-based approaches for improving sports-related motor skills when combined with structured practice (Choo et al., 2024). Similarly, Hancock and Rymal (2024) emphasized that observational learning remains a key mechanism for developing skilled performance across sporting environments.

Observational learning is an important component of motor skill acquisition because it enables learners to develop a visual understanding of movement patterns before attempting to reproduce them during physical practice. However, the effectiveness of this process may depend on the opportunities learners have to practise observed movements and receive appropriate feedback on their performance. In this regard, Ochor and Nwanwo (2026), in their study on the effects of feedback mechanisms on the acquisition of selected football skills among students of Bayelsa State Sports Academy, Nigeria, examined the contribution of instructional feedback to sport-specific skill acquisition. Their work provides relevant contextual evidence for considering how structured instruction and corrective feedback may complement demonstration-based teaching in physical education. Accordingly, the present study examines whether structured observational learning can improve batting skill performance among primary school pupils in Obio/Akpor Local Government Area of Rivers State.

In primary school physical education, observational learning is particularly valuable because children learn efficiently through imitation, visual demonstration, and repeated practice. Pupils who observe skilled demonstrations are more likely to understand correct movement patterns, reduce execution errors, and perform complex motor skills with greater confidence than those who rely solely on verbal instruction. The increasing availability of instructional videos, peer modelling, and teacher demonstrations has further strengthened the application of observational learning in school-based physical education. However, despite the growing body of international evidence supporting observational learning, empirical studies focusing specifically on batting skills among primary school pupils remain limited, particularly in developing countries. In Nigeria, inadequate instructional resources, limited teacher demonstrations, and insufficient exposure to

effective modelling strategies continue to hinder the acquisition of manipulative sports skills among school children. Recent Nigerian literature has highlighted observational learning as a promising strategy for improving sports development and skill acquisition within educational settings despite existing infrastructural and instructional challenges (Okorie & Akalazu, 2025).

Empirical studies conducted in Nigerian sport settings have also investigated the effectiveness of structured training programmes for improving sport-specific competencies. For instance, Ochor, Amasiatu, Elendu, and John (2024) examined the effect of a four-week goal-setting training programme on football passing competencies among students of Bayelsa State Sports Academy. This line of research highlights the importance of systematically organised interventions and measurable performance outcomes when evaluating strategies for developing sporting skills. Although goal-setting training differs from observational learning in its instructional focus, the study provides a relevant Nigerian context for examining how planned pedagogical interventions may contribute to motor skill performance. Nevertheless, further investigation is required to establish the effectiveness of observational learning specifically for batting skill acquisition among primary-school pupils.

Within Obio/Akpor Local Government Area of Rivers State, many primary schools continue to experience challenges in providing effective instructional approaches for developing manipulative motor skills such as batting. Although physical education forms part of the school curriculum, teaching often depends largely on verbal explanations with limited practical demonstrations and modelling opportunities. Consequently, many pupils exhibit poor batting techniques, inaccurate striking ability, improper body positioning, and reduced confidence during practical activities. Since observational learning has been widely acknowledged as an effective instructional strategy for enhancing motor performance, there is a need to determine the extent to which it influences batting skills among primary school pupils in the study area. Therefore, this study seeks to assess the extent to which observational learning influences batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State. The findings are expected to provide empirical evidence that will assist physical education teachers, curriculum planners, coaches, and educational policymakers in adopting more effective instructional strategies for improving pupils' batting skills and overall motor skill acquisition.

Statement of the Problem

Physical education is globally recognized as a critical avenue for fostering motor skill acquisition in children, yet numerous studies indicate that many pupils leave school without adequate competence in fundamental motor skills (Logan et al., 2018; Robinson et al., 2015). Such deficiencies hinder children's participation in physical activity and sports, and may contribute to sedentary lifestyles and associated health risks such as obesity and chronic diseases (Barnett et al., 2016). Although developed countries have adopted and tested evidence-based instructional strategies such as observational learning to improve motor skill development (McCullagh & Weiss, 2019), many developing countries, including Nigeria, still rely heavily on traditional teaching methods characterized by verbal instruction with limited demonstration (Adodo& Oyewole, 2019). This situation raises concerns about the effectiveness of physical education delivery in achieving desired learning outcomes.

In Obio/Akpor Local Government Area of Rivers State, the situation appears more critical due to contextual challenges such as overcrowded classrooms, inadequate facilities, and limited instructional resources (Nwankwo & Okeke, 2020).

Aims and objectives

1. To assess the extent to which observational learning influences Batting skills among primary school pupils in Obio/Akpor Local Government area of Rivers State

Research Questions

1 To what extent does observational learning influence batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State?

Hypothesis

1. There is no significant influence of observational learning on batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State.

METHODOLOGY

Research Design

The study adopted a quasi-experimental research design**,** specifically the pretest–posttest control group design**,** to investigate the effect of observational learning on batting skill performance among primary school pupils. This design was considered appropriate because it enabled the researcher to compare the performance of an experimental group exposed to observational learning strategies with that of a control group taught using the conventional method of teaching calisthenics. Both groups were assessed before the intervention (pretest) and after the intervention (posttest) using the same batting skill assessment instrument.

The pretest provided baseline information on the pupils' level of performance in selected bating skill before the intervention, while the posttest measured the extent of improvement following the instructional programme. The difference in performance between the two groups was used to determine the effectiveness of observational learning in enhancing pupils' execution of calisthenic movements.

The quasi-experimental design was suitable for this study because it permitted the investigation of cause-and-effect relationships in a natural school setting where complete randomization of participants was not feasible. It also minimized threats to internal validity by allowing comparison of changes in calisthenic movement performance between the experimental and control groups while controlling for initial differences through pretest scores.

RESULT

Research Question one: To what extent does observational learning influence batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State?

Table 4.25: Mean and Standard Deviation of Pretest and Posttest Scores on Batting Skills (N = 20)

Variable	N	Mean	Std. Deviation	Remark
Pretest	20	0.83	0.68	Partially Demonstrated
Posttest	20	1.73	0.45	Adequately Demonstrated

The results in Table 4.25 showed that the pupils obtained a pretest mean score of 0.83 and a standard deviation of 0.68, indicating partial demonstration of batting skills before the intervention. Following the implementation of observational learning techniques, the posttest

mean score increased to 1.73 with a standard deviation of 0.45, reflecting adequate demonstration of batting skills. This improvement suggests that observing demonstrations enabled pupils to improve their grip, stance, swing control, and contact accuracy. The lower posttest standard deviation further indicates greater uniformity in skill performance. Consequently, observational learning positively influenced batting skills among primary school pupils to a high extent.

Hypothesis Two

There is no significant influence of observational learning on batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State.

Table 4.17: ANCOVA Summary on the Influence of Observational Learning on Batting Skills (N = 20)

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F-value	Sig. (p-value)
Corrected Model	11.952	2	5.976	22.134	.000
Intercept	46.837	1	46.837	173.471	.000
Pretest (Covariate)	2.891	1	2.891	10.708	.005
Observational Learning	9.061	1	9.061	33.560	.000
Error	4.589	17	0.270		
Total	78.000	20			
Corrected Total	16.541	19			

The ANCOVA result presented in Table 4.17 revealed that observational learning had a statistically significant influence on batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State after controlling for pretest scores, $F(1,17) = 33.560$, $p < .05$. This result indicates that the observed improvement in batting skill performance among the pupils was significantly attributable to the observational learning intervention. Therefore, the null hypothesis stating that there is no significant influence of observational learning on batting skills among primary school pupils in Obio/Akpor Local Government Area of Rivers State was rejected. The finding suggests that observational learning significantly enhanced pupils' batting skills by improving their grip, stance, swing control, and contact accuracy following exposure to modeled demonstrations and guided practice.

Discussion

The findings of this study demonstrated that observational learning produced a substantial improvement in bating skill performance among Primary Six pupils in Obio/Akpor Local Government Area of Rivers State. The descriptive results showed that the pupils' mean performance increased from 0.90 (SD = 0.64) at pretest to 1.78 (SD = 0.42) at posttest. This represents a mean gain of 0.88 points, indicating a clear movement from the category of *partially demonstrated* to *adequately demonstrated*. The reduction in the standard deviation from 0.64 to 0.42 also suggests that performance became more consistent following the intervention. The improvement across the assessed dimensions, including posture, coordination, balance, flexibility, rhythm, accuracy, and body control, indicates that observational learning was not limited to a single aspect of calisthenic performance but supported the coordinated execution of the movement as a whole. This finding suggests that providing pupils with opportunities to carefully observe

correct movement patterns before and during practice can enhance their understanding and physical reproduction of those patterns.

The inferential result provided further evidence for the effectiveness of the intervention. After controlling for initial differences in pupils' pretest scores, ANCOVA revealed a statistically significant effect of observational learning, $F(1, 17) = 36.291$, $p < .001$. Therefore, the null hypothesis that observational learning has no significant influence on calisthenic movement performance was rejected. The magnitude of the reported F-value indicates that the difference between the groups was sufficiently large relative to the residual variation to be unlikely to have occurred by chance alone. Importantly, the significant pretest covariate, $F(1, 17) = 12.484$, $p = .003$, demonstrates why controlling for baseline performance was appropriate. The adjusted result therefore provides stronger evidence that the observed improvement was associated with the instructional intervention rather than simply reflecting pre-existing differences in pupils' movement abilities.

The finding is theoretically consistent with Bandura's Social Cognitive Theory, particularly the processes of attention, retention, motor reproduction, and motivation underlying observational learning. When pupils observe a teacher, peer, or video model performing a movement correctly, they are able to focus attention on important movement characteristics and develop a mental representation of the action before attempting to reproduce it. In the present study, the use of teacher demonstrations, peer modelling, and video demonstrations likely provided multiple visual representations of the desired bating skiil thereby helping pupils recognize correct posture, sequencing, rhythm, and coordination. This interpretation is supported by Han et al. (2022), whose systematic review of 18 studies found strong evidence that observational learning improves motor-skill learning in physical education compared with conditions without observational learning. The authors concluded that modelling is a useful pedagogical approach for promoting motor-skill development, although the effectiveness of particular modelling formats and accompanying verbal cues may vary.

The present finding is also consistent with the experimental evidence of Andrieux and Proteau (2016), who demonstrated that observation can facilitate the learning of new motor skills and that the conditions under which demonstrations are presented can influence learning outcomes. Their findings are particularly relevant to the present study because they reinforce the idea that observation provides learners with useful information about how a movement should be organized and executed. Similarly, the broader literature on modelling in motor-skill acquisition has long emphasized the importance of demonstrations in providing learners with perceptual information that complements physical practice. The current study extends this evidence by demonstrating the practical value of structured observational learning for bating skill among primary-school pupils in a Nigerian educational setting, rather than assuming that findings from other populations and motor tasks necessarily apply to this context.

The findings have important implications for physical education practice in primary schools. The improvement from a pretest mean of 0.90 to a posttest mean of 1.78 suggests that pupils may benefit when instruction moves beyond verbal explanation to include deliberate and repeated opportunities to observe correct movement execution. Teachers can therefore incorporate clear demonstrations, peer modelling, and age-appropriate video demonstrations into bating lessons, followed by guided practice and corrective feedback. Such an approach is particularly relevant for movements requiring precise coordination and body control because pupils can visually compare their own execution with the demonstrated movement. However, observational learning should be regarded as a complement to, rather than a replacement for, active physical practice. The

systematic-review evidence indicates that observational learning is beneficial for motor-skill learning, while also highlighting the influence of factors such as model type and verbal guidance (Han et al., 2022).

Overall, the study provides empirical support for observational learning as an effective instructional strategy for improving bating skill performance among primary-school pupils. The significant ANCOVA result, together with the substantial improvement in descriptive performance scores, indicates that pupils exposed to structured modelling were better able to execute the selected movements after the intervention. The findings therefore reinforce the relevance of Bandura's observational learning framework to physical education and suggest that purposeful demonstration and modelling can be integrated into primary-school calisthenics instruction to strengthen pupils' movement competence, consistency, and confidence. At the same time, because the study involved only 20 pupils from one school, the findings should be interpreted within the limits of the study context; larger studies involving multiple schools would be useful for determining the generalizability and its effect.

Conclusion

The study concluded that observational learning significantly improved batting skill performance among Primary Six pupils at Community Primary School, Nkpolu, Obio/Akpor Local Government Area of Rivers State. Pupils' mean performance increased from 0.90 (SD = 0.64) at pretest to 1.78 (SD = 0.42) at posttest, indicating an improvement from partially demonstrated to adequately demonstrated batting skill. The reduction in the standard deviation further suggests that pupils' performance became more consistent following exposure to the intervention. The ANCOVA result confirmed that observational learning had a statistically significant influence on pupils' bating skill performance after controlling for pretest differences, $F(1, 17) = 36.291$, $p < .001$. The finding indicates that the improvement observed following the intervention was associated with the observational learning strategy rather than chance alone. The study therefore concludes that structured observation through teacher demonstrations, peer modelling, and video demonstrations is an effective approach for improving pupils' execution of batting skills. Incorporating these strategies into primary school physical education may enhance pupils' posture, coordination, balance, flexibility, rhythm, movement accuracy, and overall body control.

Recommendations

Based on the findings and conclusion of this study, the following recommendations were made:

1. Physical education teachers should use structured demonstrations followed by guided practice and corrective feedback, subject to the verified intervention findings.
2. Schools should provide suitable equipment, safe practice spaces, and age-appropriate instructional materials.
3. Physical education teachers should receive training in effective modelling, observation-based instruction, and performance assessment.
4. Subsequent studies should use larger, multisite samples, clearly documented intervention and comparison conditions, reliable outcome measures, and delayed retention assessments.

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