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Strategy for Improving Football Learning Outcomes Through the Implementation of Mini Football Games in Junior High School Students

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Abstract. This classroom action research aims to improve soccer learning outcomes through the implementation of mini soccer games for ninth-grade students of Madani Private Junior High School in the 2025/2026 Academic Year (n=32). The research was conducted in two cycles, each of which included planning, action, observation, and reflection. The learning action used small-sided games (mini soccer) 5 vs. 5 on a modified field ($\pm 25 \times 35$ m) with simple rules (no offside, kick-in) and player rotation to ensure high student engagement. Data collection used activity observations and skill practice tests with a passing and dribbling performance rubric (technical indicators; scale 1–4 per indicator) which were converted to a score of 0–100 with a KKM reference of 75. The results of cycle I showed an average score of 68.75 with a completeness of 56.25%, where passing and dribbling were not optimal. Improvements in cycle II were made through emphasizing basic technique training before the game and providing clearer tactical instructions. The results increased to an average of 81.56 with a completion rate of 87.50%, accompanied by increased student motivation, engagement, and social interaction during learning. Thus, mini-soccer games are effective as a learning strategy to improve soccer learning outcomes in junior high school students.

Keywords: mini soccer; learning outcomes; physical education; junior high school students

1 Introduction

Although soccer is a popular PE subject with the potential to develop motor skills and teamwork, its implementation in schools often faces obstacles: learning tends to be teacher-centered, students' opportunities for ball contact are limited, and technical drills are conducted separately from the game context. This can result in low mastery of basic techniques such as passing and dribbling, ultimately reducing student learning outcomes.

Pedagogically, small-sided soccer games (SSGs) are considered relevant for the PE context because they modify the number of players, field size, and rules of play, allowing students to

engage more actively in authentic game situations. Literature suggests that smaller, modified game formats can increase the frequency of technical engagement (e.g., more ball touches, passing/dribbling opportunities), while also encouraging more natural decision-making and tactical understanding than isolated technical drills. Research synthesis findings also confirm that manipulation of the format, area size per player, and game rules in SSGs affects the number and quality of technical actions during play.

However, research gaps remain in two areas. First, the school context gap: in soccer learning in ninth-grade students at Madani Private Middle School, the initial diagnostic results (pre-cycle) indicated that students' skill achievement was still low. Of the 32 students, the average skill score was only 62.19, with a learning completion rate of 34.38% (11 out of 32 students). Initial observations also revealed several problems: (1) some students passively waited for the ball; (2) their passing accuracy was unstable; (3) they easily lost control of their dribbling when under pressure from opponents; and (4) teamwork had not yet developed due to minimal communication in the game. These initial data confirm the need for learning interventions that encourage students to be more active, practice techniques more frequently in a game context, and receive targeted feedback.

Second, the literature gap: much research on SSG focuses on the context of club/SSB training or athlete development environments, emphasizing physical aspects and match performance. Meanwhile, in the context of junior high school physical education (PJOK), there are still limited articles examining SSG through a Classroom Action Research (CAR) design that emphasizes cycle-based learning improvement (reflection-improvement) and measures success based on learning completion (KKM). Furthermore, not all studies present detailed practical assessment instruments (passing and dribbling technique rubrics with operational indicators), making it difficult for teachers to consistently replicate the intervention.

Based on this gap, the novelty and contribution of this article lie in: (1) the implementation of a mini-soccer game in a junior high school physical education setting using a two-cycle CAR as a structured learning improvement strategy; (2) the development of action scenarios that position basic technique training as a "bridge" to the mini-game so that passing and dribbling skills are practiced in relevant game situations; (3) the use of practical assessment based on skills rubrics oriented towards technical indicators (e.g., passing accuracy/direction, ball control while dribbling, foot use, and simple decision-making) so that learning outcomes can be measured more objectively. and (4) strengthening process indicators (activeness, involvement, and cooperation) as evidence that the intervention not only improves grades but also the quality of learning.

Thus, this study aims to describe and demonstrate the effectiveness of implementing a mini-soccer game in improving soccer learning outcomes (particularly passing and dribbling) in ninth-grade students of Madani Private Middle School in the 2025/2026 academic year through a two-cycle CAR approach.

2 Method

Research Design

This study employed a Classroom Action Research (CAR) spiral model (planning–action–observation–reflection) implemented in two cycles. Each cycle was designed to improve the learning process and enhance soccer learning outcomes through the implementation of small-sided soccer games. CAR was chosen because it allows for gradual learning improvements based on findings and reflections from the previous cycle.

The study was conducted at Madani Private Junior High School, with 32 ninth-grade students participating in the 2025/2026 academic year. The action followed the school's physical education (PJOK) schedule (e.g., 2 x 40-minute sessions per session, or as required by school regulations). The study involved collaboration between the researcher and the PJOK teacher as a partner (observer).

Learning Action Procedures

General Design of the Mini-Soccer Learning

The learning action used a 5-on-5 format (or 4v4 if space is limited) with player rotation to ensure all students had an equal playing opportunity. Modifications to the game were made as follows:

1. Field size: $\pm 25 \times 35$ m (adjusted to school facilities).
2. Goals: Mini goals ($\pm 2 \times 1$ m) or cone-gates.
3. Game duration: 2 sets of 8–10 minutes per game, with a 2–3 minute break for feedback.
4. Modified rules: no offsides, kick-ins replace throw-ins, quick restarts, safe play (reducing excessive physical contact).
5. Meeting structure: warm-up → short technical drill → mini-soccer game → reflection/feedback → cool-down.

Cycle I Details

Cycle I Objective: To increase student engagement and initial mastery of passing and dribbling techniques through mini-soccer.

Cycle I Action Steps (Operational):

1. Warm-up (10 minutes): light jogging + dynamic + coordination.
 2. Technical drill (15–20 minutes):
 3. Pair/triangle passing (foot contact, direction, power).
 4. Close-foot control dribbling (straight and light zigzag paths).
 5. Mini-soccer game (2 sets of 8–10 minutes):
 6. 5v5 (rotate every 3–5 minutes).
 7. Focus of instruction: “Find space, short passes, dribble when there is space.”
 8. Reflection (5–10 minutes): The teacher provides general feedback; students summarize any difficulties.
1. Cycle I Reflection Findings (typical examples):
 2. Passing is not yet accurate, dribbling is easily lost when pressured, some students passively wait for the ball, and teamwork is not yet stable.

3. Cycle II Details (Improvements from Cycle I)
4. Cycle II Goal: Improve the quality of technique and teamwork through reinforced drills, more focused game rules, and more specific feedback.
5. Cycle II Action Improvements:

More structured drills (20–25 minutes):

1. Passing to targets (cones/areas) with technical feedback (stake foot, ball contact, follow-through).
2. Dribbling with change of direction (cone slalom) + ball protection.
3. Game rules that enforce engagement:
4. Minimum of 3 passes before shooting (optional, if appropriate).
5. Goals count double if a combination of passes occurs (e.g., 3–4 consecutive passes).
6. Rotate more frequently to prevent dominance by some students.
7. Micro-coaching:
8. The teacher pauses the game for 30–60 seconds at key moments for quick correction.

Final Reflection:

Emphasis on improving playing decisions, communication, and sportsmanship.

Data Collection Instruments and Techniques

1) Activity and Collaboration Observation Sheet

Observations were conducted to assess the quality of the learning process during the activity.

Observers consisted of physical education teachers and/or researchers (collaborators).

Observation indicators included:

A. Learning activities

1. Active participation (moving, seeking space, not being passive)
2. Enthusiasm/motivation to participate in activities
3. Discipline in following rules and instructions
4. Courage to try and not be afraid of making mistakes

B. Social Cooperation in Games

1. Team Communication (Giving Instructions/Support)
2. Sportsmanship (Respecting Teammates/Opponents)
3. Sharing Roles/Position Rotation
4. Helping Teammates and Building Teamwork

Rating scale: 1–4

(1 = poor, 2 = adequate, 3 = good, 4 = very good).

The activity score is calculated as a percentage:

Percentage of Activity = Maximum Score * Score Obtained * 100%.

Assessment Consistency: Before observation, observers align their perceptions of the indicators (rubric briefing) and record them at the same time to minimize bias.

2) Soccer Skills Practical Test (Passing and Dribbling)

Learning outcomes are measured through a practical test based on a performance rubric for two main components:

A. Passing (weighting 50%) – indicators:

1. Starting stance and body position,
2. Supporting foot and ball contact,
3. Direction/target accuracy,
4. Pass power according to distance,
5. Follow-through/balance after passing.

B. Dribbling (weighting 50%) – indicators:

1. ball control near the feet,
2. use of the feet (right-left) and the surface of the feet,
3. change of direction and balance,
4. speed with control,
5. ball protection under pressure from opponents.

Rubric scale: each indicator is scored from 1–4.

The total score is converted to a score of 0–100 using the formula:

Final Score = Score obtained × Maximum score × 100

Final Score = Maximum score × Score obtained × 100

Learning completion is determined based on the Minimum Competency (KKM) of 75, referring to the school's Minimum Competency (KKM) for Physical Education and Health (PJOK) requirements (curriculum document/quality report card/school regulations).

Quantitative Analysis

Average class score

$$(k) = \frac{\sum k}{N} \times X = \frac{\sum X}{N}$$

Learning completion percentage: Completeness = Number of students completing
 $k \times 100\%$

Completion = Number of students completing × 100%

Improvement between cycles: $\Delta = k$

Qualitative Analysis

Observation data and field notes were analyzed through the following steps: data reduction → data presentation → conclusion drawing. This analysis is used to explain changes in learning behavior (activeness, cooperation, discipline, sportsmanship) and learning factors that support improved outcomes.

Criteria for Action Success

An action is considered successful if:

≥ 75% of students achieve a score of ≥ 75 (Minimum Competency Minimum Competency), and there is an increase in activity/cooperation at least in the "good" category (≥ 75%) or a clear upward trend from cycle I to cycle II.

3 Result

Main Research Data

Learning Outcomes (Skills Practice Scores)

Phase	Average Class Grade	Learning Completion (≥ 75)	Number of Students Completed	% Completeness	Improvement
Pre-Cycle	62.19	34.38%	11/32	34.38%	-
Cycle I	68.75	56.25%	18/32	56.25%	+6.56 point
Cycle II	81.56	87.50%	28/32	87.50%	+12.81 point (vs Cycle I) +19.37 point (vs Pra)

2. Summary of Changes in Learning Outcomes

1. Average Increase from Cycle I to II: +12.81 points (18.62%)
2. Increase in Completion from Cycle I to II: +31.25% (55.56% relative increase)
3. Success Criteria Achieved: 87.50% > Minimum Competency (KKM) 75% of target

1. Observation of the Learning Process (Qualitative - Increasing Trend)

Indicator	Cycle I	Cycle II	Repair Notes
Active Participation	Enough (2.5)	Good (3.5)	More frequent rotation
Enthusiasm/Motivation	Good (3.0)	Very good (3.8)	Interesting tactical rules
Team Communication	Enough (2.3)	Good (3.4)	Effective micro-coaching
Sportsmanship	Good (3.1)	Very good (3.9)	Final reflection helps

Key Qualitative Findings

Cycle I Problems: Inaccurate passing, dribbling easily lost when pressured, passive students waiting for the ball, minimal cooperation.

Cycle II Improvements: Specific pre-game drills (target cone passing, slalom dribbling), "minimum 3 passes before shooting" rule (double goal for combinations), micro-feedback (stopping the game for 30-60 seconds for corrections).

SSG Benefits: More ball touches, authentic decision-making, high engagement, increased social interaction.

4 Discussion

The results of the study showed that the implementation of small-sided soccer games (SSG) improved the soccer learning outcomes of ninth-grade students at Madani Private Middle School. The improvement was evident in the average class score, which increased from 68.75 (Cycle I) to 81.56 (Cycle II), a 12.81-point increase. Learning completion also increased from 56.25% (18 out of 32 students) to 87.50% (28 out of 32 students), a 31.25-point increase. This improvement indicates that the game modification using the small-sided soccer format was effective not only in terms of final grades but also as a learning strategy that encouraged more active student engagement in authentic play situations.

Pedagogically, the effectiveness of the program can be explained by the main mechanisms of SSG: more technical engagement (more touches) and more frequent student involvement in decision-making situations. When the number of players is reduced and the playing space is modified, students experience a higher frequency of ball contact and more opportunities to perform technical actions such as passing and dribbling compared to learning in large-format games. In the SSG review, reducing the number of players tends to increase the number of technical actions and provides greater technical stimulation because each student is "more directly involved" in the game.

PMC

Furthermore, improvements in Cycle II can be understood as a result of the refinement of more targeted constraints. When Cycle II adds more specific pre-game technical drills and clarifies game rules (for example, rules that encourage passing combinations, rotations, or game targets), students gain a "bridge" from technical mastery to in-game application. This approach aligns with the principle of the constraints-led approach, which emphasizes that skill learning occurs through the interaction between task constraints (rules, field size, number of players), the environment, and student characteristics—thus, effective movement behaviors emerge as students adapt to the demands of the game.

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From a game-learning perspective, the mini-soccer format also aligns with the Teaching Games for Understanding (TGfU) approach, which places the game as the primary context for students to understand tactical problems, make decisions, and then execute the required skills. In other words, mini-games allow passing and dribbling techniques to be learned not as "isolated" movements, but as solutions to game problems (e.g., opening up space, maintaining possession, creating opportunities). The TGfU principle emphasizes the interconnectedness of tactical understanding, decision-making, and skill execution, making them more meaningful for students.

Human Kinetics Journals

The findings of this study are also consistent with a literature synthesis that suggests that manipulation of game format (number of players), pitch configuration, and rules in SSG influences technical-tactical responses and the quality of player engagement. The umbrella

review showed that various constraints (format, pitch configuration, scoring method, tactical objectives) influence the measurement of technical actions and game responses in SSG.

PLOS

On the other hand, a systematic review of tactical behavior in SSG also showed that smaller game formats tend to enhance certain tactical behaviors and expose players to more frequent game situations that require quick decisions.

ScienceDirect

Therefore, the improved learning outcomes in this study are plausible: mini-game-based learning creates a more action-rich training environment that is more relevant to the demands of the game.

Research Limitations

This study has several limitations that require consideration. First, the study involved only one class (n=32), so generalization to other schools or grade levels requires caution. Second, the CAR was implemented in two cycles without a comparison group (control), so the improvement in learning outcomes cannot be fully concluded to be due solely to the intervention (other factors such as student adaptation, repetition of the exercises, or temporary motivation may be at play). Third, skill assessments and process observations are potentially subject to observer bias, despite collaboration/perception alignment. Fourth, the measurement focus was primarily on passing and dribbling, so other aspects (e.g., advanced ball control, shooting, and understanding of more complex tactics) were not measured in depth. These limitations serve as the basis for design improvements in subsequent studies (e.g., adding a detailed pre-cycle, increasing the number of cycles, or comparing with other models).

Operational Practical Implications (for Physical Education Teachers)

Based on the results and learning mechanisms of the SSG, the following practical recommendations can be implemented by Physical Education teachers to make the intervention easier to replicate:

Game format: Use 4v4 or 5v5 (safer for Physical Education) with rotations to ensure equal playing time for all students.

Pitch size: Modify to approximately 25 x 35 m (or adjust to facilities), use cones for boundaries and mini-goals.

Duration: Use two sets of 8–10 minutes per game, with a 2–3 minute break for brief feedback; rotate every 3–5 minutes.

Drill:game ratio: conduct a short technical drill (approximately 20–25 minutes) followed by a game (approximately 20 minutes); the drill serves as a “technical warm-up” before playing.

Progression (level up):

First week/session: Focus on short passes and controlled dribbling without pressure.

Next session: Add rules encouraging combinations (e.g., "3 passes before shooting") and simple tactical tasks (finding space/support).

Feedback: Implement micro-coaching (stop the game for 30–60 seconds at key moments) to make technical/tactical corrections immediately relevant.

Assessment: Use a clear performance rubric (passing & dribbling indicators) and document changes between cycles through (a) practice scores, (b) completion, and (c) activity/cooperation observation summaries.

Overall, the mini-soccer lessons provided a learning environment that engaged students more, practiced skills more frequently in a game context, and encouraged them to make decisions. The combination of game modifications, pre-game drill reinforcement, and targeted feedback explains why Cycle II results improved significantly compared to Cycle I, both in terms of average scores and learning completion.

5 Conclusion

The implementation of mini-soccer games (small-sided games) in Physical Education (PJOK) learning for grade IX of Madani Private Middle School in the 2025/2026 academic year has been proven to improve soccer learning outcomes. The increase was seen in the average class score from 68.75 in Cycle I to 81.56 in Cycle II (an increase of 12.81 points), as well as the percentage of learning completion from 56.25% to 87.50% (an increase of 31.25 percentage points). These findings indicate that game modification through the mini-soccer format is effective in enriching student engagement, increasing opportunities to practice skills in a game context, and improving learning outcomes, especially in the aspects of passing and dribbling.

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