

Modified Small-Sided Games to Strengthen Student Engagement in Football Dribbling Lessons: A Two-Cycle Classroom Action Study

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ABSTRACT

Low participation during technique-centred physical education can restrict students' opportunities to practise football dribbling in meaningful situations. This classroom action study examined whether progressively modified small-sided games could improve Grade VII students' learning engagement during dribbling lessons. Twenty-eight students at SMP Negeri 58 Halmahera Selatan, Indonesia, participated in a pre-action phase and two action cycles following planning, action, observation, and reflection. Cycle I used Dribbling Zig-Zag Race and Dribbling Challenge Zone; Cycle II increased contextual complexity through one-versus-one defender tasks and modified mini-soccer. Four observable indicators—active participation, cooperation, enthusiasm, and discipline—were rated on a four-point scale. Mean total engagement increased from 8.00 (50.0%) at baseline to 10.43 (65.2%) in Cycle I and 13.04 (81.5%) in Cycle II. A Friedman test confirmed differences across phases, $\chi^2(2) = 45.33$, $p < .001$, Kendall's $W = .809$. All four indicators improved, with the largest gain in enthusiasm (35.00 percentage points). The findings indicate that sequencing simplified drills toward opponent-based and small-sided play can produce substantial behavioural engagement gains in a resource-constrained school context. Because the study lacked a comparison group and did not provide complete student-level dribbling performance scores, conclusions are restricted to observed engagement rather than causal skill improvement.

Keywords: Classroom Action Research, Football, Game-Based Learning, Modified Games, Physical Education, Student Engagement

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INTRODUCTION

Physical education (PE) is expected to develop motor competence while supporting motivation, cooperation, responsibility, and sustained participation. Yet technique-centred lessons often isolate movement practice from the problems and social interactions that give games meaning. Recent syntheses show that pedagogical models in PE should be judged across motor, cognitive, affective, and social outcomes, rather than by technical execution alone (Fernandez-Rio & Iglesias, 2022; Shen & Shao, 2022; Zhang et al., 2024). Student engagement is especially consequential because it converts motivation into observable effort, persistence, attention, and participation (Guo et al., 2023; Tian & Shen, 2023).

Game-based pedagogy offers a plausible response. Systematic reviews report generally favourable motivational and engagement outcomes when challenges, rules, feedback, and learner choices are aligned with instructional goals (Arufe-Giráldez et al., 2022; Camacho-Sánchez et al., 2023; Krath et al., 2021). In PE, cognitively challenging games can be enjoyable

when task demands remain understandable and attainable ([Kolovelonis & Goudas, 2022](#); [Kolovelonis et al., 2022](#)). Sport Education and cooperative learning also appear to strengthen motivation through meaningful roles, peer interaction, and shared responsibility ([Liu & Lipowski, 2021](#); [Tendinha et al., 2021](#)). These mechanisms matter in football lessons, where waiting in lines and repeating decontextualized movements can sharply limit ball contacts and decision opportunities.

Modified games operationalize these principles by manipulating equipment, space, rules, player numbers, and task constraints. Smaller and simplified games can increase opportunities to act while preserving the perception–decision–movement connection of authentic play. Digital-supported Teaching Games for Understanding has likewise demonstrated the value of contextualized soccer learning and feedback ([Greve et al., 2022](#)). Indonesian studies report positive experiences with game-based PE ([Culajara, 2022](#)), improved engagement and game performance through game-based instruction ([Mahardhika et al., 2024](#)), and gains associated with modified or student-centred football tasks ([Hardinata et al., 2023](#); [Thamrin Muzizat et al., 2023](#); [Wahyudi et al., 2024](#)). However, positive findings should not be treated as automatic: outcomes depend on task progression, teacher support, inclusion, and the fit between challenge and learner readiness ([André, 2024](#); [He et al., 2023](#)).

The target journal’s recent work also emphasizes that instructional innovations should be linked to observable learner responses rather than novelty alone. [Harun et al. \(2024\)](#) evaluated learning enthusiasm and practicality, while [Mulla et al. \(2025\)](#) connected structured support with engagement and performance. [Puobanye et al. \(2026\)](#) further illustrates that engagement is context-dependent and must be interpreted within students’ learning environment. This concern is particularly relevant to remote and resource-constrained schools, which are underrepresented in PE intervention research.

At SMP Negeri 58 Halmahera Selatan, preliminary observation indicated passive participation, limited cooperation, low enthusiasm, and inconsistent discipline during conventional dribbling instruction. The empirical gap was not merely whether games are enjoyable, but how a locally feasible sequence of game modifications changes specific dimensions of classroom engagement across iterative action cycles. Accordingly, this study asked: How does student engagement change from baseline through two cycles of progressively modified football dribbling games? The study contributes a transparent cycle-by-cycle account and separates supported engagement claims from unsupported claims about dribbling skill achievement.

METHODS OF RESEARCH

This study used a two-cycle classroom action research design based on the recurring phases of planning, action, observation, and reflection. Action research was selected because the purpose was to improve an identified classroom practice while using evidence from each cycle to refine the next action. Iterative implementation is inherently context-sensitive and can be procedurally “messy”; therefore, the intervention changes and decision rules are reported explicitly ([Rabgay & Kidman, 2023](#)). The study was conducted during the second semester of the 2025/2026 academic year at SMP Negeri 58 Halmahera Selatan, Makian Island, Indonesia.

Participants were 28 Grade VII students (14 boys and 14 girls). Although an earlier

methodological note in the source thesis stated 29 students, the attendance-based result tables and all phase-level calculations contained 28 complete cases; consequently, the present reanalysis uses $n = 28$. The class was selected because initial observation showed low participation during football dribbling instruction. School-level permission was documented, student names were removed from the article dataset, and results are reported in aggregate. A record-level audit of the three source tables confirmed that the same 28 student identifiers appear at baseline, Cycle I, and Cycle II, with one score for every student at every phase. Thus, the repeated-measures analyses used 28 fully matched cases rather than phase-specific attendance samples.

Table 1 Intervention Progression Across the Action Cycles

Phase	Learning tasks	Instructional purpose	Reflection-informed adjustment
Baseline	Demonstration and turn-taking drill	Document initial engagement	Long waiting time and limited interaction identified
Cycle I	Zig-Zag Race; Challenge Zone	Increase ball contacts, attainable challenge, and visible goals	More contextual opposition and peer coordination required
Cycle II	1-v-1 Dribbling vs Defender; modified mini-soccer	Connect control, direction, decisions, and cooperation in play	Cycle ended after engagement criterion was exceeded

Engagement was observed using four indicators: active participation, cooperation, enthusiasm, and discipline. Each indicator was rated from 1 (low) to 4 (very good), yielding a total score from 4 to 16 per student. The same indicators and scale were used at baseline and in both cycles. Two forms of evidence were retained: student-level ratings and field notes describing classroom responses. The action-success criterion specified at least 75% class activity. Because the thesis did not report inter-rater reliability or independent double scoring, the ratings are treated as structured observational evidence rather than as a fully validated psychometric scale. The four indicators and their behavioural descriptors were developed by the researcher for this classroom action study from the lesson-observation form used in the source thesis; they were not adopted from a previously validated PE engagement scale. Accordingly, the ratings are interpreted as context-specific classroom observations. The 75% success criterion was specified a priori in the study protocol as the local operational boundary for the “good” activity category. It was a researcher-defined decision rule for determining whether another action cycle was required, not a national, international, or psychometrically validated engagement benchmark.

Quantitative analysis included the mean, standard deviation, median, range, and percentage of the maximum possible score. A Friedman test compared the three repeated phase scores because the same students were rated on an ordinal scale. Kendall’s W quantified the omnibus effect. Directional Wilcoxon signed-rank tests were used for planned phase comparisons with a Holm-adjusted significance threshold; exact p values are reported. Qualitative field notes were condensed by phase and indicator to explain how participation patterns changed. No inferential test of dribbling performance was conducted because complete student-level skill scores were not available in the source file. The directional alternative was specified before the pairwise analyses because each action cycle was designed and hypothesized to increase, rather than merely change, engagement relative to the preceding

phase. Holm adjustment was retained to control family-wise error across the planned comparisons. Observation-note summaries were examined alongside the ratings and organized by phase and indicator; representative excerpts are reported in the Results and Discussion.

RESULTS AND DISCUSSION

Student engagement increased at each observation point (Table 2). The average total score rose by 2.43 points from baseline to Cycle I and by a further 2.61 points in Cycle II. Relative to the 16-point maximum, engagement increased from 50.0% to 81.5%, a gain of 31.5 percentage points. Dispersion widened in Cycle I and narrowed in Cycle II, suggesting that the first modification did not benefit students uniformly, whereas the second cycle produced a more consistently high pattern. The observation-note summaries supported this numerical pattern. At baseline, students were described as “waiting for their turn” and “rarely taking the initiative to repeat movements they had not mastered.” In Cycle I, the notes recorded that students “began to be more willing to participate,” although some remained hesitant and cooperation was not yet consistent. By Cycle II, students were described as “taking the initiative to repeat practice independently,” helping peers who had difficulty controlling the ball or passing a defender, and maintaining enthusiasm from the beginning to the end of the lesson. These observations indicate a qualitative shift from passive turn-taking to more self-initiated and socially supported participation.

Table 2 Descriptive Statistics for Total Observed Engagement (N = 28)

Phase	Mean	SD	Median	Range	% of maximum
Baseline	8.00	1.44	8.00	4–11	50.0
Cycle I	10.43	2.30	10.00	6–16	65.2
Cycle II	13.04	1.26	13.00	10–16	81.5

Indicator-level results show that the improvement was multidimensional (Table 3). Enthusiasm registered the largest baseline-to-Cycle II gain (35.00 percentage points), followed by active participation (35.14), cooperation (31.50), and discipline (24.50). Discipline began at the highest baseline level but showed the smallest relative gain; this pattern is consistent with a ceiling effect and with the intervention’s stronger focus on participation opportunities and task enjoyment than on rule enforcement.

Table 3 Engagement Indicators by Phase (% of Maximum Score)

Indicator	Baseline	Cycle I	Cycle II	Total gain (pp)
Active participation	49.11	62.50	84.25	35.14
Cooperation	48.25	64.25	79.75	31.50
Enthusiasm	47.25	64.25	82.25	35.00
Discipline	55.25	69.75	79.75	24.50

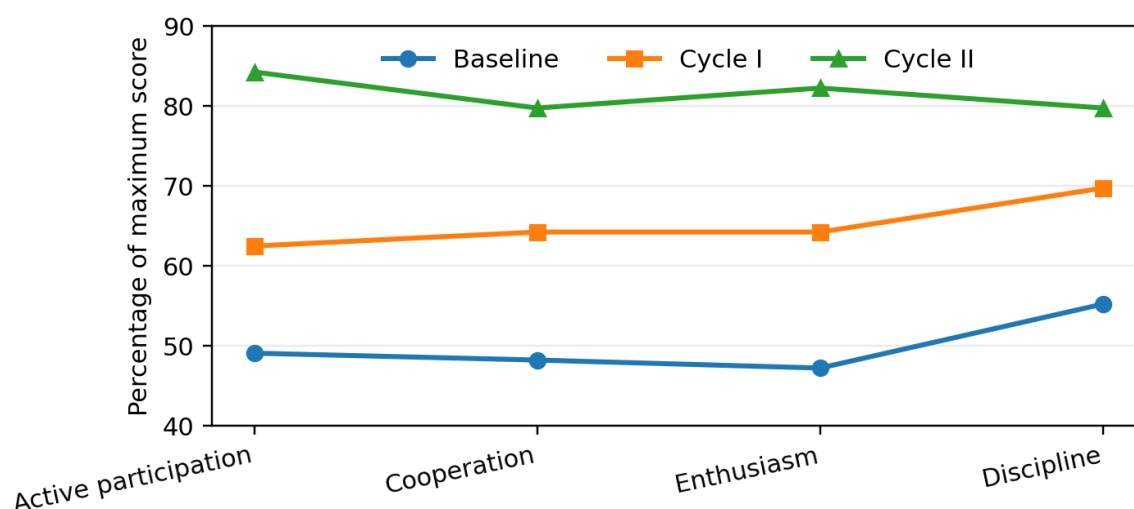


Figure 1 Development of the Four Engagement Indicators Across Phases

The phase effect was statistically substantial, Friedman $\chi^2(2) = 45.33$, $p < .001$, Kendall's $W = .809$. Planned Wilcoxon tests indicated improvement from baseline to Cycle I ($W = 0.00$, $p < .001$), Cycle I to Cycle II ($W = 11.50$, $p < .001$), and baseline to Cycle II ($W = 0.00$, $p < .001$); all remained significant after Holm adjustment. These tests describe systematic within-class change, but they do not establish that the intervention alone caused the change because maturation, repeated observation, teacher expectancy, and other history effects were not controlled.

Table 4 Repeated-Measures Tests of Phase Differences

Comparison/Test	Statistic	p	Interpretation
Friedman omnibus	$\chi^2(2) = 45.33$	$< .001$	Large concordant phase difference ($W = .809$)
Baseline < Cycle I	$W = 0.00$	$< .001$	Improvement after initial modifications
Cycle I < Cycle II	$W = 11.50$	$< .001$	Further improvement after contextual progression
Baseline < Cycle II	$W = 0.00$	$< .001$	Sustained cumulative improvement

The first cycle replaced prolonged turn-taking with short, goal-directed tasks. Zig-zag racing created an explicit performance target, while challenge zones gave students frequent attempts and immediate feedback. These features align with theoretical analyses showing that game elements are most productive when goals are clear, feedback is prompt, and challenges are adjustable (Krath et al., 2021). They also echo evidence that gamified PE tends to improve motivation and commitment, although achievement effects are less consistently demonstrated (Arufe-Giráldez et al., 2022; Camacho-Sánchez et al., 2023). The widened Cycle I variability is important: a novel game structure may energize some students while leaving others uncertain, which underscores the need for teacher scaffolding and need-supportive interpersonal behaviour (Guo et al., 2023; Tian & Shen, 2023).

Related evidence also supports the engagement pathway without implying that every game intervention produces the same outcome. Gamification has been associated with study engagement through enjoyment and self-efficacy (Chen & Liang, 2022), and a PE intervention reported increased motivation with reduced disruptive behaviour (Soriano-Pascual et al.,

2022). Students and teachers also tend to value game-oriented PE experiences (Nugraha et al., 2022). At the curriculum level, group-game reviews stress alignment between game structure, curricular intent, and assessment (Mohammed & Baysen, 2022). Recent Indonesian work similarly reports positive motivational responses to modified volleyball and improved enthusiasm toward football learning resources (Amansyah & Hardinoto, 2025; Hidayat et al., 2025). Together, these studies justify treating engagement as an explicit outcome while retaining caution about transfer to motor proficiency.

Cycle II introduced a defender and modified mini-soccer, moving from closed-path control toward perception, decision making, and cooperation. The simultaneous rise in participation, enthusiasm, and cooperation supports a task-design explanation: fewer players and constrained space increased each student's functional role and reduced opportunities to remain peripheral. This interpretation is consistent with game-centred pedagogy, which recommends representative but simplified game forms (André, 2024), and with soccer research combining Teaching Games for Understanding, cooperative work, and feedback (Greve et al., 2022). It also corresponds with Indonesian findings on project-based, modified-ball, TaRL-card, and cooperative approaches to dribbling or ball-game learning (Hardinata et al., 2023; Thamrin Muzizat et al., 2023; Upa' et al., 2025; Wahyudi et al., 2024).

The social gains are pedagogically relevant. Cooperative learning interventions in PE have a positive aggregate association with intrinsic motivation (Liu & Lipowski, 2021), while Sport Education research identifies roles, peer relationships, and autonomy as recurring motivational mechanisms (Tendinha et al., 2021). The present intervention was not a full implementation of either model, yet one-versus-one and small-team tasks made peers consequential to successful play. This likely explains why cooperation increased alongside enthusiasm rather than functioning as a separate outcome. More broadly, reviews of hybrid pedagogical models suggest that combining game-centred challenges with responsibility and collaboration can address several learning domains at once (Shen & Shao, 2022; Zhang et al., 2024).

Three cautions qualify the practical promise. First, behavioural engagement is not equivalent to motor learning; students can participate enthusiastically without demonstrating durable improvement in dribbling technique. Second, observation by the teacher-researcher may inflate post-action ratings, particularly when no blinded observer or reliability coefficient is available. Third, the two-cycle, one-class design cannot separate the intervention from repeated practice or novelty. The study therefore supports a local improvement claim, not a universal causal-effect claim. Future studies should pair engagement ratings with a standardized dribbling test, video-based inter-rater agreement, delayed retention measurement, and a comparison class. Inclusive adaptations should also be planned because game-based designs can distribute opportunities unevenly when confidence or ability differs (Tlili et al., 2022).

Despite these constraints, the study offers a feasible design principle for low-resource contexts: begin with simplified, high-contact tasks; use reflection to identify who remains peripheral; and then progress toward representative opponent-based play. This staged structure is compatible with meaningful-learning accounts in which new action patterns become useful when connected to prior experience and intelligible contexts (Bryce & Blown, 2023). It also reinforces JOSSE evidence that learner enthusiasm and engagement should be

measured as explicit outcomes of instructional innovation (Harun et al., 2024; Mulla et al., 2025; Puobanye et al., 2026), rather than assumed from the mere presence of a new medium.

CONCLUSIONS

This study examined changes in Grade VII students' engagement during two cycles of progressively modified football dribbling games. Mean engagement increased from 50.0% at baseline to 65.2% in Cycle I and 81.5% in Cycle II, with a large repeated-measures effect and improvements in active participation, cooperation, enthusiasm, and discipline. The strongest practical contribution is the progression from high-contact simplified challenges to one-versus-one and small-sided contextual play. For PE teachers, modification should be understood as deliberate task design—adjusting space, roles, rules, and challenge—rather than merely changing equipment. Nevertheless, the available evidence supports improved observed engagement only; it does not justify a causal claim about dribbling skill. Replication with validated skill measures, independent observers, retention testing, and a comparison group is required before broader effectiveness claims can be made. In practical terms, the Cycle II value of 81.5% exceeded the study's prespecified local success criterion of 75% by 6.5 percentage points and fell within the study rubric's "good" activity range (70%–84%), approaching the "very good" boundary of 85%. This comparison supports the decision to end the action cycle, but it should not be interpreted as an externally validated threshold for meaningful motor learning or skill mastery.

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