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IMPROVE BASKETBALL PASSING LEARNING THROUGH GAME MODIFICATION ON JUNIOR HIGH SCHOOL

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Abstract

This study addressed the low basketball passing performance of seventh-grade students at SMP Negeri 281 Jakarta, which was accompanied by passive participation and limited opportunities for meaningful passing practice. The study aimed to improve basketball passing learning outcomes through a modified version of the Monkey in the Middle game. Classroom action research was conducted in two cycles, each comprising planning, action, observation, and reflection. The participants consisted of 36 students. Data were collected using a basketball wall-pass test, student and teacher activity observation sheets, and student worksheets. Data validity was examined through source and technique triangulation, while the data were analysed using quantitative and qualitative descriptive procedures. Passing mastery increased from 25.00% (9 students) in the pre-cycle assessment to 52.78% (19 students) in Cycle I and 94.44% (34 students) in Cycle II, exceeding the predetermined success criterion of 80%. The increases from the pre-cycle assessment to Cycle I and from Cycle I to Cycle II were 27.78 and 41.67 percentage points respectively. Student-activity mastery also increased from 27.78% in Cycle I to 80.56% in Cycle II. These descriptive findings indicate that the implementation of the modified Monkey in the Middle game was associated with improved passing performance and student activity across the two action cycles.

Keywords: Basketball; Passing; Modified Games; Teaching Strategies

INTRODUCTION

Physical Education, Sports, and Health (PJOK) supports the physical, motor, cognitive, and social development of adolescents, who experience rapid changes in movement ability and social and cognitive functioning (Azmi, Mahardika, Mutmainah, & Lestari, 2023; Mastorci, Lazzeri, Vassalle, & Pingitore, 2024). In the Phase D curriculum, students are expected to perform and analyse specific movement skills and apply appropriate tactics. Basketball supports these outcomes through coordination, teamwork, and tactical decision-making. Passing is central to maintaining possession and organising attacks, requiring students to control the ball, identify available teammates, and select an appropriate pass (Oliver, 2004; Wissel, 1994).

The initial assessment showed that only 9 of 36 students (25%) met the passing-mastery criterion, with a mean score of 9.92. Several students participated passively, received limited meaningful repetitions, and hesitated when passing

under defensive pressure. These difficulties were associated with static and monotonous activities that provided little movement variation or decision-making and allowed more proficient students to dominate. Because motor skills develop through varied and repeated practice, passing instruction should combine technical repetition with opportunities to perceive space and respond to opponents (Hariyanto, 2015; Suseno, Nasution, & Sumarno, 2025).

Modified small-group games can provide contextual passing practice by adjusting player numbers, playing areas, and task demands. They increase opportunities to interact with the ball while requiring students to communicate, identify passing options, and respond to defenders. Previous studies have reported improvements in passing outcomes or participation through peer tutoring, circuit games, chain-ball activities, traditional games, and other game-based strategies (Ahmad & Saputra, 2024; Marhenes, Sumarni, & Hartati, 2021; Nugraha, Widiastuti, & Setiakamawijaya, 2021; Suseno et al., 2025; Syahyana, Andrijianto, & Sandiko, 2024).

However, classroom action research that progressively increases task constraints to develop passing execution and decision-making remains limited. This study addressed that gap by modifying Monkey in the Middle from five passers against one defender in Cycle I to four passers against two defenders with a three-second possession limit in Cycle II. Its novelty lies in progressively adjusting the player ratio and possession time based on reflection across action cycles. The study therefore examined changes in passing performance, cognitive worksheet results, and student activity from the pre-cycle assessment through Cycle II

METHOD

This study employed classroom action research based on the planning, action, observation, and reflection stages of Kemmis, McTaggart, & Nixon (2013). A pre-cycle assessment established baseline passing performance, followed by two action cycles conducted in one 3 × 40-minute lesson each. Cycle I was implemented on 4 May 2026 using five passers against one defender. Reflection on its results informed Cycle II, conducted on 18 May 2026 using four passers against two defenders and a three-second ball-possession limit. Observation occurred during

each action, while reflection followed the review of test, worksheet, and observation data.

Setting and Participants

The study was conducted from March to June 2026 in one seventh-grade class at SMP Negeri 281 Jakarta, East Jakarta. The class comprised 36 students and was selected because only 9 students (25%) met the passing-mastery criterion during the preliminary assessment. The researcher implemented the instructional actions, while a collaborating physical education teacher observed student activity and contributed to reflection after each cycle.

Intervention Procedures

The intervention progressively increased the task demands of *Monkey in the Middle* by modifying the player ratio, playing area, and ball-possession time. The differences between cycles are presented in Table 1.

Table 1. Intervention Procedures across Cycles		
Component	Cycle I	Cycle II
Game format	Five passers versus one defender	Four passers versus two defenders
Implementation	One 3 × 40-minute lesson, 4 May 2026	One 3 × 40-minute lesson, 18 May 2026
Playing area	Initial playing area	Narrower playing area
Ball-possession limit	No specific time restriction	Maximum of three seconds
Instructional focus	Passing mechanics and adaptation to the modified game	Passing accuracy and rapid decision-making
Assessment	Passing test, student worksheet, and student-activity observation	Passing test, student worksheet, student-activity observation, and teacher-activity observation
Basis for action	Preliminary assessment	Reflection on Cycle I

Before Cycle I, the researcher prepared the instructional plan, equipment, passing test, worksheet, and observation sheet. The five-passers-versus-one-defender format was implemented on 4 May 2026 without a possession-time restriction. The researcher and collaborator observed passing difficulties and student participation, while the passing test and worksheet were administered after the action. Reflection identified hesitation, limited initiative, technical difficulties, and insufficient understanding of the game procedures.

Based on these findings, Cycle II introduced clearer demonstrations, a brief corrective drill, a narrower playing area, four passers against two defenders, and a three-second possession limit. The revised action was implemented on 18 May 2026 and assessed using the passing test, worksheet, student-activity observation, and teacher-activity observation. The research ended after the final reflection showed that the classical mastery criterion had been achieved.

Research Instruments

Three instruments assessed passing performance, cognitive understanding, and learning activity. Passing performance was measured using a 30-second wall-pass test with a 60 × 60 cm target positioned 2.45 m from the boundary line. After one trial, each student completed a scored attempt using a chest pass. One point was awarded when the ball struck the target and was caught behind the line; passes made while stepping on or crossing the line were not counted. The highest preliminary score, 17 valid passes, served as a class-specific reference rather than an official AAHPERD norm. Applying the school mastery criterion of 75 produced a raw threshold of 12.75:

$$\frac{75}{100} \times 17 = 12.75$$

The threshold was rounded upward to 13 valid passes. Scores above 17 remained possible because 17 was a preliminary reference score, not the maximum attainable score.

Student Worksheet

The student worksheet assessed basic knowledge of basketball passing after each cycle. Student-activity observations documented participation, cooperation, compliance with game instructions, and technical difficulties, while teacher activity was assessed only in Cycle II. The instruments were reviewed by the academic supervisors and the collaborating physical education teacher for suitability, content correspondence, and appropriateness for seventh-grade students.

Observation

Observation was used to document the instructional process during the implementation of the modified game. The student-activity observation focused on

students' active participation, cooperation, and compliance with the modified-game instructions. The researcher and the collaborating teacher also recorded the technical and participation-related problems encountered during each cycle.

During Cycle II, observation additionally covered the researcher's implementation of the instructional action. The collaborating teacher observed whether the revised game procedures, including the four-versus-two configuration and three-second possession limit, were implemented according to the action plan. The observation findings were used together with the passing-test and worksheet results during the reflection process.

Data Analysis

Passing-test and worksheet data were analysed descriptively using means, standard deviations, frequencies, and percentages. Students achieving at least 13 valid passes were classified as meeting the individual passing-mastery criterion. Classical mastery was calculated as:

$$P = \frac{f}{n} \times 100\% \quad (1)$$

where P represents the percentage of classical mastery, f represents the number of students who met the individual mastery criterion, and n represents the total number of students. The classroom action was considered successful when at least 80% of the 36 participating students met the established mastery criterion.

The distribution of students' passing abilities was also classified into five categories using a norm-referenced assessment based on the class mean and standard deviation. The categories consisted of very good, good, sufficient, poor, and very poor, following the five-category classification described by Sudijono (2005).

Qualitative analysis was applied to the observation records. The findings were examined to identify technical difficulties, changes in student participation, and weaknesses in the implementation of the modified game. These findings were used during reflection to determine the revisions required for the subsequent cycle.

Data Validity

Instrument and action-model suitability was reviewed through expert judgment involving the academic supervisors and collaborating teacher. Source triangulation compared researcher and teacher observations, while technique triangulation compared passing-test, worksheet, and observation data.

Ethical Considerations

Written administrative permission to conduct the observation and research activities was obtained from SMP Negeri 281 Jakarta before data collection. The participating students' names and other direct identifiers were removed from the analytical data and manuscript, and the findings are reported only in aggregate form. Identifiable photographs of students were not included in the article. The collected data were used solely for academic research purposes, and access to individually identifiable research records was limited to the researcher and authorised members of the research team.

RESULT AND DISCUSSION

The preliminary assessment involved all 36 seventh-grade students participating in the study. The mean basketball passing score was 9.92, with a standard deviation of 3.70. Of the 36 students, 9 students met the established passing mastery criterion, representing 25.00% of the class. The remaining 27 students, or 75.00%, had not met the criterion. These results showed that the initial level of classical mastery remained substantially below the predetermined success criterion of 80%.

Classroom observations conducted during the initial assessment also indicated that several students participated passively in passing activities. Students received limited opportunities for meaningful repetition and experienced difficulty applying passing movements in situations that required them to recognize an available teammate and respond to game pressure. The preliminary assessment therefore became the basis for implementing the first action cycle.

Cycle I

Cycle I was implemented in one 3×40 -minute lesson on 4 May 2026 using a five-passers-versus-one-defender configuration. Following the action, the mean passing score increased to 12.22, with a standard deviation of 3.01. A total of 19

students met the passing mastery criterion, equivalent to 52.78% of the class, while 17 students, or 47.22%, remained below the criterion. Although the proportion of students achieving mastery was higher than in the pre-cycle assessment, it had not reached the required classical mastery level of 80%.

The cognitive worksheet results showed a mean score of 65.83. Only 5 students met the worksheet mastery criterion, representing 13.89% of the participants, whereas 31 students, or 86.11%, had not yet met the criterion. These results indicated that students' cognitive understanding of basketball passing remained limited during the first cycle.

The mean student-activity score in Cycle I was 59.72. A total of 10 students met the student-activity criterion, representing 27.78% of the class, while 26 students, or 72.22%, remained below the criterion. Observation records showed that several students were still unfamiliar with the modified-game procedures and appeared hesitant when acting as passers or defenders. Because no ball-possession time limit had been introduced, some students held the ball for relatively long periods, while other students remained passive and showed limited initiative in seeking an available passing position.

The reflection conducted after Cycle I showed that neither passing mastery nor student activity had reached the predetermined success criterion. The action was therefore continued to Cycle II. The revisions included a clearer demonstration of passing mechanics, reinforcement of basic passing knowledge, closer assistance for less active students, a change in the ratio between passers and defenders, and the introduction of a three-second ball-possession limit.

Cycle II

Cycle II was implemented in one 3×40 -minute lesson on 18 May 2026 using four passers and two defenders. The playing area was narrowed, and students were required to release the ball within three seconds. Following the revised action, the mean passing score increased to 14.58, with a standard deviation of 1.68. A total of 34 students met the passing mastery criterion, representing 94.44% of the class. Only 2 students, or 5.56%, remained below the criterion. The passing-mastery percentage therefore exceeded the predetermined classical success criterion of 80%.

The cognitive worksheet results also improved in Cycle II. The mean worksheet score increased from 65.83 in Cycle I to 78.89 in Cycle II. A total of 30 students met the cognitive mastery criterion, representing 83.33% of the participants, while 6 students, or 16.67%, had not yet met the criterion.

Student activity showed a similar progression. The mean student-activity score increased from 59.72 in Cycle I to 77.22 in Cycle II. Twenty-nine students met the activity criterion, equivalent to 80.56% of the class, while 7 students, or 19.44%, remained below the criterion. Thus, the student-activity outcome also exceeded the 80% success criterion.

The implementation of the instructional action in Cycle II was assessed through teacher-activity observation. The researcher obtained 49 points from a maximum possible score of 52, corresponding to 94.23%. This result indicated that the revised instructional procedures were implemented in accordance with the Cycle II action plan. Because passing mastery, cognitive mastery, and student-activity mastery had reached or exceeded their respective success criteria, the classroom action research was concluded after Cycle II.

Overall Progression of Learning Outcomes

Table 2 summarizes the progression of basketball passing scores, worksheet results, student activity, and teacher activity across the action stages. Passing mastery increased from 25.00% during the pre-cycle assessment to 52.78% in Cycle I and 94.44% in Cycle II. The mean passing score increased by 4.66 points between the pre-cycle assessment and Cycle II, while the standard deviation decreased from 3.70 to 1.68.

Table 2. Summary of Learning Outcomes across the Action Stages

Outcome	Pre-Cycle	Cycle I	Cycle II
Passing score, mean	9.92	12.22	14.58
Passing score, SD	3.70	3.01	1.68
Passing mastery, n (%)	9 (25.00)	19 (52.78)	34 (94.44)
Worksheet score, mean	–	65.83	78.89
Worksheet mastery, n (%)	–	5 (13.89)	30 (83.33)
Student-activity score, mean	–	59.72	77.22
Student-activity mastery, n (%)	–	10 (27.78)	29 (80.56)
Teacher-activity score	–	–	49/52 (94.23%)

The progression of passing mastery is illustrated in Figure 1. Classical mastery increased by 27.78¹ percentage points from the pre-cycle assessment to Cycle I and by a further 41.67² percentage points from Cycle I to Cycle II. Overall, the increase between the pre-cycle assessment and Cycle II was 69.44 percentage points.

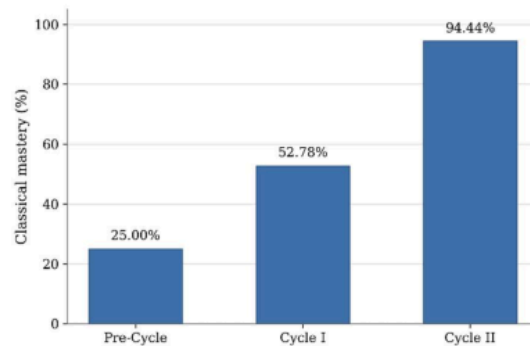


Figure 1. Progression of Basketball Passing Mastery across the Action Stages

Discussion

The observed increase in passing performance occurred following the implementation and progressive revision of the modified Monkey in the Middle game. The small-group format appeared to provide students with more opportunities to interact with the ball while requiring them to coordinate their movements, identify available teammates, and respond to defenders. This interpretation is consistent with Teaching Games for Understanding, which integrates technical practice with tactical understanding through modified games (Bunker & Thorpe, 1982). The mean passing score increased from 9.92 in the pre-cycle assessment to 14.58 in Cycle II, while the standard deviation decreased from 3.70 to 1.68. These descriptive changes suggest that passing performance improved and became more evenly distributed within the participating class. However, because the study did not include a comparison group, the observed changes should be interpreted as within-class improvement across the action cycles rather than as evidence of a definitive causal effect.

Further improvement was observed in Cycle II after the game format was changed from five passers against one defender to four passers against two defenders and a three-second ball-possession limit was introduced. The additional

defensive pressure appeared to encourage students to identify passing targets earlier, move into open space, and release the ball without holding it excessively. These task constraints may have supported faster passing decisions, more frequent movement, and greater passing accuracy. Nevertheless, the Cycle II improvement cannot be attributed exclusively to the player ratio or possession limit because clearer demonstrations, theoretical reinforcement, corrective feedback, closer assistance, and revised group management were implemented during the same cycle.

The increase in worksheet achievement from 65.83 to 78.89 indicates that students' development extended beyond motor execution. Students demonstrated a better understanding of hand and foot positioning, the selection of *chest passes*, *bounce passes*, and *overhead passes*, technical-error correction, and passing decisions in game situations. This cognitive development supported students in connecting technical knowledge with spatial awareness, defensive pressure, and tactical choices.

Student-activity mastery increased from 27.78% in Cycle I to 80.56% in Cycle II. Clearer demonstrations, structured instructions, closer group management, and direct feedback encouraged previously hesitant students to participate more actively. Teacher activity reached 49 of 52 points (94.23%) in Cycle II, indicating consistent implementation of the revised procedures. However, because teacher activity was measured only in Cycle II, this result reflects implementation quality rather than an increase from the previous cycle.

The findings are consistent with studies showing that modified traditional games, game-based models, and small-sided activities can support basketball passing and student participation (Marhenes et al., 2021; Nugraha et al., 2021; Pratama, 2022). Similar benefits have been reported for circuit-game and chain-ball modifications (Ahmad & Saputra, 2024; Syahyana et al., 2024). Although Suseno et al. (2025) employed peer tutoring rather than game modification, their findings also support structured and interactive passing practice. Unlike these studies, the present intervention progressively changed the ratio of passers to defenders and introduced a three-second possession limit. The mastery criterion was reached

within two cycles, whereas Juariah (2017) reported achievement after three cycles. This difference, however, does not demonstrate superiority because the participants, settings, instruments, and procedures were not directly comparable.

This study provides a practical example of how task constraints can be progressively adjusted during classroom action research. Within the participating class, the combination of small-group play, revised player ratios, and a ball-possession limit was accompanied by improvements in passing performance, conceptual understanding, and student activity. The strategy may be considered by physical education teachers as an instructional alternative for classes with varied motor abilities. However, its applicability to other classes and schools requires further investigation because the present study involved only one class, did not include a comparison group, used a relatively short intervention, and did not assess skill retention or transfer.

CONCLUSION

This classroom action research documented an increase in basketball passing learning outcomes among Grade VII students at SMP Negeri 281 Jakarta following two cycles of the modified Monkey in the Middle game. Passing mastery increased from 25.00% ² in the pre-cycle assessment to 52.78% in Cycle I and 94.44% in Cycle II, thereby exceeding the predetermined classical mastery criterion of 80%. Student-activity mastery also increased from 27.78% ³ in Cycle I to 80.56% in Cycle II. These findings show that the progressive modification of the game was accompanied by improvements in passing performance and student participation within the participating class.

The four-passers-versus-two-defenders format and the three-second ball-possession limit may be considered practical instructional alternatives for creating more dynamic passing activities. However, because the study involved one class, lacked a comparison group, and introduced several instructional revisions simultaneously, the findings should not be interpreted as definitive evidence that one particular game constraint independently caused the observed improvement. Further research should examine the strategy across different schools and grade

levels, employ comparison groups, and include longer intervention periods and retention assessments.

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