



Modification of The Battle to Improve Learning Outcomes in The Game of Rasel Ball Students of Grade IV of SDN 3 Balaesang Tanjung

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ABSTRACT

The purpose of this study is to improve the learning outcomes of baseball games through modified bats for fourth-grade students of SDN 3 Balaesang Tanjung. This study is a classroom action research (CAR), which is one type of research conducted by teachers to improve the quality of learning in the classroom. This study took place at SDN 3 Balaesang Tanjung, Balaesang Tanjung District, Donggala Regency, Central Sulawesi Province and used school yard facilities for the implementation of baseball hitting skills learning using modified baseball bats. Elementary school students of SDN 3 Balaesang Tanjung. The class to be studied is class IV which consists of 17 male students and 11 female students. The total number of research subjects is 28 students. Based on the results of the study regarding classroom action research with the title "Modification of Bats to Improve Baseball Hitting Skills of Fourth-grade Students of SDN 3 Balaesang Tanjung in the 2025/2026 Academic Year", it can be concluded that the application of modified bats can improve students' skills in performing basic baseball hitting techniques. In the first cycle, the learning outcomes showed that the highest score obtained by students was 91.7, the lowest score was 50, and the class average was 75.00. The number of students who achieved mastery of hitting skills was 15 people (53.57%), while 13 students (46.43%) had not achieved mastery. In the second cycle, there was a significant increase. The highest score of students reached 100, the lowest score was 75, and the class average increased to 87.2. The number of students who completed the skill increased to 24 people (85.71%), while only 4 students (14.29%) remained incomplete. Thus, the classical mastery target of 85.00% has been achieved, so it can be concluded that the use of modified bats is effective in improving baseball hitting skills.

Keywords: *The Battle, Improve Learning Outcomes, The Game*

ARTICLE INFO

Article history:

Received Juni 29,
2025

Revised August 27,
2025

Accepted September
30, 2025

Journal Homepage

<https://ojs.staialfurqan.ac.id/IJoASER/>

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INTRODUCTION

Physical education is a tool that can be used to achieve overall educational goals. Therefore, the implementation of physical education must be directed towards achieving these goals. The goal of physical education is not just physical activity itself, but also to develop students' potential through physical activity (Rahayu, 2013; Samsudin, 2008).

Physical education provides students with the opportunity to engage directly in a variety of learning experiences through physical activity, play, and exercise, conducted systematically, purposefully, and in a planned manner. These learning experiences are designed to foster and shape a healthy and active lifestyle throughout life. Furthermore, physical education is an integral part of overall education, aiming to develop students' physical fitness, motor skills, knowledge, and sportsmanship (Susanto, 2013; Sudjana, 2012).

One of the subjects taught in Physical Education, Sports, and Health (PJOK) at the

elementary school level is the game of baseball. Baseball requires basic motor skills such as throwing, catching, and hitting the ball. Hitting the ball is a crucial fundamental technique in this game, as it determines success in achieving long and accurate shots. However, in reality, many students struggle to hit the ball correctly (Kusmayasari, 2013; Febrianto, 2024).

Rounders is a popular subject in Physical Education (PJOK) among elementary school students, particularly fourth-grade students at SDN 3 Balaesang Tanjung. Informal interviews with teachers and students revealed that most students chose rounders because it is fun, challenging, and involves a lot of physical activity, such as running, throwing, catching, and hitting. Furthermore, rounders encourages teamwork and strategy, increasing student enthusiasm for learning (Ikadarny, 2024).

The students' strong interest in baseball is an important basis for conducting this research. This interest provides a significant opportunity to improve student learning outcomes if the learning is structured appropriately and engagingly. However, high interest does not necessarily translate into good mastery of playing techniques, particularly in hitting the ball. Based on initial observations on Wednesday, June 4, 2025, in the fourth grade of SDN 3 Balaesang Tanjung, it was found that most students experienced difficulty in hitting the ball effectively. This was caused by the use of standard bats that were too heavy and large for the hands of elementary school students.

These findings align with Muliadi's (2023) research, which found that modifying learning media has been proven to improve fundamental movement skills and reduce student learning boredom by more than 80%. Furthermore, research by Adi Suriatno & Rusdiana Yusuf (2020) also showed that the use of modified equipment can increase student learning motivation by up to 86%. Therefore, innovation in the form of modifying bats is deemed necessary to increase learning effectiveness, improve batting techniques, and foster student self-confidence and active participation during the learning process.

Based on this background, the author is interested in conducting a classroom action research entitled "Modification of Batting Equipment to Improve the Learning Outcomes of Fourth Grade Students of SDN 3 Balaesang Tanjung in Baseball".

The objective to be achieved in this research is to improve the learning outcomes of the baseball game through modification of the bat for fourth grade students of SDN 3 Balaesang Tanjung.

METHOD

This study uses a Classroom Action Research (CAR) approach because it is suitable for improving the ongoing learning process. The CAR model used is the Kemmis and McTaggart model, which emphasizes four main stages: planning, action, observation, and reflection. According to Kemmis and McTaggart (1988), this model allows teachers to systematically reflect on their own practices so that learning can be improved through repeated cycles. This opinion is also in line with Aqib (2008), who explained that CAR is effective for improving student skills in the real context of classroom learning.

This research was conducted at SDN 3 Balaesang Tanjung, Donggala Regency, Central Sulawesi, utilizing the schoolyard as the venue for the activities. The research subjects were 28 fourth-grade students, consisting of 17 boys and 11 girls. The selection of subjects was based on the results of initial observations that showed low baseball hitting skills due to the use of standard bats that were not suitable for the physical condition of elementary school children. This is relevant to the findings of Kusmayasari (2013) who reported that the size and weight of bats that do not match the characteristics of students often become obstacles in baseball hitting skills.

The research variables consisted of bat modifications as the independent variable and baseball hitting skills as the dependent variable. Bat modifications were made by adjusting the size, weight, and material to make them more user-friendly for students. According to Suriatno and Yusuf (2020), modifying media or tools in Physical Education (PJOK) learning has been shown to improve students' motivation and motor skills. A similar sentiment was expressed by Muliadi (2023), who emphasized that innovation in learning media contributes positively to improving fundamental motor skills.

The research procedure was carried out in two cycles. In the planning stage, the

researcher developed learning materials in the form of teaching modules, prepared materials such as baseballs, modified bats, and cones, and created instruments in the form of observation sheets and practical tests. The action stage was carried out with the researcher acting as a teacher who delivered material on baseball hitting skills using modified equipment. The observation stage was carried out by the researcher and observers by recording the development of student skills during the learning process. The reflection stage was used to analyze observation data and test results, in order to evaluate the actions and improve implementation in the next cycle. According to Arikunto (2013), the cycle in CAR aims to enable teachers to identify weaknesses in the actions and make continuous improvements.

RESULT AND DISCUSSION

Results

In this chapter, the data analysis presents the findings or findings of the research, namely the technique of hitting the ball in rounders. It was found that most students still experienced difficulties. To answer the problem, achieve the objectives, and test the improvement of this research, all data processing was done using Microsoft Excel based on the classical completeness formula.

In the initial stage before the intervention was given, the observation results showed that the baseball hitting skills of fourth-grade students at Balaesang Tanjung 3 Elementary School were still relatively low. Of the total of 28 students, only 10 (35.71%) were able to hit the ball correctly, while the other 18 students (64.28%) were unable to execute the skill correctly. This percentage is far below the minimum completion target set by the school, which is 85%. This condition indicates that most students have difficulty in mastering the ball hitting technique, so that improvements are needed through modifications to learning media that are more appropriate to the characteristics of the students. This initial finding is in line with the opinion of Kusmayasari (2013) who stated that baseball hitting skills in elementary school students are often hampered by the use of standard bats that do not match their size and physical strength.

Table 1.
Percentage of Each Aspect Hitting - Cycle 1

Hitting Aspect	Percentage Results (%)
Hand Swing	85.71
Body Position	86.90
Ball Planning	69.05
Ball Direction	54.76

Source: Processed results 2025

Based on the table above, the results of observations in the first cycle show that students' baseball hitting skills are still not optimal. Of the 28 students, only 15 students (53.57%) achieved learning completion, while 13 students (46.43%) have not completed it. The average achievement of baseball hitting skills in cycle I was 73.88%. Viewed from the technical aspect, hand swing (85.71%) and body position (86.90%) have reached the completion criteria, but the aspects of ball contact (69.05%) and ball direction (54.76%) are still low. Student activity also only reached 72%, not exceeding the success indicator set at 76%.

Table 2.
Percentage of Student Skill Completion - Cycle I

Criteria	Results (%)
Completed	53.57%
Not Completed	46.43%

Source: Processed results 2025

Table 2 above shows that 46.43% of students have not yet achieved mastery in hitting a baseball. Overall, the percentage of skills achieved by students is only 53.57%, so it is still far from the set target. These results indicate that the learning completion rate has not met the standard, as the researcher's expectation is that at least 85% of students will be able to achieve the specified skills. Therefore, improvements and enhancements are needed through the implementation of learning in the second cycle.

This situation demonstrates that the modified bat is beginning to have a positive impact, but the limited training intensity is not sufficient to improve overall skills. These results align with research by Muliadi (2023), which emphasizes the importance of training intensity and innovative learning media to strengthen students' mastery of basic skills.

In the second cycle, strategy improvements were made by increasing the intensity of the training, from 10 strokes to 25 strokes for each student.

Table 3.
Percentage of Each Aspect Hitting – Cycle II

Hitting Aspect	Percentage (%)
Hand Swing	91.67
Body Position	91.67
Ball Hit	84.52
Ball Direction	79.76

Source: Processed results 2025

Table 3 above shows a significant increase in the average ball-hitting skill. The result of the increase reached 86.91%, and classical completion increased to 85.71% (24 students completed, 4 students did not complete). All aspects of the skill showed improvement: arm swing (91.67%), body position (91.67%), ball contact (84.52%), and ball direction (79.76%). Student activity also increased to 88%, exceeding the established completion indicator.

Table 4.
Percentage of Student Skill Completion in Cycle II

Criteria	Results (%)
Completed	85.71%
Not Completed	14.29%

Source: Processed results 2025

Based on the data analysis results from the table above, it is known that as many as 85.71% of the total students have achieved mastery in the skill of hitting a baseball. Meanwhile, only 14.29% of students have not met the completion criteria. This finding shows that the majority of students are able to master the skills taught according to the predetermined indicators. Thus, it can be concluded that the learning completion target set by the researcher has been achieved. This high percentage of completion indicates the effectiveness of the learning activities carried out, especially through the use of modified bats, so that they can make a positive contribution to improving student learning outcomes.

This proves that the use of modified bats is effective in improving baseball hitting skills. This finding corroborates research by Suriatno and Yusuf (2020), which showed that modifying learning media can improve students' motivation and motor skills, as well as research by Ikadarny (2024), which demonstrated that varying bats in baseball can increase student engagement and learning outcomes.

Discussion

The results of the study showed an increase in the baseball hitting skills of fourth-grade students at SD Negeri 3 Balaesang Tanjung through the use of modified bats. In cycle I, learning completion only reached 53.57%, while in cycle II it increased to 85.71%. This 32.14% increase proves that the modified bat can have a real impact on students' motor skills, especially in the aspect of hitting techniques. This finding is in line with Sudjana's (2012) opinion that learning outcomes are changes in behavior as a result of the learning

process, where the quality of learning outcomes is greatly influenced by the methods, media, and learning strategies used.

Significant improvements in cycle II indicate that method improvements and increased training intensity play a significant role in student skill achievement. While challenges such as lack of confidence, limited training, and minimal motivation persisted in cycle I, these challenges were mitigated through improved strategies in cycle II. This supports Gusril's theory (as cited in Saputra, 2024), which emphasizes that modifications in physical education learning can increase motivation, foster enjoyment, and ultimately enhance student learning activities.

Furthermore, the results of this study align with those of Muliadi (2023), who found that modifying learning tools can encourage teacher creativity while simultaneously improving students' motivation and basic motor skills. Suriatno and Yusuf (2020) also emphasized that the use of modified learning media, including the use of simple tools and used materials, has been shown to effectively improve motor skills and reduce learning boredom. A similar finding was found in Ikadarny's (2024) study, where modifying tools in baseball learning improved students' classical mastery from cycle to cycle.

Specifically, the use of modified bats provides a learning experience more suited to the characteristics of elementary school students. Bats with customized sizes and weights help students master hand swing techniques, body position, ball contact, and even shot direction. The results of this study support the findings of Kusmayasari (2013), who emphasized that baseball hitting skills are significantly influenced by the suitability of the equipment used. Febrianto (2024) also reported that modified baseball bats can improve ball contact accuracy while increasing student active participation in learning.

Thus, this study shows that modifying learning media in Physical Education not only improves learning outcomes but also contributes to student engagement, motivation, and confidence in participating in learning. The practical implication of this study is the need for Physical Education teachers to integrate the principle of tool modification in teaching traditional games such as rounders, so that the learning process is more inclusive, effective, and appropriate to the developmental needs of students.

CONCLUSION

The results of classroom action research indicate that the use of modified bats is effective in improving the baseball hitting skills of fourth-grade students of SD Negeri 3 Balaesang Tanjung in the 2025/2026 academic year. In cycle I, student learning outcomes showed a class average of 75.00 with 53.57% completion or 15 students who successfully achieved the KKM, while 13 other students (46.43%) had not completed it. This condition illustrates that baseball hitting skills still require improvement through the implementation of more appropriate learning strategies.

In cycle II, there was a significant increase with the class average reaching 87.2 and classical completion rising to 85.71% or 24 students completed, while only 4 students (14.29%) did not meet the standard. With the achievement of the classical completion target of 85%, it can be concluded that the modification of the bat has a positive contribution to improving students' baseball hitting skills, while also proving the effectiveness of the learning strategy used.

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