

## Improving Badminton Long Serves Through Modifying Learning Media

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### Abstrak

**Objective.** Physical education teachers play a crucial role in promoting successful learning by nurturing critical thinking skills that make the learning process more innovative. However, the lack of adequate facilities and infrastructure poses a significant challenge in achieving successful learning outcomes, particularly in badminton education. To address this issue, this research employs a modified learning media that utilizes recycled materials to enhance the learning outcomes for badminton long serve.

**Materials and Methods.** The study was conducted among fourth-grade students at Madrasah Ibtidaiyah Nurul Islam Ngabang, Landak Regency. Researchers employed a classroom action research method, which included two cycles of data collection and analysis. The study utilized a descriptive research type and employed observation and test techniques for data collection. Data analysis was conducted descriptively and quantitatively based on the results of observations of activities and skills.

**Result.** The study employed two cycles with four meetings each to evaluate the effectiveness of a certain approach. In the first cycle, the participants achieved a final average grade of 79.67 with a 68% completion rate, which was considered unsatisfactory. In the second cycle, the approach was refined and the participants achieved a final average grade of 90.67 with a 92% completion rate, indicating a significant improvement.

**Conclusion.** After conducting extensive research, it has been found that modifying the learning media by utilizing second-hand products can significantly enhance the longevity of badminton services. This study highlights the effectiveness of such an approach in improving the overall performance of badminton players. By employing this technique, players can optimize their skills and achieve a higher level of proficiency in the sport. The findings of this research are valuable and can contribute to the development of new and innovative training methodologies in the field of badminton.

**Keywords:** Long Serve, Badminton, Modification of Learning Media

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## Introduction

Physical education is a crucial aspect of personal development, both individually and collectively. It supports physical and spiritual growth and development. Schools serve as a platform for students to interact with educators, providing them with learning tools and curriculum direction that can foster effective teaching and learning (Adi Suriatno dan Rusdiana Yusuf, 2020). One way to achieve this is for physical education teachers to create learning materials for physical education that incorporate various modifications of learning media. These materials should be appropriate for the child's level of growth and development, and should stimulate all parts of the body to function as they should (Warniati et al., 2022) states that learning media development is defined as a systematic process of producing effective and efficient instructional materials so that they can be used in the teaching and learning process.

As part of the education system, teachers play a crucial role in ensuring the success of the learning mission. Specifically, physical education teachers hold the responsibility of instilling healthy living habits in the younger generation. To produce well-rounded individuals, it is important for teachers to have a deep understanding of physical education and its progression (Puspo Negoro et al., 2022). The tendency to minimize the role and involvement of students as well as the teacher's dominance in the learning process is still visible when the teaching and learning process takes place, which causes students to play more of a passive role and involvement, they wait more for presentations from the teacher rather than seeking and discovering their own knowledge, skills and attitudes. they need. Student involvement during the learning process is key to the effectiveness of the learning environment (Muis & Santosa, 2022) revealed that apart from intelligence factors, learning motivation has an important role in student engagement.

Therefore, teachers are the key in organizing, directing and creating an atmosphere of innovative and proactive learning activities that are manifested for students, so that learning is not seen by students as boring. Quality learning has at least several indicators, namely: challenging, fun, encouraging exploration, providing successful experiences, and must develop thinking skills. Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers article 20 points a and b reads: a. planning learning, implementing a quality learning process, and assessing and evaluating learning outcomes; b. improve and develop academic qualifications and competencies on an ongoing basis in line with developments in science, technology and art (Sari et al., 2023).

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It is crucial for teachers to strive towards enhancing the physical education learning process in order to foster the growth and development of sports in Indonesia. This will have a significant impact on the development of students. Physical education should be made available at all levels of schooling, to enable teachers to prepare suitable learning strategies for motor skills and body movement (Siti Rodi'ah, Isatul Hasanah, 2021). Students in Madrasah Ibtidaiyah have been learning and memorizing movements since kindergarten. This gives them valuable skills to adapt in life, including thinking patterns, curiosity, competition, strength, balance, and coordination. However, there are obstacles that reduce their enthusiasm towards learning physical education, sports, and health. One of these obstacles is the poor condition of the field, which needs attention from the Madrasah. Additionally, the lack of tools and facilities to support physical education learning, particularly badminton, at Madrasah Ibtidaiyah Nurul Islam Ngabang in Landak Regency, makes learning less effective.

Modification is a treatment to change so that it can be achieved according to needs. The location of schools far from urban areas is also a factor in the lack of facilities and infrastructure in schools because not all places can provide the necessary needs (Khaerunnisa et al., 2023) said that situations like this could actually be anticipated with the creativity of sports teachers in providing learning materials for the game of badminton. Modifying learning media is very necessary so that students can learn and receive motor stimulation easily. (Mochamad A'is Septiandika Pratama, 2022) The learning process requires media or is modified if there are limited learning facilities.

The physical education learning process does not only look at the physical, cognitive and emotional involvement aspects, but requires a way of delivering it to students so that learning objectives are achieved, one of which is the learning media aspect. (Ismail Pulka. N, 2022) stated that learning media can make things easier for teachers in a practical way that can be used face-to-face or online. Learning media is designed as best as possible to improve the learning experience of students. The experience in question is to make learning interesting and effective so that students can easily understand. Learning media helps make it easier for teachers in the teaching process and students easily understand learning material, especially in physical education (Padang et al., 2023).

During the learning process of badminton for class IV students at Madrasah Ibtidaiyah Nurul Islam Ngabang, Landak Regency, certain observations were made. Out of 25 students, 16 were male and 9 were female. The majority of the students (68%) did not complete the minimum completion criteria standard of 75%. They were still unable to play badminton properly, particularly in serving strokes. This was due to improper holding of the racket,

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incorrect foot positioning when serving, incorrect contact of the shuttlecock with the racket during serving, and less accurate serving technique. The shuttlecock was either hit too hard or too weakly, resulting in it going out of the court or being too easy for the opponent to attack.

Due to the lack of badminton equipment and facilities in schools, this research aims to investigate the effectiveness of modified learning media that utilizes existing items. Specifically, the goal is to determine the extent to which class IV students at Madrasah Ibtidaiyah Nurul Islam Ngabang, Landak Regency, can learn the long serve in badminton through this approach. The hope is that this research will serve as a valuable reference for physical education teachers who are faced with inadequate facilities and infrastructure at their schools.

## **Materials and Methods**

### ***Study Participant.***

The present study was conducted using a sample of 25 students belonging to class IV of Madrasah Ibtidaiyah Nurul Islam Ngabang, situated in the Landak Regency of West Kalimantan Province. The sample comprised both male and female students, who were chosen as subjects for the study. The study aimed to investigate and analyze various aspects of the students' academic performance and behavior in an academic setting. The research was conducted with the utmost care and attention to ensure that it meets the required standards of accuracy and reliability.

### ***Study organization***

The methodology utilized in this study is quantitative and descriptive, as methods are the tools necessary to achieve a goal. Research methods are employed to acquire more comprehensive and objective data (Indrawan & Jalilah, 2021). (Siti, 2021) explains that quantitative research methods are an absolute scientific research process obtained from direct observation.

This research aims to provide practical considerations about concrete situations and the validity of the theory or hypothesis it produces, not relying too much on 'scientific' truth tests because the main aim is to help students act more intelligently and proficiently (Udil, 2021) stated that to analyze problems in learning teachers can conduct classroom action research so that the quality of learning increases. Classroom action research is a concept, method, procedure that can be used in research results where problems need to be solved (Slameto, 2016).

To conduct effective research, a structured research design is necessary. The process involves initial observation, planning, implementation, observation, and evaluation. The first step in this process is observation. If the data obtained is below the KKM value of 75%, a research design is created. The research design ensures that research procedures are carried out

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systematically. The planning stage involves preparing the learning implementation plan (RPP) and syllabus, followed by implementation, observation, and evaluation. The final evaluation stage examines the results obtained in cycle 1. If the results are still below 75%, the process is repeated in cycle 2.



**Figure 1.** Students Perform Badminton Long Serves Using Modified Learning Media



**Figure 2.** Evaluation of Long Service with Modified Learning Media



**Figure 3.** Modification of Learning Media

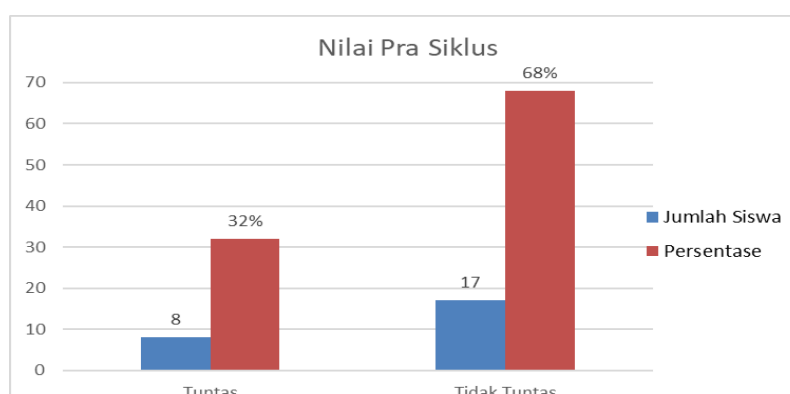
## Results

As part of the pre-cycle conditions, the researchers utilized the initial research results to determine how to improve the badminton court service for class IV students at Madrasah Ibtidaiyah Nurul Islam Ngabang in Landak Regency. Here are the results of the badminton long service pre-cycle test for class VI students of Madrasah Ibtidaiyah Nurul Islam Ngabang in Landak Regency, prior to taking action through modified learning media:

**Table 1.** Pre-Cycle Test

Category	Value Range	Pre-Cycle Total students	Percentage
Very good	93-100	0	0%
Good	84-92	3	12%
Enough	75-83	5	20%
Less	66-74	11	44%
Very less	<66	6	24%
<b>Total</b>		<b>25</b>	<b>100%</b>

After analyzing the pre-cycle test completion scores for increasing badminton long serves, it was found that none of the students or 0% fell in the very good category. 3 students or 12% were categorized as good, 5 students or 20% as enough, 11 students or 44% as less and 6 students or 24% as very less.



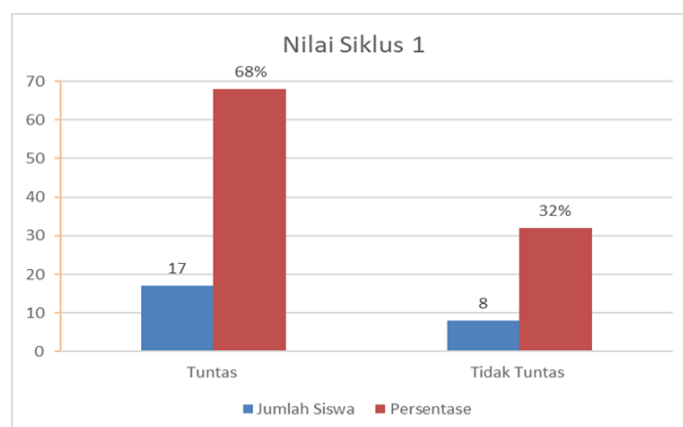
**Figure 1.** Pre Cycle Values

Based on the recapitulation of the initial data description, it can be inferred that the majority of students (approximately 68%) have not been able to perform the long badminton service properly. In other words, only 32% of students have successfully completed the learning process. Using a play-based approach for learning can be effective in providing motivation and enthusiasm, which can lead to better learning outcomes. This can be observed from the positive attitude of students who never give up and always strive to perform their best during tests, as well as their willingness to retry and improve their scores in the games. In cycle II, there is still an opportunity to achieve better results and meet the expected standards.

**Table 2.** Cycle Test I

Category	Value Range	Test 1	
		Total students	Percentage
Very good	93-100	3	12%
Good	84-92	6	24%
Enough	75-83	8	32%
Less	66-74	6	24%
Very less	<66	2	8%
<b>Total</b>		<b>25</b>	<b>100%</b>

In cycle I, a badminton long serve test was conducted using modified learning media that emphasized starting techniques, execution, and ending movements. After completing the test, the students were categorized based on their scores. Out of the 25 students, 3 students (12%) were in the "very good" category, 6 students (24%) were in the "good" category, 8 students (32%) were in the "enough" category, 6 students (24%) were in the "less" category, and 2 students (8%) were in the "very less" category.



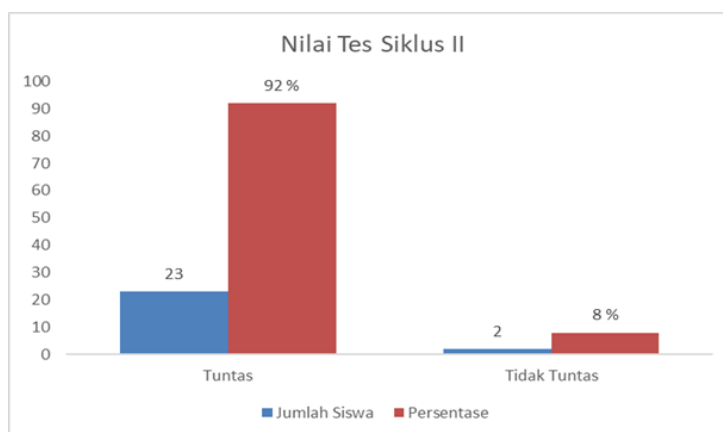
**Figure 2.** Value of Cycle 1

The process of learning how to execute a good badminton long serve involves mastering the basic techniques and practicing with modified learning materials. The students seem to be enthusiastic and happy during the learning process, and the material is challenging enough to keep them engaged. The use of modified learning materials has provided a new and exciting atmosphere for learning the badminton long serve, as shown by the satisfactory improvement and completeness in the test results during cycle II.

**Table 3.** Cycle Test II

Category	Value Range	Test II	
		Total students	Percentage
Very good	93-100	8	32%
Good	84-92	11	44%
Enough	75-83	4	16%
Less	66-74	2	8%
Very less	<66	0	0%
<b>Total</b>		<b>25</b>	<b>100%</b>

The description of the test completion value in cycle II describes the increase in long badminton serves after being given action. There are 8 students in the very good category or 32%, 11 students in the good category or 44%, 4 students in the fair category or 16%, 2 students in the less category or 8% and there are no students in the category very less.



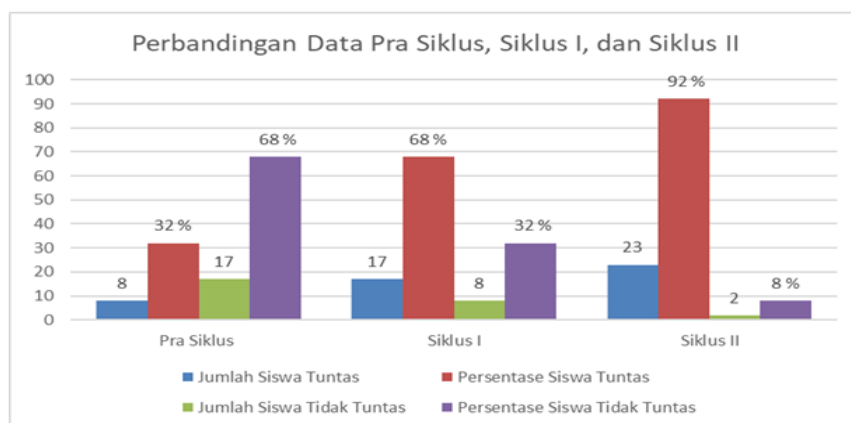
**Figure 3.** Value of Cycle 2

Based on the test results of cycle II, it is evident that the length of badminton serves created by students has increased significantly. The data shows that at the start of the cycle, only 32% of serves were of the desired length, but this increased to 68% by the end of cycle I. At the end of cycle II, the percentage of serves with the correct length further increased to an impressive 92%.

**Table 4.** Comparison of Pre-Cycle Data, Cycle 1 and Cycle II

No	Learning Completeness	Completeness Comparison					
		Pre-Cycle		Cycle 1		Cycle II	
		Total Student	Percentage	Total Student	Percentage	Total Student	Percentage
1	Tuntas	8	32%	17	68%	23	92%
2	Tidak Tuntas	17	68%	8	32%	2	8%
		25	100%	25	100%	25	100%





**Gambar 4.** Comparison of Pre-Cycle Data, Cycle 1 and Cycle II

Based on the table and diagram provided, it can be concluded that modifying the learning media has effectively improved the learning outcomes of basic badminton long serve techniques for class IV students at Madrasah Ibtidaiyah Nurul Islam in Landak Regency. This is evidenced by a significant increase in students' learning completeness scores (classical) in each cycle.

According to a descriptive qualitative study conducted by (Muliadi, Sudarto, 2022), physical education teachers in Cluster II, West Tanete Riattang District, Bone Regency, face various problems related to the limited facilities and infrastructure in schools. As a result, teachers need to utilize their creativity to modify sports facilities and infrastructure to make them more effective and efficient. The study highlights the importance of teacher creativity, particularly in modifying sports facilities and infrastructure for better learning outcomes.

## Discussion

Before implementing modified learning media, the learning completeness value in the pre-cycle indicates that only 32% of class IV students at Madrasah Ibtidaiyah Nurul Islam Ngabang, Landak Regency were able to successfully perform long badminton services. In cycle I, efforts were made to modify the learning media to increase the length of badminton serves. This resulted in a significant improvement, with the learning completeness score increasing to 68%. However, the criterion value of 75% was still not reached, hence the need for cycle II. In cycle II, the modified learning media was further implemented, and this led to a remarkable increase in learning completeness, with a percentage of 92%.

## Conclusions

Modifying learning media for students is crucial for innovative educational development. This involves planning, implementing, observing, and evaluating steps based on initial observations. An example of such modification is creating a badminton racket from

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second-hand goods, improving the learning process for badminton long serves. This was successfully done with a sample of 25 class IV students at Madrasah Ibtidaiyah Nurul Islam Ngabang, with an increase in performance from 32% in pre test to 92% in cycle II.

On this occasion, researchers have some suggestions for physical education teachers to foster innovation in the delivery of learning. They recommend paying attention to inadequate facilities and infrastructure so that they can overcome these limitations. Moreover, local district education offices need to provide necessary facilities and infrastructure in schools to support success in the learning process. Finally, other researchers can use this study as a reference for conducting research using the same methodology and developing learning modification tools.

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### **Conflict of interest**

The researcher confirmed that there was no conflict with any party involved in the case

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