



Analysis of Basic Badminton Skills in Elementary School Students

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Abstract

This study aimed to analyze the basic badminton skills of elementary school students. The descriptive method was used in the study. This study involved 42 students (22 male students, 20 female students) of three elementary schools in Bandung City. Participants were selected using purposive sampling with the following inclusive criteria (1) aged 10-12 years and (2) following badminton extracurricular activities. The instrument used in this research was an instrument model for assessing badminton skills measuring two basic skills, namely high serve and clear lob skills. Obtained data were analyzed using descriptive statistics analysis and correlational test using SPSS software version 29.0. The results of the analysis showed that the student skills were divided into two categories, namely good and very good categories. Meanwhile, the correlational analysis showed that there was a correlation between high service and clear lob skills with a correlation coefficient of 0.62 and a p_value of 0.001. It indicates that the high service and clear lob basic skills have an impact on each other in game conditions and are interrelated in basic skills. Furthermore, based on the findings, the high service and clear lob basic skills in badminton of elementary school students taking part in badminton extracurricular were generally categorized as good and very good, since high service and clear lob skills are the skills that can be used as parameters of basic and primary skills to be mastered by students.

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INTRODUCTION

Coaching is an effort made within a framework to establish, foster, advance, and enhance existing abilities (Erlina et al., 2022; Umar & Putra, 2019). Therefore, coaching is one of the crucial factors for success in sports at all levels.

At a practical level, the coaching process is carried out in stages, such as the Long-Term Athlete Development (LTAD) coaching process (Lloyd et al., 2015; Dowling & Washington, 2021), which is based on the physical, emotional, and cognitive development of children and adolescents. It also involves skill development through programs, training, competitions, and athlete or student recovery.

The Long-Term Athlete Development (LTAD) coaching process consists of seven stages grouped into three: (1) athlete/student development stage with physical education and sports literacy, including active start, fundamentals, and learn to train; (2) a stage that further focuses on excellence, including train to train, train to compete, and train to win; (3) the final stage emphasizes physical activity for a lifetime (Lloyd et al., 2015; Dowling & Washington, 2021). Therefore, it is essential that the coaching process is well-designed to achieve maximum performance. In conclusion, coaching in sports is an effort to improve and enhance sports performance and achieve better results (Umar & Putra, 2019).

The study reveals that to support improved performance in sports, good skills are necessary (Erlina et al., 2022; Permadi & Fernando, 2021; Subarkah & Marani, 2020). Research on football players has shown a connection between good psychological and physical skills. Possessing these skills enhances performance in matches (Permadi & Fernando, 2021). In water polo, skills are also crucial to enhance performance. For instance, exercises like shuttle swimming can improve skills (Sarimanah & Mulyana, 2020).

Training goalkeepers in specific skills, such as reaction time, can significantly impact their performance (R. A. Hidayat et al., 2022).

Studies analyzing students' volleyball performance through a Modified Volleyball Information System have shown significant success in volleyball games when players possess good skills (Yudiana et al., 2022). These findings emphasize the importance of skills for achieving maximum performance in both individual and team sports, including badminton.

Badminton is one of the most popular sports globally (Yüksel & Aydos, 2018; Panda et al., 2022; Wijaya, 2017), including in Indonesia (Bimantara et al., 2022; Pratama et al., 2020; Umar & Putra, 2019; Wijaya, 2017; Williyanto, 2016). Badminton is played either in singles or doubles, requiring fast thinking and quick shuttlecock movements without it touching the ground (Bimantara et al., 2022; Subarkah & Marani, 2020). It is a sport enjoyed by people of all ages, genders, and skill levels, as it combines recreation with a pleasant experience and can contribute to physical fitness, health, and quality of life (Panda et al., 2022; Pratama et al., 2020).

Badminton can be played in both singles and doubles (Bimantara et al., 2022). The game has five categories: men's singles, women's singles, men's doubles, women's doubles, and mixed doubles (Bimantara et al., 2022). A badminton court is a rectangular area measuring 13.40 meters long and 6.10 meters wide, with a net suspended at a height of 1.55 meters in the middle, dividing the court into two equal parts (Bimantara et al., 2022).

One of the key achievements in coaching badminton is enabling athletes or students to master the basic technical skills of playing badminton. This aligns with the concept that fundamental skills must be acquired by athletes or students (Zainuddin et al., 2022), especially beginners in badminton (Bahri & Permadi, 2019; Bimantara et al., 2022). Athletes or students with good fundamental skills can more easily attack and defend while applying strategies (Bahri & Permadi, 2019; Bimantara et al., 2022).

The mastery of fundamental skills, including serving, smashing, lobbing, and drop

shots, is essential for improving performance in matches (Bimantara et al., 2022; Subarkah & Marani, 2020).

The study findings show that skill development in coaching badminton significantly improves performance (Erlina et al., 2022; Subarkah & Marani, 2020). Various research and experiments have been conducted to develop exercises and skills to enhance performance, with positive results.

For instance, exercises and coordination have been used to improve the accuracy of jumping smashes through techniques like block practice and random practice (Wijayanto & Williyanto, 2022). Training body positioning has also been shown to significantly improve accuracy in jumping smashes, further enhancing the performance of badminton athletes/students (Wijayanto & Williyanto, 2022).

However, previous research has primarily focused on overall skills and abilities, rather than specific basic badminton technical skills such as serving, lobbing, drop shots, and smashing. These basic skills are essential and should be assessed to allow coaches to quantitatively evaluate the success of their athletes/students, which can provide valuable feedback for training program preparation.

In summary, based on previous studies and research results, badminton is one of the most popular sports, especially in physical education programs, and is a common extracurricular activity in elementary schools. It is essential for developing students' interests and talents in badminton. Consequently, this study will focus on analyzing the skill levels of elementary school students who participate in badminton extracurricular activities.

METHOD

The method used in research this is descriptive quantitative.

Participants

The research subjects in this study there are as many as 42 students who follow extracurricular activities in three schools' base envi-

ronments the city of Bandung was involved in the research. Range age participants between 10-12 years, male students totaling 22 students and female students totaling 20 students, with criteria inclusion following extracurricular badminton. All participants gave informed consent before carrying out the research process in the learning process. This done for students know that the data generated in the appraisal process will be analyzed for interest research and get made bait come back direct for teachers/trainers and athletes/students (Hambali et al., 2021; Hidayat et al., 2022; Yudiana et al., 2022).

Intrument

Instruments used in research this uses an assessment model Skills Badminton Developed by Hidayat, Yudiana, Hambali, & Nugraha in 2022, measuring two skills based on play badminton with refers to indicators standard assessment on the Badminton Basic Skills (BBS) program namely on basic skills.

Validity value be measured using Content Validity Ratio (CVR) with yields of 0.71 to 1.00 (Hambali et al., 2022). Whereas reliability test value use technique analysis correlation Person Product Moment (PPM) with yields of 0.83 to 0.94 (Hambali et al., 2021; Y. Hidayat et al., 2022).

Data Collection Technique

Data collection is carried out accordingly with procedure or protocol, and tested 2 times on the same day. Students hitting each 12 strokes on each sub-test with start doing high service skills, followed by clear lobs. Obtained data was analyzed using analysis statistics descriptive and correlational with using SPSS software version 29.0.

RESULTS

There are three discussions of the results of this study, namely:

- (1) an overview of the percentage of students' skills in playing badminton;
- (2) the relationship between the basic skills of high service and clear lob;

(3) the correlation between high service and clear lob with the total score.

1. Percentage of basic skills of athletes/ students:

Table 1. Descriptive Statistics

	N	Min	Max	Mean	SD
High Service	42	35.2	49.6	42.8	5,03
Clear Lob	42	42.5	56	50.54	2,77
Total	42	77.7	105.6	93.34	7,11

To gain insight into the basic skills (high service and clear lob) of athletes/students in playing badminton, a descriptive statistics analysis was employed. The results of this analysis are presented in Table 1.

Based on the results of the descriptive statistical analysis of the students' skills assess-

Table 2. Percentage of Student Skill

Category	Percentage
Very good	96.62%
Good	23.60%

ments, the average score was 93.3, the minimum score was 77.7, and the maximum score was 105.6, with a standard deviation of 7.1. Here is percentage of student can be seen in table 2:

The results of the analysis in table 2 show that the percentage of students' skill results falls into two categories: good and very good. The assessment consists of four categories, including poor, moderate, good, and very good. This implies that almost all students already possess good basic skills, including high service and clear lobs.

2. The relationship between high service skills and clear lobs

To determine whether there is a relationship between high service and clear lobs concerning the overall success of a badminton

game, researchers conducted a correlation analysis. Here is the results of this analysis are presented in table 3:

Table 3. Results of the correlation

		Clear Lob
High Service	Pearson Correlation	,62**
	<i>p-value</i>	,001
	N	42

Correlation is significant at the 0.01 level (2-tailed).

The results of the analysis in Table 3 show that there is a correlation between high service and clear lob because it has a significance value of <0.05, which is 0.001. The degree of correlation is strong because the coefficient interval is 0.62, and the form of the relationship is positive.

3. Correlation resulting from high service and clear lobs to the total

To analyze the correlation resulting from high service and clear lob on basic badminton skills to the total, the researcher tried to conduct a correlation analysis. The results of the analysis are presented in Table 4.

Table 4. Results of HS Correlation Analysis, CL, and Total Score

Skills	Analysis	combined
High Service	Pearson Correlation	.953 **
	<i>p-values</i>	001
	N	42
ClearLobs	Pearson Correlation	.833 **
	<i>p-values</i>	001
	N	42

The results from Table 4 indicate a correlation between high service and clear lobs with the total score. High service has a significance value of <0.05, specifically 0.001, demonstrating a very strong degree of correla-

tion with a coefficient interval of 0.95. Similarly, clear lob skills also have a significance value of <0.05 , specifically 0.001, and show a very strong correlation with an interval coefficient of 0.83. The relationship of both high service and clear lob skills with the total score is positive.

DISCUSSION

One strategy for trainers that can be used in preparing training programs is to quantitatively assess the success of athletes or students resulting from their training. This research aimed to analyze basic badminton technique skills, particularly high service and clear lob skills, in beginner-level athletes and students. The analysis of students' skills in playing badminton revealed that 2.38% fall into the good category, while the vast majority, 97.62%, are in the very good category, indicating that students effectively implement basic badminton skills, specifically high service and clear lob skills (Bimantara et al., 2022; Subarkah & Marani, 2020).

The substantial percentage of students with good and very good skills can be attributed to a correlation between high service and clear lob skills (Putra & Komari, 2018). The research also aimed to analyze this correlation. The results of the correlation analysis are fascinating as they indicate a strong correlation between high service and clear lob skills, with a significance value of 0.001, which implies a correlation (correlated). The strength of this correlation is evident with a coefficient value of 0.62, and it is positively related. This means that when athletes or students possess high skills in high service, they also tend to have high skills in clear lob, and vice versa. If their high service skills are low, their clear lob skills also tend to be low. These findings suggest a significant and positive relationship between high service and clear lob skills.

Additionally, the correlation analysis between high service and clear lob skills and the total score is another intriguing discovery. These results demonstrate a very strong correlation, with high service skills yielding a coefficient

of 0.95 and clear lob skills yielding a coefficient of 0.83, both displaying a positive relationship. This suggests that athletes or students with strong high service and clear lob skills tend to achieve higher overall scores (Putra & Komari, 2018), consequently increasing their success rate.

These findings align with Putra & Komari's research (Putra & Komari, 2018), which explored the relationship or correlation between basic skills (serving, drop shot, lob, and smash) and badminton playing skills. In summary, this study emphasizes the significance of basic skills (serving, drop shot, lob, and smash) in enhancing badminton playing skills, with greater precision in these basic skills, such as serving, drop shot, lob, and smash, leading to improved athlete/student performance.

This is consistent with research conducted by Erlina & Rohendi (Erlina et al., 2022) and Subarkah & Marani (Subarkah & Marani, 2020), which illustrate the impact of basic skills (serving, drop shot, lob, and smash) on the performance of badminton athletes/students during matches. Seth's study (Seth, 2016) revealed a significant correlation between badminton game performance and basic skills in playing badminton, including high service and clear lob skills. Therefore, having high basic skills in playing badminton results in better performance, whereas lower skills in these areas lead to suboptimal performance in competitions.

Early age coaching is required so that the sport of badminton, especially in Indonesia, can still compete with other countries, enabling Indonesian athletes to excel and even win gold medals in future Olympics. In addition to intensive coaching, training is also needed to enhance students' badminton playing abilities (Safitri and Ramadani, 2021; Wijaya, 2018). Formal education, such as in elementary schools, prioritizes teaching basic badminton techniques, including lob shot techniques, backhand smash techniques, strategies, mental resilience, and stamina (Zarwan, Arsil, and Hardiansyah, 2018; Zarwan and Hardiansyah, 2019).

The results of this study contribute to existing research, especially in the context of early childhood or elementary school badminton learning outcomes. According to Awira et al. (2022), based on the results obtained in this study, five students have met the success criteria established in the research, which include the improvement of skills in lob shots, such as the ability to hit beyond the baseline and lob shots that pass the opponent. Guided learning can enhance students' badminton lob shot skills. They address a gap in previous research by focusing specifically on the analysis of students' or athletes' badminton playing skills. The findings offer evidence that students who actively engage in the learning process and display diligence tend to develop strong basic skills, supported by various learning approaches (Casebolt & Zhang, 2020; Riswara & Yulian-dri, 2017; Hidayat, 2016; Y. Supriyatna et al., 2019; Y. Hidayat et al., 2023).
he conclusion outcomes.

CONCLUSION

Based on the results and discussions of this study, it can be concluded that elementary school students in the city of Bandung, Indonesia, demonstrate good and very good proficiency in basic badminton skills, specifically high service and clear lob. There exists a significant and positive relationship or correlation between these fundamental skills, falling into the strong category. Additionally, there is a very strong relationship between the overall score and the two fundamental skills, high service and clear lob.

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