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The Effect of Shooting Training Methods with the BEEF Concept on Basketball Extracurricular Free Throw Shooting Ability

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ABSTRACT

This study aims to analyze the effect of shooting training by applying the concept of BEEF (Balance, Eyes, Elbow, Follow-Through) to the ability of free throws in extracurricular basketball students at SMP Negeri 15 Bengkulu City. This quantitative study used a one-group pretest-posttest design with a population of 25 students who all became research samples through the total sampling technique, training was carried out with the BEEF approach, and data were collected through direct tests in the form of 10 free throw attempts. Statistical analysis shows the data is normally distributed and homogeneous. The results of the hypothesis test recorded a t-count value of 10, greater than the table 2.064 at the 0.05 significance level, so the alternative hypothesis is accepted. These findings confirm that BEEF concept-based training has a significant effect on improving students' free throw shooting ability. The BEEF concept is proven to be effective in helping students improve shooting techniques, especially body balance, gaze focus, elbow position, and optimal follow-up movements. Thus, shooting exercises using the BEEF principle can be used as an effective strategy in coaching basic basketball skills, especially free throws, to support the development of students' abilities in a practical and structured manner.

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INTRODUCTION

Basketball is a team sport that can be played by various age groups, ranging from children, teenagers, to adults. In official competitions, matches are usually divided by age groups, such as juniors and seniors, as well as by gender (Alitalia & Raiola, 2019). A basketball game consists of four quarters, with each quarter lasting ten minutes. To play basketball well, mastery of basic skills, including the basic techniques of the game, is essential.

One of the key skills that need to be mastered is shooting. Players who are able to shoot with high accuracy are considered to have an advantage in the game, as this ability is an important foundation for opening gaps in the opponent's defense. Players with good shooting ability are often the focus of attention for the opposing team, which can disrupt their defensive strategy. This advantage not only gives the team greater control over the match, but also makes it difficult for the opponent to effectively implement defensive tactics (Hidayatullah, 2017). Sports can bring an achievement, not only academic

achievements but also non-academic achievements such as extracurricular basketball achievements that can make schools proud so that they are widely known in the community and can also win basketball championship competitions both regionally, nationally, and even represent Indonesia in international events (Alamsyah et al., 2022).

Since the goal of this basketball game is to score as many points as possible, and since shots or ball throws are needed to put the ball into the basketball hoop, shots are the most important aspect of winning a victory (Dongoran et al., 2020). Competent shooting techniques are required for shots to produce good results. What are the reasons for the poor performance of the Bengkulu basketball team in the national games? Poor shooting technique is one of them. Do all basketball players use proper shooting techniques? Many athletes continue to shoot with poor movement skills to create decent and correct shots, shooting practice with basic techniques is very important and given when an athlete is young.

Shooting a basketball requires complex movements of the limbs, body, and arms. The closeness of the shot is determined by the placement and range of the player's basket; making the shot involves synchronization from the lower end of the body to the fingertips, specifically between the legs, back, shoulders, elbows, arms, wrists, and fingers. (Utomo & Kartiko, 2015). There are several basic basketball techniques to learn, including *passing*, *dribbling*, and *shooting*. (Fajar Faturahman & Fitri Amalia, 2019). Shooting in a basketball game is important because it allows you to get or make numbers while leaving other basic techniques alone. Most basketball players understand that precision is the most important factor (Hajaang et al., 2019). When it comes to making shots, solid mechanics are more important than concentration (Ramadhan, 2019).

BEEF is a concept that should be presented to students at a young age when it comes to shooting tactics in the game of basketball. BEEF is a shooting concept that helps players understand and master shooting tactics more effectively. The BEEF approach has the advantages of being efficient and effective, as well as easy to understand. BEEF is: (*Balance*): Bend your knees and keep your body in a balanced position when catching the ball. ¹ Eyes: To shoot accurately, the player must immediately focus on the target (the player can quickly coordinate the location of the ring), and the eyes must not be obstructed by the ball or hands. ¹ Elbow: Maintain a vertical arm position while moving continuously: Follow the movement to the ring, lock the elbow, and then release the arm, fingers, and wrist. ³

Shooting is an important throw in basketball. ³ Players who shoot well pose a severe threat to their opponents because they can easily knock the ball into the opponent's ring and score points for the team (Rustanto, 2017). *Passing*, *dribbling*, *defense*, and *rebounding* are basic basketball techniques that can hide the shortcomings of other basic techniques. Every team with the ball should look for opportunities to shoot...

Free Throw is an opportunity given by players to score points without guarding from opponents, from behind the free throw line and inside the half circle. Every competitor must be able to shoot free throws because this approach is useful for scoring vital numbers that determine the victory of the match.

When conducting direct interviews with the basketball extracurricular coach at SMP 15 Bengkulu City, there was no special training to improve *Free Throw Shooting* ability.

Based on this, the first thing to solve is to provide shooting practice using the idea of BEEF. BEEF is a shooting philosophy that helps athletes understand and master shooting skills effectively and correctly. The advantages of shooting using the BEEF principle are that it is efficient and effective, and easy to understand. With the aim of always taking into account the reasons for difficulties faced by students, especially when shooting from the preparation stage to the follow-up stage, students are considered to have motion skills whose movements are carried out continuously (not intermittent). (Litrenta et al. 2020). There are many advantages to practicing with the idea of BEEF. Have instructors put the BEEF concept through many shooting drills? It is still uncertain because at the time of observation, the extracurricular basketball students of SMP 15 Bengkulu City did not understand what the BEEF idea was. This exercise should be offered to good students or future athletes at a young age to produce outstanding athletes.

The challenges faced by students when learning *shooting*, especially in extracurricular basketball at SMP Negeri 15 Bengkulu City, where it can have an impact on the team because when competing to build numbers, one of them is by *shooting*. After making observations and watching live matches, many students who compete still have many mistakes in *shooting* and *shooting Free Throw*, low *shooting* accuracy results in the ball often not entering the ring. There are still many technical errors in *shooting* so that the ball is not directed, the position of the hand when holding the ball still has many mistakes and the balance of many players is not balanced when they want to *shoot* because balance is very influential when they want to *shoot*, if our balance is good then it will be easy when *shooting*, otherwise if the balance of the body is not balanced then the ball to be shot becomes undirected. Researchers have developed solutions or initiatives that use the B.E.E.F concept (*Balance, Eyes, Elbow, Follow trough*) so that teenage students can easily perform shooting movements because shooting exercises with the B.E.E.F concept have gradual motion elements such as starting from foot position, body position, hand position, to shooting throws in basketball games.

From the results of observations made at SMP 15 Bengkulu City, this basketball extracurricular is very rapidly growing, unfortunately the basketball extracurricular achievements at SMP 15 Bengkulu City are still relatively small, the lack of achievement achieved is caused by several factors, the author believes that one of the factors that causes the lack of player achievement is a lack of concentration when *shooting Free Throw*. There are still many who shoot as long as they arrive and seem random so that it is not as desired as seen when the basketball extracurricular students of SMP Negeri 15 Bengkulu City have just participated in a competition at the AL AZHAR 52 Islamic Junior High School in Bengkulu City, they got a direct defeat when they wanted to advance to the next round.

In basketball games when competing we must be confident and also believe in the team, many students are not confident when competing, nervous when they want to *shoot* as a result *shooting* is not directed

and does not enter the ring, and the factor of the large number of spectators makes the mental players from SMP Negeri 15 Bengkulu city go down. Not only *shooting* is a problem for students but *passing* and *dribbling* are also an obstacle for basketball players at SMP Negeri 15 Bengkulu city. The ability to pass and *dribble* and the techniques used still have many mistakes so that the ball is easily captured by the opponent. In addition, the absence of special training to improve the ability to *shoot Free Throw* is also one of the factors for the lack of achievement in basketball games at SMP Negeri 15 Bengkulu City, because training is very important to improve the ability to play basketball, the more we practice the more the ability to play basketball will improve. As a result, the author will use the BEEF idea and training method to improve the ability of *Free Throw shots* with repeated practice and various shooting distances, which are projected to further improve the ability to shoot *Free Throw shots*.

Given the previous context, it became a difficulty for the researchers. This research is very significant and worthwhile to explore because there are still not many studies that reveal it, and even when conducting interviews with students in extracurricular basketball, many do not know about the idea of BEEF, despite the fact that scholars believe this is important and should be done immediately to help basketball coaches, especially those in Indonesia. Because we have to apply the BEEF principles when we want to play basketball and when we want to play basketball well and correctly. The purpose of this study is to see if ¹ there is a substantial effect on shooting practice with the idea of BEEF on shooting ability (*Free Throw*).

¹ METHODS

This research is an experimental study involving one group of participants who received treatment in the form of shooting exercises using the BEEF principle (*Balance, Eyes, Elbow, Follow-Through*). The experimental approach is used to evaluate the cause-and-effect relationship of certain phenomena. As explained by Sugiyono (2018), the experimental method is a research approach designed to examine the impact of special treatments on subjects under controlled conditions. In this context, the researcher wants to measure the effect of BEEF concept-based shooting training on free throw ability. The research was conducted at the basketball court of SMP Negeri 15 Bengkulu City for 16 sessions, taking place from May 24 to June 24, 2023. Each week, the training was conducted four times, namely on Monday, Wednesday, Friday and Sunday. The study population included 25 ¹¹ students who participated in extracurricular basketball activities at the school. In accordance with Sugiyono's theory (2018), total sampling was used because the population was less than 100, so the entire population was used as the research sample. The sample consisted of 25 students, consisting of 13 girls and 12 boys aged 13-15 years. The instrument used in this study was a basketball free throw test. The validity of the instrument was recorded high with a value of 0.98, indicating a very valid measuring instrument. Meanwhile, the reliability of the free throw instrument was found to be 0.50. Although a reliable instrument is not always valid, a valid instrument generally has a good reliability level of 0.50.

RESULTS AND DISCUSSION

The results of this study provide a number of important implications that can be applied in sports learning, especially basketball. This study involved 25 extracurricular basketball students at SMP Negeri 15 Bengkulu City, consisting of 12 boys and 13 girls. Using a *one-group pretest-posttest* experimental design, data was obtained through a series of *free* throw tests conducted 10 times before and after training. The training program, which was conducted over 16 sessions with a frequency of four times per week (Monday, Wednesday, Friday, Sunday), was designed based on the principles of BEEF (*Balance, Eyes, Elbow, Follow-Through*), with additional passing and dribbling exercises.

The results showed an increase in shooting ability by 1.4 points or a percentage increase of 70% after training. Normality, homogeneity, and hypothesis testing support the conclusion that BEEF concept-based training has a significant effect on students' free throw skills.

The profound implication of this study is that the application of a structured technique-based training method such as BEEF not only improves specific skills such as shooting, but also has a positive impact on other basic skills such as passing and dribbling. This confirms the importance of a systematic approach in school sports coaching to maximize students' potential, improve accuracy, and instill a more solid foundation of basketball skills.

Presentation of initial test data (pre test) punishment shots (Free Throw)

This study uses a 10-time free throw test to see how many balls can be put into the basketball ring.

Table 1. Statistical description of the initial test (*pre-test*) *Free Throw*

No.Statistical description Total		
1	Minimum value	0
2	Maximum Value	6
3	Mean	2
4	Standard deviation	1.60

According to table 2, the free throw test results in the pre-test obtained a minimum value of 0, a maximum value of 6, an average (mean) of 2, and a standard deviation of 1.60. The histogram and frequency table are shown below for further information:

Table 2. *Free Throw pre-test* frequency distribution

Free Throw Shooting interval class	Absolute frequency	Frequency %	Category
0 - 2	18	72%	Very less
3 - 4	5	20%	Less
5 - 6	2	8%	Simply
7 - 8	0	0%	Good

9 - 10	0	0%	Very good
Total	25	100%	

According to table 2, out of 25 extracurricular basketball students, 18 have grades 0 - 2, 5 have grades 3 - 4, and 2 have grades 5 - 6. 8% have grades 5 - 6, 0% have grades 7 - 8, and 0% have grades 9 - 10. See the following score distribution histogram for more information..:

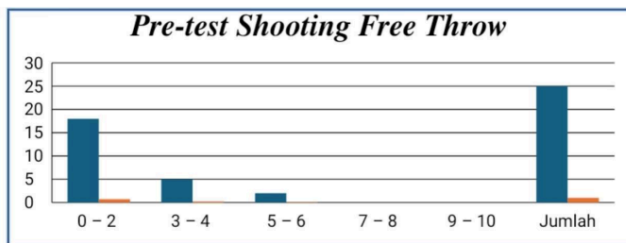


Figure 1. Histogram of Free Throw Preliminary Test Score Distribution

Presentation of Final Test (Post Test) data

Data collection results or (post-test) Free Throw test conducted after offering shooting training therapy with the BEEF concept in extracurricular basketball at SMP Negeri 15 Bengkulu City. The statistical description of the post-test free throws is shown in the table below:

Table 3. Statistical description of the final test (post-test) Free Throw

No.	Statistical description	Total
1	Minimum value	1
2	Maximum Value	7
3	Mean	3,4
4	Standard deviation	1,80

⁶ From table 3, it can be noted that the final test (post-test) of the Free Throw test results obtained a minimum value of 1, a maximum value of 7, an average (mean) of 3.4, and a standard deviation of 1.80.

Table 4. Frequency distribution of the final test (post test) Free Throw

Interval class	Absolute frequency	Frequency %
0 - 2	10	40%
3 - 4	7	28%
5 - 6	7	28%
7 - 8	1	4%
9 - 10	0	0%
Total	25	100%

Based on the data in table 4.4, it can be concluded that out of 25 basketball extracurricular students, 10 students 40% have a score of 0 - 2, then 7 students 28% have a score of 3 - 4, then 7 students 28% have a score of 5 - 6, then 1 student 4% has a score of 7 - 8, then 0 students 0% have a score of 9 - 10. For more details, it can be seen in the following score distribution histogram:

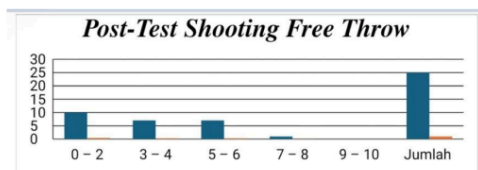


Figure 2. Histogram of Free Throw final test score distribution

1. Test requirements

Normality test

Normality calculations seek to determine whether samples from the population are regularly distributed. The lilliefors formula was used to calculate the normality test. The table below contains a summary of the normal test findings

Table 5. Normality Test Results

No.	N	Initial Test		Final Test		Description Distribution
		Lo	Lt	Lo	Lt	
1	25	0.160	0.173	0.170	0.173	Normal

According to table 5, the normality test results are known in the initial test Lo 0.160 Lt 0.173 and the final test Lo 0.170 Lt 0.173, implying that the scores obtained from the free throw test data are normal distribution.

Homogeneity Test

The homogeneity test is useful for detecting the similarity of many samples, namely whether the variance of samples taken from the population is uniform or not. In the distributed table, the homogeneity test uses the F test with degrees of freedom and significance = 0.05. The free throw test results are consistent, based on the results of the variance test calculation. This is shown in the table below:

Table 6: Homogeneity Test Results

No.	Variables	Standard Deviation	Variance (S ²)
1	Initial test	1,60	2,58
2	Final test	1,45	2,12

Based on table 4.6, it can be concluded that the results of the calculation of the initial test variance (X) are (2.58), while the final test variance (Y) is (2.12). after being calculated, the fcount value = 1.21

while the f_{table} value at a significant level = $0.05 = 1.98$. So $f_{count} < f_{table}$, namely $1.21 < 1.98$, this means that the sample data comes from a population that has the same variance (**Homogeneous**).

2. Hypothesis testing

After completing the necessary normality and homogeneity tests, the t-test was used to evaluate the hypothesis. Because the purpose of this study was to test whether the shooting training method with the BEEF concept had an effect on the shooting ability of free throw basketball extracurriculars at SMP Negeri 15 Bengkulu City.

Hypothesis testing is used to determine whether or not with the BEEF concept on Free Throw shooting ability. the effect of shooting practice

Table 7. Hypothesis Testing Results

n	Preliminary Test and Final Test		Description
25	t_{count}	t_{table}	Significant
	10	2.064	

According to table 4.7, the proposed hypothesis (H_a) can be accepted, so that there is a considerable increase in the results of penalty shots (*Free Throw*) $t_{count} 10 > t_{(table)} 2.064$. As a result, it can be stated that equipping SMP Negeri 15 Bengkulu City students with a shooting training program based on the BEEF concept has a major impact on the results of the penalty shot or free throw shooting test.

CONCLUSION

Based on the results of the study, it can be concluded that shooting practice by applying the BEEF concept has a significant effect on improving the ability to shoot free throws in basketball games. This conclusion is supported by the results of hypothesis testing which shows a significant difference before and after treatment. BEEF concept-based training, which focuses on balance, gaze, elbow position, and follow-through, proved effective in helping students improve their shooting skills. Implementing BEEF principles in training sessions in extracurricular basketball activities has a positive impact that can be seen from the improvement of participants' ability to shoot free throws. This suggests that a structured, technique-based training approach can yield significant results in developing fundamental basketball skills across the board.

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