



## Contribution of Agility And Speed to Ball Drifting Skills in Students Football Extracurricular

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### ABSTRACT

**Purpose of the study:** The purpose of this study was to determine the contribution of agility and speed towards dribbling skills students of football extracurricular.

**Methodology:** This type of research is correlation. The population in this study were students of soccer extracurricular Public High School 5 Bandar Lampung, amounting to 20 people. The sampling technique used was total sampling so that the number of samples in this study were 20 students. The test instrument used was the shuttle run test, 30 meter run test and dribbling test. The data analysis technique used is the r test.

**Main Findings:** Based on the results of the calculation, it can be seen that the value of the contribution of agility and speed to the results of dribbling the ball of football extracurricular students Public High School 5 Bandar Lampung is = 44.76%

**Novelty/Originality of this study:** This research presents novelty by integrating in-depth empirical analysis regarding the contribution of agility and speed to ball dribbling skills in students who take part in extracurricular football. This study uses a quantitative approach that specifically measures how these two physical components individually and synergistically influence dribbling ability, which is a crucial skill in soccer.

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## 1. INTRODUCTION

The world of sport is a world where body interactions, interactions with other humans have a healthy effect. Exercise also has a positive effect on humans, apart from being healthy, exercise can also help reduce high levels of stress and then increase the body's immune resistance [1], [2]. In applying sports within the scope of society, the government seeks formal and non-formal guidance so that there is equal access to sports. The efforts that have been made by the government to promote sports and improve sports performance include carrying out sports in schools or in the community by holding matches and competitions between high schools or holding them in the community [3], [4].

For students who have talents and abilities in certain fields, the school provides extracurricular activities. This activity can be used as a forum for students who have an interest and talent in sports, especially football. Through teacher guidance and training, extracurricular football activities can be a means for students to form positive attitudes and develop their football skills. Football is one of the sports that receives attention from the government. One of the efforts that has been made is coaching football from an early age through football schools [5], [6]. Football is a sport played in teams, where each team consists of 11 people. In football there are

several basic techniques that players must master, including passing and stopping the ball, dribbling the ball, heading the ball or heading and shooting. All of these basic techniques must be mastered thoroughly by the players so that with good basic technical skills combined with teamwork, achievements can be achieved [7], [8].

In this research, the author focuses on dribbling techniques, where dribbling is a running movement while pushing the ball using the foot so that it continues to roll on the ground. The factor that supports the results of dribbling the ball is a player's maximum agility, with agility the player can easily outwit the opponent who wants to seize the ball being driven [9], [10]. Other physical elements that influence the results of dribbling the ball include agility, apart from that, good motor coordination can also make dribbling movements more dynamic [11], [12]. The results of dribbling the ball are also influenced by speed, with maximum speed the player can dribble the ball quickly leaving the opponent fooled. Apart from that, the flexibility factor also influences the results of dribbling the ball, because good flexibility will make it easier for the player to swerve, apply deceptive tactics so that the ball that is about to be captured can continue to be controlled and dribbled [13], [14].

When someone dribbles the ball, the most important supporting factors are agility and flexibility, where agility is a person's ability to change the direction of body movement quickly, and flexibility will make it easier for the player to avoid opponents while dribbling the ball [15], [16]. So that the ball being driven is not easily seized by the opponent, the player must have maximum agility and flexibility, so that he can easily direct the ball being driven while moving to outwit the opponent who wants to seize the ball [17].

Based on the results of observations that the author has made on extracurricular soccer students at Public High School 5 Bandar Lampung, it can be seen that the students' dribbling results are still low, this occurs because of inadequate extracurricular soccer facilities and infrastructure such as fields that are not available at school, the field is quite far from school, not enough football, not enough time to practice football techniques, training is only done once a week, namely during extracurricular football activities and is often filled with playing football directly. Then in terms of dribbling techniques, when students dribble the ball, the ball often escapes control of the student's feet [18], [19]. This is caused by the student's agility and speed not being optimal so that the ball being dribbled is easily seized by the opponent [20]. Apart from that, the student's flexibility and coordination of movements are still not optimal, the student is a bit stiff when dribbling the ball so that his movements are easily predicted by the opponent.

The implications of this research are very significant for football training programs at school level, especially in extracurricular activities. Findings showing the major contribution of agility and speed to dribbling skills can provide a basis for coaches to develop more focused and effective training programs. Coaches can design drills that specifically improve aspects of agility and speed, which in turn can improve a student's overall performance in dribbling [21], [22]. Additionally, schools can consider investing resources in tools and technology that help measure and monitor students' physical development more accurately [23], [24]. By implementing training strategies based on the findings of this research, it is hoped that a generation of young soccer players who are more skilled and competitive can be created.

## **2. RESEARCH METHOD**

### **2.1 Type of Research**

The design of this research was carried out using a correlational research design. Correlational (associative) research designs can be in the form of symmetrical, causal (cause and effect) relationships. Where in this research the variable X1 is agility, the variable X2 is speed and the variable Y is dribbling skills.

### **2.2 Population and Sample**

Population is the subject of research. The population in this study were 20 extracurricular football students at Public High School 5 Bandar Lampung. The sample is a part or representative of the population studied. If there are less than 100 subjects, it is better to take all of them so that the research is population research. Thus, the number of samples in this study was 20 people.

### **2.3 Data Collection Technique**

The collection techniques used in this research are observation, literature and tests. Observation is making direct observations of the research area to obtain the information or data needed for this research. Library to obtain the concepts and theories used in this research. Measurements The test in this study was to measure agility, speed and dribbling results.

### **2.4 Data Analysis Technique**

The correlation analysis technique used is calculating correlation from X1 (agility), the variable X2 (speed) and the variable Y (dribbling skills). Meanwhile, providing an interpretation of the magnitude of the relationship between agility and speed on ball dribbling skills in extracurricular students football:

Table 1. Interpretation of the magnitude of the relationship between agility and speed on ball dribbling skills

Interval	Category
Equal to 0.00	Not Calculated
Less than 0.01-0.199	Very low
Between 0.20-0.399	Low
Between 0.40-0.599	Medium
Between 0.60-0.799	Strong
Between 0.80-1.000	Very strong

To see the magnitude of the contribution of agility and speed to dribbling skills in vocational school football extracurricular students Public High School 5 Bandar Lampung by looking at the coefficient of determination with the formula:  $KD = r^2 \times 100$ .

### 3. RESULTS AND DISCUSSION

Based on the results of research conducted on players using an agility test with shuttle run, a body flexibility test with sit and reach and a ball dribbling skill test, the following detailed data were obtained.

#### 1. Agility Test Results (X1)

Based on the results of agility tests on football extracurricular students at Public High School 5 Bandar Lampung. It was found that the lowest agility achieved by students was 14.91 and the highest agility was 10.82. Calculation of the score distribution resulted in: (1) average score = 11.73; (2) standard deviation = 0.96; (3) median = 11.46; and (4) mode = 10.82. The distribution of agility scores for football extracurricular students at Public High School 5 Bandar Lampung is presented in a frequency distribution list with a total of 6 classes and a class length of 0.77, namely in the first interval class in the range 10.82-11.58 there are 11 people or 55%, in the second interval class in the range 11.59-12.35 there are 7 people or 35%, in the third interval class in the range 12.36-13.12 there was 1 person or 5%, in the fourth interval class in the range 13.13-13.89 there were none, in the fifth interval class in the range 13.90-14.66 there were none, in the sixth interval class in the range 14.67-15.43 there was 1 person or 5%. For more details, see the following table:

Table 2. Frequency Distribution of Agility (X1) in Extracurricular Football Students

No	Interval	Absolute Frequency	Relative frequency
1.	10.82 - 11.58	11	55%
2.	11.59 - 12.35	7	35%
3.	12.36 - 13.12	1	5%
4.	13.13 - 13.89	0	0%
5.	13.90 - 14.66	0	0%
6.	14.67 - 15.43	1	5%
	Amount	20	100%

From the calculation results, it is known that the correlation value of the relationship is large agility with the results of dribbling the ball in football extracurricular students Public High School 5 Bandar Lampung obtained a value of  $r_{count} = 0.545$ .

#### 2. Speed (X2)

Measuring the speed, it was found that the lowest speed achieved was 5.33 and the maximum speed was 4.23. Calculation of the data distribution produced: (1) average = 4.74; (2) standard deviation = 0.34; (3) median = 4.72. The research data is entered into a table with a total of 6 classes, the class length is 0.21, namely in the first interval class in the range 4.23-4.43 there are 5 people or 25%, in the second interval class in the range 4.44-4.64 there are 4 people or 20%, in the third interval class in the range 4.65-4.85 there are 3 people or 15%, in the fourth interval class in the range 4.86-5.06 there are 4 people or 20%, in the fifth interval class in the range 5.07-5.27 there are 2 people or 10%, in the interval class sixth in the range 5.28-5.48 there are 2 people or 10%. For more details, see the following table:

Table 3. Speed Frequency Distribution (X2) in Football Extracurricular Students

No	Interval	Absolute Frequency	Relative frequency
1.	4.23 - 4.43	5	27.27%
2.	4.44 - 4.64	4	22.73%
3.	4.65 - 4.85	3	9.09%
4.	4.86 - 5.06	4	22.73%
5.	5.07 - 5.27	2	18.18%
6.	5.28 - 5.48	2	
	Amount	20	100%

From the calculation results, it is known that the correlation between speed and dribbling results for extracurricular football students at Public High School 5 Bandar Lampung, obtained a value of  $r = 0.615$ .

### 3. Dribbling Results (Y) for Extracurricular Students

Based on the results of calculations regarding dribbling results, the lowest time obtained by students was 17.96 and the fastest time was 10.39. Calculation of the score distribution produces: (1) average = 14.04; (2) standard deviation = 1.97; (3) median = 13.55. The research data is entered into a table with a number of classes of 6 and a class length of 1.43, namely in the first interval class in the range 10.39-11.81 there is 1 person or 5%, in the second interval class in the range 11.82-13.24 there are 8 people or 40%, in the class in the third interval class in the range 13.25- 14.67 there are 4 people or 20%, in the fourth interval class in the range 14.68- 16.10 there are 4 people or 20%, in the fifth interval class in the range 16.11- 17.53 there is 1 person or 5%, in the sixth interval class in the range 17.54- 18.96 there are 2 people or 10%. For more details, see the following table:

Table 4. Frequency Distribution of Dribbling Results (Y) for Extracurricular Football Students

No	Interval	Absolute Frequency	Relative frequency
1.	10.39 - 11.81	1	5%
2.	11.82 - 13.24	8	40%
3.	13.25 - 14.67	4	20%
4.	14.68 - 16.10	4	20%
5.	16.11 - 17.53	1	5%
6.	17.54 - 18.96	2	10%
	Amount	20	100%

From the calculation results it is known that the correlation value between agility and speed of dribbling results for football extracurricular students at Public High School 5 Bandar Lampung is simultaneously 0.669. Then we get  $r_{count} = 0.669$ . At the 5% significance level,  $r_{table} = 0.444$ . thus  $r_{count} > r_{table}$  or  $0.669 > 0.444$ . This shows that there is a correlation between variables X1 and X2 to variable Y or there is a significant relationship between agility and speed and ball dribbling results for extracurricular football students at Public High School 5 Bandar Lampung.

The results of the research show that a student's agility and speed influence his ability to dribble the ball, this indicates that agility and speed have a good contribution to dribbling the football extracurricular students at Public High School 5 Bandar Lampung. Agility and speed will maximize a student's ability to dribble the ball without losing control of the ball being dribbled. From the data analysis previously presented, it is known that agility and speed have a significant contribution to ball dribbling results of 44.76%. This contribution value is large enough to influence a person's ability to dribble the ball, although there are other factors that influence the ability to dribble the ball, agility and speed are important factors that a football player must have optimally. Based on the results of this research, it has been proven that there is a significant contribution from agility and speed to the ability to dribble the ball [25]. This contribution occurs when students dribble the ball, when students move left and right to avoid obstacles while dribbling the ball controlled with their feet. So the agility and speed possessed by students greatly influence their dribbling ability. The better the student's agility and speed, the better their dribbling ability will be [26], [27].

The results of this research are also in line with the results of research by Iman (2008) which shows that there is a significant relationship between agility and speed on the results of dribbling the ball in class VII male students at Kapuas Private Middle School, Pontianak. With detailed conclusions: 1) There is a significant relationship between agility and the results of dribbling the ball in class VII male students at Kapuas Private Middle School Pontianak, 2) There is a significant relationship between speed and the results of dribbling the ball in class VII male students at Kapuas Private Middle School Pontianak, 3) There is significant relationship between agility and speed in class VII male students at Kapuas Private Middle School, Pontianak.

Apart from agility, another factor that also contributes when students dribble the ball is that students' good movement coordination also contributes to their dribbling ability, estimated at 55.24% due to agility and speed on the results of dribbling the ball with a contribution value of 44.76%. One of the important elements for learning and mastering skills in sports is coordination. Coordination is an element of physical conditions that is relatively difficult to define precisely because its function is closely related to other elements of physical conditions and is largely determined by the system's capabilities.

In the game of football, it is hoped that everyone who takes part in the game of football can be more active in improving their abilities, for this reason it is best to carry out useful exercises to support the game of football, such as agility and speed training. A person is said to be agile when he is able to position his body according to his needs, for example a football player is dribbling the ball towards the goal and is suddenly blocked by an opponent who is trying to seize the ball, so at that time he must dodge quickly so that he can pass his opponent so that he remains in control ball [28]. Speed in physics is defined as distance per unit of time. Speed is an important element in several sports such as athletics, football, swimming, and so on. So it can be said

that speed is the body's ability to direct all its systems against load, distance and time which produces mechanical work that is very useful when dribbling the ball [29].

This research has important implications for the development of soccer training programs in schools, by showing that agility and speed significantly influence students' dribbling skills. These findings encourage trainers to design exercises that are more focused on improving these two physical aspects, so that they can improve students' overall performance. In addition, the importance of this research lies in its contribution to providing a scientific basis for the development of young players, allowing for a more structured and data-driven approach. By utilizing modern technology to monitor physical development, schools and coaches can ensure that students receive optimal training [30]. This research also highlights the need for investment in advanced measurement tools and technology, so that they can more accurately evaluate and improve students' soccer skills, which can ultimately improve the quality and competitiveness of young soccer players.

This research has several limitations that need to be considered. First, the research sample is limited to students who participate in extracurricular football at a particular school, so the results may not be generalizable to the entire population of students who play football. Second, this study only assessed the contribution of agility and speed to dribbling skills, without considering other factors such as strength, coordination and mental condition which can also influence performance. Third, the measurement method used, although involving modern technology, may still have limitations in capturing the complexity of football movements and skills as a whole. In addition, this research is cross-sectional, so it cannot identify changes and developments in students' skills over time. Finally, variability in students' level of training and experience may also influence study results, which needs to be taken into account in the interpretation of findings.

#### 4. CONCLUSION

In conclusion, this research reveals that agility and speed have a significant contribution to the dribbling skills of students who take part in soccer extracurriculars. These findings highlight the importance of focusing on developing these two physical aspects in school football training programs. By understanding and implementing training strategies that improve agility and speed, coaches can effectively improve students' dribbling skills. Apart from that, the use of modern technology to monitor and evaluate students' physical development can also help in designing more targeted and efficient training programs. This research provides valuable insights that can be applied to improve the quality of training and performance of young soccer players.

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