

## THE EFFECTIVENESS OF SHORT PASS TRAINING WITH SMALL GOALS ON THE PASSING ACCURACY OF STUDENTS AGED 10 TO 12

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### ABSTRAK

The aim of this study is to investigate the extent to which training in *short passes* affects the basic technique of *passing* in soccer. The observation results show that the 10- to 12-year-old students at the Putra Ciledug soccer school (SSB) still frequently make mistakes when *passing*, which manifests itself in inaccurate passes, a lack of precision in execution, and passes that are too fast for their teammates to receive. The research method used was an experiment with a *one-group pretest-posttest design*. The sample in this study consisted of 26 students, using a saturated sampling approach to determine the sample. The research period consisted of 12 sessions, comprising 1 pretest, 10 treatments, and 1 posttest. The data collection instrument used was the low ball passing test by Subagyo Irianto (1995), which has a validity of 0.812 and a reliability of 0.856. Data analysis was performed using a t-test at a significance level of 5%. The results of the study show a significant difference between the pre-test and post-test results ( $t_{\text{calculated}} = 8.705 > t_{\text{table}} = 1.706$ ;  $p = 0.021 < 0.05$ ) with a percentage increase of 37.69%. Based on these results, it can be concluded that training *short passes* with small goals has a significant impact on improving the passing accuracy of 10- to 12-year-old students at SSB Putra Ciledug.

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### INTRODUCTION

Soccer is considered one of the most popular sports in the world. Throughout its history, this sport has undergone numerous innovations and changes. Advances in science and technology have also had a major impact on the development of soccer. Students also need to keep up to date with the latest developments in the world of soccer (Emral, 2016). According to (Setiawan, 2019), the use of variations in training is a crucial element in the process of improving passing skills. To maintain the enthusiasm of athletes, especially during long training sessions, coaches must design training activities that are not monotonous. The lack of variation in training methods can hinder players'

understanding and mastery of basic passing techniques. A targeted training program with varied methods for learning basic techniques and physical exercises combined with games is designed to prevent students from losing interest during training.

(Yudistira et al., 2018) soccer players must have a good understanding of basic movements and game strategies, including activities when in possession of the ball and when not in possession of the ball. Based on a brief search by the researcher, there are three studies that deal with passing. (Rendi, 2023) The training model for passing in pairs was found to be suitable after a small trial run aimed at improving the passing skills and teamwork of soccer players in Palembang. The trial run showed a validity of 84% for passing skills and 83% for teamwork, although some revisions are still needed. In a large-scale test, the validity increased to 95.2% for passing skills and 84.9% for teamwork, without the need for additional revisions.

Passing is one of the basic techniques that every player must master. On a small playing field, hard and accurate passes are required (Gema et al., 2016). The author believes that passing skills are very important in soccer because accurate and precise passes make it easy to receive and control the ball. SSB Putra Ciledug has three age groups that train: 7- to 9-year-olds, 10- to 12-year-olds, and 13- to 16-year-olds. Based on observations made by the researcher over a period of about one month in January 2024, in the training program itself, the coaches never create a training program, but simply focus on training the basic techniques. Source: Rizal (head coach of SSB Putra Ciledug).

SSB students must learn all the basic soccer skills, but many of the students at SSB Putra Ciledug have not yet mastered these skills optimally. For example, their passes to teammates are inaccurate, their shots miss the goal, their ball control is not yet optimal, their headers are still inaccurate, their foot passes are still inaccurate, their gaze is still too focused on the ball when passing, and their passing accuracy is not yet optimal. Observations by researchers and information from parents suggest that this may be due to overly repetitive training methods, which cause students to become bored and demotivated. Basic soccer skills such as passing, shooting, stopping, dribbling, and heading play an important role in the success of players on the field (Abdillah Achmad Mufiid, 2019).

Secondly (Arianto, 2016), the aim of this study is to evaluate the influence of exercises in the form of small games on the passing accuracy of players at the UNY soccer club. A total of 40 active players from the club were used as the research group. The analysis results show an average difference between the pre- and post-tests of 1.75 these

results confirm the null hypothesis ( $H_0$ ) and reject the alternative hypothesis ( $H_a$ ), showing that training with small game exercises has a significant impact on improving the passing accuracy of players.

Thirdly (Qolbarijal, 2017), this study focused on investigating the influence of passing exercises using the inside and sole of the foot on the passing accuracy of players at the Desa Beringin Kencana football club, Kecamatan Candipuro, Lampung Selatan. This study used an experimental approach. The sample consisted of 22 soccer players from the village. Data collection was carried out using a passing accuracy test and data analysis using a t-test. The research data shows that: 1) Passing exercises using the inside of the foot have a significant effect on improving the passing accuracy of players from the Desa Beringin Kencana football club, Kecamatan Candipuro, Kabupaten Lampung Selatan, as evidenced by a t-value of 6.829, which is above the t-table value of 2.228. 2) The t-value of 6.640, which is also greater than the t-table value of 2.228, confirms that training has a significant effect on passing accuracy. 3) The team's average passing accuracy of 22.32% is higher than 21.30%, showing that training with the inside of the foot is more effective than training with the top of the foot.

Observations at SSB Putra Ciledug show that many SSB Putra Ciledug students make mistakes when passing. The passes are either too strong, making it difficult for teammates to control the ball, or they are too inaccurate, making it unclear where the ball will go. Passing in pairs was developed as a method for training basic soccer techniques, with training conducted at a distance of about 10 meters, with two players facing each other and passing the ball to each other. This activity aims to improve passing accuracy and ball control. In addition, this training is also used to develop players' ball control, especially in adjusting the strength of the pass to the distance between players (Santosa, 2016). The research question is whether passing drills in pairs have a significant effect on the passing skills of players. This study was conducted to determine the extent to which passing drills in pairs affect the passing skills of students aged 10 to 12 at the Putra Ciledug soccer school. With reference to the previously identified problems, this study focuses on the influence of passing training in pairs on the passing skills of students aged 10 to 12 at the Putra Ciledug soccer school. This restriction was made to avoid an overly broad interpretation.

## **RESEARCH METHOD**

(Sugiyono, 2014) explains that the researchers in this experiment actually used a pre-experimental design, in which a group or class was subjected to a pre-test and a post-test. According to (Sugiyono, 2014), a pre-experimental design is a design that involves only one group that is tested before and after treatment. This design is carried out on one group without a control group or comparison group. One of the research methods is experimentation. The result of conducting the exercise is the cause-and-effect relationship that emerges from the test results. This study conducted an experiment using a one-group pretest-posttest design. (Kemal Pasha, A. G., Mahardika, G. P., & Sitompul, S. R. 2024) used a similar method in this study by using a quantitative approach with a pre-experimental design and a one-group pretest-posttest method. The researchers conducted a pretest to measure the students' passing accuracy before training, then implemented a treatment in the form of short passes with small goals during 16 training sessions, and concluded with a posttest to measure the students' agility after training.

The population of this study consists of 26 students from SSB Putra Ciledug aged between 10 and 12 years. The sample comprises 26 students aged between 10 and 12 years. Of these, 15 students are 10 years old, 10 students are 11 years old, and 1 student is 12 years old. This study used the saturation sampling method, meaning that the entire population was used as the sample for the study. The study was conducted at the Putra Ciledug Soccer School. A total of 12 meetings were held, including a pre-test, 10 treatments, and a post-test. As part of the implementation of the annual training research that had already been compiled, interventions were carried out to achieve a change in behavior with regard to the students' passing skills. The measures included 10 different training models, which were based on the training goals to be achieved. The variants of the training models were compiled according to the analysis of the movement requirements for passing and the positioning for catching the pass. The training dosage is based on FITS (frequency, intensity, time, set) for each model offered, taking into account the goals of each training session.

This study uses measurements for the initial and final measurements. The instrument used is a test to measure soccer skills developed by (Subagyo, 1995) in the section "Executing a low pass to the target." This test involves a small goal with a width of 1.5 meters and a post height of 0.5 meters, with the distance between the shooter and the goal being 9 meters, the line behind the goal also being 9 meters, and the boundary line being 1.5 meters. The validity of the test is 0.812 and the reliability is 0.856. A pass is

considered correct if it crosses the valid line to the specified target. The collected data is then tested and analyzed. The researcher must ensure that the analyzed data is normally distributed, so a normality and homogeneity test is required (Suharsimi Arikunto, 2006).

## RESULTS AND DISCUSSION

### Pre-test and Post-test Data Analysis

Quantitative data collection during the pre-test and post-test was carried out using a research instrument in the form of an observation sheet to assess fit accuracy. The categories used to assess the students' fit abilities were "Very Good," "Good," "Average," "Poor," and "Very Poor." The collected data were analyzed using normality tests, homogeneity tests, and t-hypothesis tests using the SPSS Version 25 program to determine whether there were significant differences before and after the treatment. According to (Siregar et al. 2023), the post-test is a test conducted after the learning process is complete to assess the extent to which students have understood the material taught. The post-test was conducted after all subjects had been trained with short pass exercises using small goals over a period of time. The posttest serves to measure the development of students' passing accuracy after the treatment. The results of the posttest provide an overview of the level of passing skills of the students after participating in the series of exercises that had been designed. The posttest was measured using the same instrument for assessing passing accuracy as in the pretest, so that the results of the pretest and the posttest could be compared objectively. The data from the follow-up examination was then analyzed using SPSS Version 25 to determine whether the students' passing accuracy had improved significantly after the treatment in the form of short pass exercises with small goals.

**Table 1.** Result Pretest dan Posttest

Deskriptive	Pretest	Posttest
Mean	39.20	37.80
Median	38.50	37.00
Std. Deviation	9.612	9.234
Minimum	25	20
Maximum	55	55
Range	30	35

Table 1, results of the pre-test on the passing accuracy of students at the Putra Ciledug soccer school (SSB) aged 10 to 12, show that the average (mean) value of the pre-test is 39.20. This indicates that the initial passing accuracy of the students before the training with short passes to a small goal was still in the middle range. The median value of the pre-test was 38.50, which means that half of the sample scored below 38.50 and the

other half scored above it. The standard deviation was 9.612, indicating a relatively large variation or dispersion of data among the pre-test results of the entire sample. This shows that there were differences in initial passing accuracy among the students before the treatment.

The minimum score achieved by the students was 25, while the maximum score was 55, giving a range of 30 for the pre-test scores. This range indicates that there was a fairly significant difference between the students with the lowest and highest passing accuracy scores prior to the treatment. Overall, these data from the pre-test provide an initial overview of the students' passing accuracy. After training with short passes to small goals, these data will be compared with the results of the post-test to determine whether the students' skills have improved after training. Overall, this data from the pre-test provides an initial overview of the students' passing accuracy. After training with short passes to small goals, this data will be compared with the results of the post-test to determine whether the students' skills have improved after training.

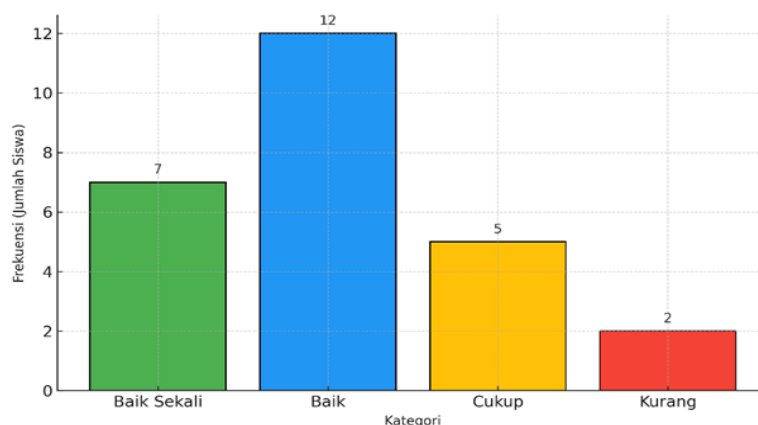
The results of the post-test data processing show that the average post-test score (mean) for students at the Putra Ciledug soccer school (SSB) aged 10 to 12 is 37.80. This shows that the students' passing skills are adequate to good overall after the short passing training with small goals. The median value of 37.00 shows that half of the students have a passing accuracy value below this value, while the other half is above it. The median value, which is quite close to the mean, indicates that the data distribution is relatively normal, with most students achieving values that are not too far from the mean.

With a standard deviation of 9.234, there is significant variation in the students' passing skills, with some students scoring higher than others. The minimum value of 20 in the post-test shows the lowest score achieved by the students after the treatment, while the maximum value of 55 represents the highest score achieved by the students in the post-test.

The score range of 35 shows that there are quite large differences in passing accuracy among the students. The results of this analysis suggest that training short passes to a small goal has the potential to improve students' passing accuracy, even though the results vary depending on the individual abilities of each student.

**Table 2.** Assessment Category Pretest

Interval Class	Category	Student Frequency	Percentage
$X < 28,15$	Very Low	1	3,85%
$28,15 < X \leq 36,06$	Low	5	19,23%
$36,06 < X \leq 44,97$	Medium	10	38,46%
$44,97 < X \leq 52,88$	High	7	26,92%
$X > 52,88$	Very High	3	11,54%
Total		26 student	100%



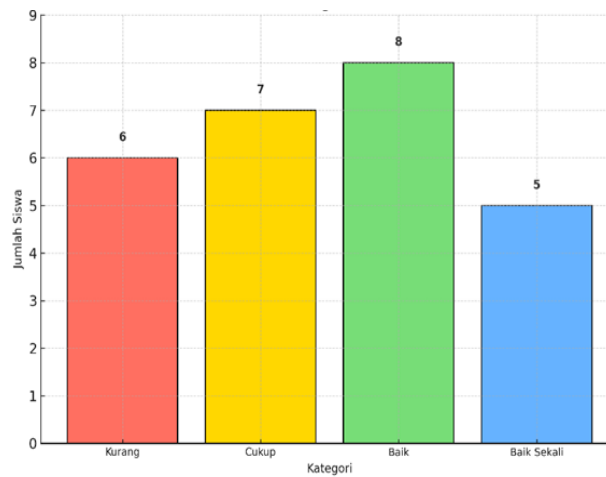
**Picture 1. Bar Chart of Pretest Results**

A total of 3 students were in the “Very Good” category, followed by 7 students in the ‘Good’ category. Then there were 10 students in the “Average” category, 5 students in the “Poor” category, and 2 more students in the “Very Poor” category. This data shows that before participating in the training program, most students were at the ‘Good’ level in terms of passing accuracy, although there were still some students who needed special attention as they were in the “Poor” category. The results of the pre-test on passing accuracy of 26 students aged 10 to 12 from the Putra Ciledug Soccer School (SSB) before the short passing training with small goals are shown in the table above. The passing accuracy test gave each student a score.

**Tabel 3. Kategori Penilaian Posttest**

Kelas Interval	Kategori	Frekuensi Siswa	Persentase
$X < 30,11$	Very Low	1	3,85%
$30,11 < X \leq 34,88$	Low	5	19,23%
$34,88 < X \leq 39,65$	Moderate	8	30,77%
$39,65 < X \leq 44,42$	High	7	26,92%
$X > 44,42$	Very High	5	19,23%
<b>Total</b>		<b>26 Student</b>	<b>100%</b>

Table 3 shows how the categories of students' passing accuracy are distributed based on the results of the post-test after training with short passes to small goals. The majority of the 26 students were in the medium (30.77%) and high (26.92%) categories, which represents a significant improvement over the pre-test. In addition, 5 students (19.23%) were in the “low” category and 1 student (3.85%) was in the “very low” category; 19.23% of these students showed an improvement in their skills after training. Overall, this distribution shows that students have better passing skills after participating in the planned training program.



**Picture 2, Post-test Results Bar Chart**

The graph above shows the distribution of the categories of passing accuracy among the students after training short passes on a small goal. A total of 5 students fall into the “very high” category, 7 students into the “high” category, 8 students into the “medium” category, 5 students into the ‘low’ category, and 1 student is still in the “very low” category.

### Data Analysis Results

According to (Raffles and Nasution, 2024), data analysis is a systematic process for processing, compiling, and interpreting data with the aim of identifying patterns, trends, or correlations that are useful for decision-making. With the right analysis, data can be transformed into insights that help companies, organizations, or individuals choose the best strategy.

#### 1. Normality Test

The normality test is a statistical test used to determine whether the available data is normally distributed or not (Quraisy, 2020). The Shapiro-Wilk test is one of the most commonly used methods for testing normal distribution, especially for relatively small samples (less than 50), but it can also be used for larger samples. The decision criteria for the Shapiro-Wilk U test are as follows:

- a) If the significance value is  $> 0.05$ , the data is normally distributed.
- b) If the significance value is  $< 0.05$ , the data is not normally distributed.

**Table 4. Hypothesis Testing**

Saphiro-Wilk Normality Test Results		
Group	Significance Value	Description
Pretest	0,743	Normal Distribution
Postets	0,293	Normal Distribution

Based on the analysis results shown in Table 4, a significance value (Sig.) of 0.743 was determined for the pre-test data and 0.293 for the post-test data. According to the decision rules, the data is considered to be normally distributed if the significance value is greater than 0.05 ( $p > 0.05$ ).

Thus, both sets of values, the pre-test and post-test values, have a significance value greater than 0.05, so it can be concluded that the data from the pre-test and post-test results in this study are normally distributed. A normal data distribution shows that the data meet an important prerequisite for performing parametric statistical tests in the next phase of data analysis.

## 2. Homogeneity Test

According to (Usmadi, 2020), the homogeneity test is used to determine whether multiple population variants are equal. The basic assumption of analysis of variance (ANOVA) is that the population variants are equal. The test of equality of two variances compares both variances to determine whether the data distribution is homogeneous.

The homogeneity test is used to determine whether the data variance in the compared groups is equal (homogeneous). The prerequisite for the homogeneity test is a significance value ( $p$ ) greater than or equal to 0.05. This means that if the significance value is greater than 0.05, the data can be described as homogeneous. Here are the results of the homogeneity test:

**Table 5.** Homogeneity Test Results

Pengujian	Nilai Signifikansi	Keterangan
Based on Mean	.051	Homogen
Based on Median	.066	Homogen
Based on Median and with adjusted df	.079	Homogen
Based on trimmed mean	.061	Homogen

The results shown in Table 5 are based on four approaches: mean, median, median with adjustment of the degree of freedom, and trimmed mean. The test results show that all significance values of the four approaches are greater than 0.05, namely 0.051, 0.066, 0.079, and 0.061. A significance value greater than 0.05 indicates that the variance between the data groups is equal or homogeneous.

This leads to the conclusion that the data in this study satisfy the homogeneity assumption. This means that the variance between the groups does not differ

significantly, so that the data can be further analyzed using parametric statistical tests that require the homogeneity assumption.

### 3. Hypothesis Testing

The t-test is a method for testing hypotheses that can be used to determine whether an independent variable has a significant influence on a dependent variable. The prerequisite for the t-test in regression analysis is that the data meet the assumptions of normality and homogeneity.

The decision is made based on the significance value in the "Coefficients" table. As a rule, regression analysis is performed with a confidence level of 95% or a significance level of 5% ( $\alpha = 0.05$ ). The criteria for the t-test (Ghozali, 2019) are as follows:

1. If the significance value of the t-test is  $> 0.05$ ,  $H_0$  is accepted and  $H_a$  is rejected. This means that there is no influence of the independent variables on the dependent variable.
2. If the significance value of the t-test is  $< 0.05$ ,  $H_0$  is rejected and  $H_a$  is accepted. This means that there is an influence of the independent variable on the dependent variable.

**Table 6.** T-Test

Testing	Significance value	Calculated t - value	Description
Pre-test : paired short pass Practice - Post-test : paired short pass practice	.021	8,705	There are differences

To calculate the t-value, a significance level of 0.05 and a degree of freedom (df) calculated based on the sample size (N) are used. In this case,  $N = 26$ , so  $df = 25$ . Using the t-distribution at a significance level of 0.05 and  $df = 25$  for a two-tailed test, the t-value is 1.706.

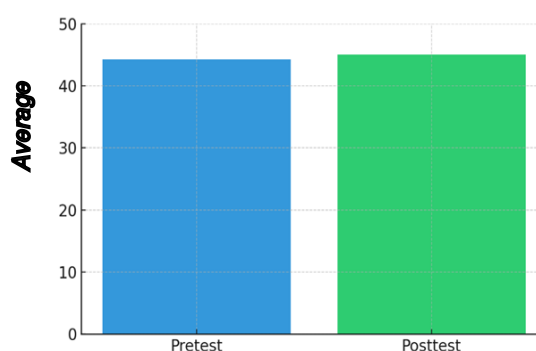
Based on the result of the t-test, the t-value is 8.705, which is greater than the t-value of 1.706. In addition, the significance value (p-value) of 0.021 is also less than 0.05, indicating that the difference between the pre-test and the post-test is significant. Therefore, the alternative hypothesis ( $H_a$ ) is accepted, which states that training with short passes in pairs has a significant effect on improving the underhand pass skills of 10- to 12-year-old students at SSB Putra Ciledug. This result proves that training with short passes in pairs is effective in improving students' underhand pass skills.

## Discussion

(Adim et al., 2025) Passing is a fundamental technique in futsal that every player must master, as it is crucial for ball control, controlling the pace of the game, and creating scoring opportunities. According to (Yustus et al., 2021), in order to improve passing skills in soccer, various models or methods must be applied to help students learn the movement sequences and develop accurate passing skills. The examination of the sources cited above forms the basis for the problem statement, and the secondary data collected at the beginning of the study show that the problems encountered must be investigated through an experimental study, which will hopefully provide answers to these questions.

Based on the results of a series of data analyses that were collected, the normality test shows that the pre-test and post-test data are normally distributed and meet the requirements for parametric analysis. The paired t-test shows that there is a significant difference between the pre-test and post-test results, with a significance value of 0.021, which is  $< 0.05$ , and a t-value of 8.705, which is greater than the t-table value of 1.706, suggesting that short pass training with small goals has a significant impact on improving the accuracy of students' flat passes.

The average pre-test score of 44.29 and the average post-test score of 45 result in a mean difference of 0.71. This shows that short pass training with small goals had an impact on the passing accuracy of 10- to 12-year-old students at the Ciledug soccer school and led to a change compared to the situation before the experiment.



**Picture 3. Comparison Chart of Pretest and Posttest Results.**

Based on the results of the comparison between the average of the pre-test and the average of the post-test, an increase in the average value can be observed after the students completed the short pass training with small goals. The pre-test average of 44.29 rose to 45 in the post-test, with a mean difference of 0.71. Although the increase is relatively small, these results show that this training method has a positive effect on passing accuracy. This improvement may be due to the specific nature of the training,

which requires students to focus more on directing the ball toward a small target, thereby improving their ball control and passing accuracy. In addition, this training also develops faster decision-making and technical skills under more challenging playing conditions, which ultimately contributes to an improvement in the students' passing accuracy.

The improvement in students' passing accuracy is due to the use of short passing training with small goals, which encourages students to focus more on directing the ball toward a narrow target. In addition, this exercise also trains better ball control, passing accuracy, and faster decision-making under pressure (Banuwa et al. 2021). The smaller target area requires students to improve their concentration and passing technique, which contributes to an improvement in overall passing accuracy.

This result supports the alternative hypothesis ( $H_a$ ), which states that training short passes in pairs can improve the passing accuracy of students. This training method, which emphasizes accuracy and ball control in real game situations, is particularly recommended for the 10- to 12-year-old age group, as it can improve students' basic soccer skills.

(Usmadi, 2020) testing the normality and homogeneity of the data is an important step in ensuring the validity of the statistical tests used so that the results of the analysis have a solid scientific basis for conclusions. According to a study by (Quraisy, 2020), it is emphasized that the Shapiro-Wilk test is effective for small samples, as the results of this test can determine whether the data can be tested using parametric or nonparametric statistics.

## **CONCLUSION AND RECOMMENDATIONS**

Based on the results of the research conducted, which is grounded in research principles and prioritizes the principles of research implementation, this research has made a significant contribution to the research findings. The results of the data analysis demonstrate quantitative success. The training variables implemented proved to be effective by creating an analysis of the basic movement requirements for passing and compiling a training program. These measures improved the passing accuracy of students aged 10 to 12 at the SSB level.

This study has advantages and disadvantages that can serve as recommendations and references for further studies. The weakness of this study lies in the small number of subjects used. It is important to increase the number of subjects so that this study can be

proven effective for all performance levels, and it is necessary to apply the study to female subjects as well to prove the impact of the success of this study. The strengths of this study lie more in the results of the training composition (dosage) based on the requirements of passing, as well as in the creation of a program that can be adapted to the short training time. Considerations that can serve as a reference for coaches to conduct a comprehensive examination of basic movement requirements so that the basic needs of students can be analyzed, as well as recommendations for soccer club managers to comprehensively support student training measures.

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