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Development of a shooting training model for football players aged 14-17 years
Desarrollo de un modelo de entrenamiento de tiro para futbolistas de 14 a 17 años

Paisal, Samsudin, Iwan Setiawan
State University of Jakarta (Indonesia)

Abstract. This research aims to produce a product and test the effectiveness of a shooting training model for football players aged 14-17 years. The evaluation by experts used three football experts who work as football coaches and three lecturers who are experts in sports testing and measurement who are also lecturers in football courses. This research method uses the Borg and Gall Research and Development (R&D) model. The research subjects were football players aged 14-17 years, totaling 20 small test subjects, 80 people for the large test, and 50 people for the effectiveness test consisting of 25 people in the experimental group and 25 people in the control group. The instruments used were questionnaires, interviews, and observations. To measure the shooting ability of football players as well as the level of effectiveness of the football shooting training model product using the validated Paisal Football Shooting Test (PFST) test instrument. The results of the N-Gain percent test for the experimental group obtained a mean value = 0.72 or equal to 72%, which is included in the quite effective category. Meanwhile, the results of the N-Gain percent test in the control group obtained a mean value = 0.26 or equal to 26%, which was included in the ineffective category. So it can be concluded that the shooting training model for football players aged 14-17 years is quite effective and worthy of use to improve the shooting abilities of football players.
Keywords: Development, Training Model, Shooting, Kicking The Ball, Football, Soccer

Resumen. El objetivo de esta investigación es elaborar un producto y probar la eficacia de un modelo de entrenamiento de tiro para futbolistas de 14 a 17 años. Para la evaluación por expertos se recurrió a tres expertos en fútbol que trabajan como entrenadores de fútbol y a tres profesores expertos en pruebas y mediciones deportivas que también imparten cursos de fútbol. Este método de investigación utiliza el modelo de Investigación y Desarrollo (I+D) de Borg y Gall. Los sujetos de la investigación eran jugadores de fútbol de entre 14 y 17 años, en total 20 sujetos para la prueba pequeña, 80 personas para la prueba grande y 50 personas para la prueba de eficacia, que consistía en 25 personas en el grupo experimental y 25 personas en el grupo de control. Los instrumentos utilizados fueron cuestionarios, entrevistas y observaciones. Medir la capacidad de tiro de los futbolistas, así como el nivel de eficacia del producto modelo de entrenamiento de tiro utilizando el instrumento validado Paisal Football Shooting Test (PFST). Los resultados de la prueba del porcentaje de ganancia N para el grupo experimental obtuvieron un valor medio = 0,72 o igual a 72%, que se incluye en la categoría de bastante eficaz. Mientras tanto, los resultados de la prueba del porcentaje de ganancia N en el grupo de control obtuvieron un valor medio = 0,26 o igual al 26%, que se incluyó en la categoría de ineficaz. Por lo tanto, se puede concluir que el modelo de entrenamiento de tiro para futbolistas de entre 14 y 17 años es bastante eficaz y digno de utilizarse para mejorar las habilidades de tiro de los futbolistas.
Palabras clave: Desarrollo, Modelo de entrenamiento, Tiro, patear el balón, Fútbol

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Paisal
faizpaisal71@gmail.com

Introduction

There are many supporting aspects in achieving achievements in sports, the best achievements will only be achieved if coaching can be implemented and focused on the complete training aspects which include; physical condition, technical skills, tactical skills, athlete personality, and mental abilities. These five aspects form a unified whole (Tangkudung & Wahyuningtyas, 2012). One of the sports that is popular with both young and old, both men and women all over the world is football. Football is the only team sport that is spread all over the world (Brewin, 2022). Very simple gameplay and rules make this game popular. The basic principle of football is to score more goals than the opposing team (Shahidul Islam et al., 2019). Football is the most popular sport in the world, in almost every corner of the world people know about football, so currently the sport of football is experiencing development with the presence of Futsal and Minisoccer, making many people play this sport as a means of recreation, entertainment and as a fitness activity. However, sometimes it becomes a competition in the form of tournaments held by these communities which of course leads to achievement. Now that it is growing, football has not only become a popular sport but also an industry that can generate commercial profits (Şener & Karapolatgil, 2015).

Football is a dynamic and multidimensional sport that involves various techniques, tactics, physiological and psychological elements that will determine the results of teamwork (Michail et al., 2021). The team that scores more goals becomes the winner (Rollin et al., 2019). Football is a game of kicking to put the ball into the opponent's goal and defend one's own goal from conceding the ball and players can use all body parts except the arms and hands (Muhajir, 2016). Another opinion was expressed that football is a game to seek victory according to FIFA rules, namely by scoring more goals than conceding (Danurwindo et al., 2017). From the several theories above, it can be concluded that football is a team sport played by 11 players whose aim is to score as many goals as possible compared to the opposing team.

One of the conditions for being able to play football well is that players must be equipped with good basic technical skills because players who have good basic skills tend to be able to play football well too. As stated by (Michail et al., 2021) "Soccer is not just who runs the fastest, who is the strongest or who is the most aggressive. Physical, technical, tactical and mental skills differentiate soccer players by competitive level". The meaning of the quote above is that

football is not just about running the fastest, who is the strongest, or who is the most aggressive, but rather a combination of physical, technical, tactical, and mental abilities that differentiate football players based on their level of competition.

A football player is important to have a good cognitive understanding of football, especially shooting techniques to the goal so that the results achieved can be maximised. According to (Carnevale et al., 2024) In a football match, players are subject to high cognitive demands. These demands can generate mental fatigue. players with a high level of tactical performance performed more offensive and defensive tactical actions compared to their peers with a low level of tactical performance, under the conditions with and without mental fatigue. Football players must have creativity for more effective results (Freire de Almeida & Molina Saorin, 2021).

In the game of football, there are several basic techniques that a player must master in order to play well in order to improve performance, such as dribbling the ball, kicking the ball, heading the ball, and so on. According to (Bahtra, 2022) Some basic techniques that must be mastered by football players include passing, ball control, dribbling, kicking the ball into the goal (shooting), and heading the ball. According to (Keo et al., 2022) Mastering the basic technical skills of playing football will certainly make a very significant contribution to the team achieving victory. According to (Bahtra, 2022) In accordance with the basic idea of the game of football, namely scoring as many goals as possible against the opponent's goal and defending one's own goal from being conceded, so mastery of basic techniques in football is very necessary.

Kicking the ball is a basic technique that must be mastered to become a soccer player. If players have good basic kicking techniques then they will be able to play effectively and efficiently. The technique of kicking the ball is one of the basic techniques in football which is included in the basic techniques with the ball (Nunome et al., 2018). The technique of kicking the ball is the basis of the game of football that must be mastered by players (Torreblanca-Martínez et al., 2018). According to (Shahidul Islam et al., 2019) Shooting accuracy has an impact on the outcome of the match, so it is important that players have accurate and effective shooting skills. The main goal of attacking is to score a goal against the opponent's goal. The better the level of accuracy of each player's passing and shooting, the greater the possibility of a team's control of the game on the field, and the chance of winning is of course also higher. (Vidoni & Ferraz, 2019).

According to (Anam et al., 2021) Shooting is easy to do, but high accuracy is required so that the shooting is difficult for the goalkeeper to anticipate so that it can result in a goal. Accuracy is the ability to direct something to the intended target, the target can be an object that is hit (Hunter et al., 2018). Accuracy and shooting in football have a close relationship. A football player who has good ball control and dribble will be useless in a match if that player does not have the accuracy of kicking to pass the ball to a friend and the final finishing (shooting) of course also requires good accuracy. (Palucci Vieira et al., 2021)

From the description of the various theories above related to shooting, it can be concluded that shooting skills are a very important basic technique in the game of football where shooting is a basic technique with the ball whose aim is to score goals. In an effort to shoot, accuracy is also required because sometimes football players shoot but the ball they kick soars high or far from the goal target. From an attacking perspective, the goal of football is to shoot at the goal. A player must master the basic skills of kicking a ball and then develop a series of shooting techniques that make it possible to shoot and score goals from various positions on the field. According to (Bahtra, 2022) If you want to have good shooting skills, players must be given the opportunity to kick the ball into the goal (shooting) as much as possible during shooting practice sessions.

Basically, the game of football is a game that requires us to achieve victory by scoring as many goals as possible because the determination of victory in football is how many goals can be scored compared to the opposing team (scoring), so it is important for football players, whatever their position, especially front players, to have good shooting accuracy ability. According to (Junaidi et al., 2019) Football players are required to be able to kick the ball into the opponent's goal well. According to (Karim & Marwane, 2023) The better the level of mastery of a player's shooting technique skills, the closer they are to winning by scoring a goal. Then obey (Wardana et al., 2018) the number of goals that can be scored against the opponent's goal and avoid goals that occur in their own goal, this will lead a team to achieve victory in the match.

The description above shows that the main element in taking a kick at goal (shooting) correctly is mastery of the basic technique of kicking the ball. This can happen if players are given an effective and appropriate training program. A player must master the basic skills of kicking a ball and then develop a series of shooting techniques that enable him to shoot and score goals from various positions on the field. Opportunities or chances to shoot sometimes come suddenly or from a systematic build-up process, individual acceleration, or the result of a combination of play between players so that a player must be ready to take advantage of the opportunity to shoot if the opportunity or opportunity exists. According to(Gryszczenko et al., 2024) goalkeepers concede more without considering the situation of shots on goal. So a football player must be able to shoot by understanding the principles of expected goals and decision making.

This can be done if players do shooting practice repeatedly and involve ball speed while still paying attention to technique, target, and field situations. Research conducted by (Li et al., 2020) where they analyze matches from 2014 to 2018 in the Chinese Football Super League (CSL) shows that the team rankings of all teams are highly correlated with their actual final league rankings. In general, teams that

win the CSL build their success on defensive ability and shooting accuracy. So it can be concluded that shooting is a technique that has enormous benefits in a team and is very important for a forward or other player to have because it can be used to score goals and bring the team to victory. Shooting is a technique that is the spearhead in achieving maximum results in a football match, so it is important to develop and implement an effective and varied training model so that it can be applied to football players to train and hone each player's shooting skills.

Based on observations made by researchers of coaches and players. Observation results show that generally the players are very constrained in the final finishing stage or scoring goals. Players often waste opportunities, especially midfield and front-line players, so they always fail to shoot on target and this results in a lack of goals scored. Apart from that, the coaches who were interviewed simultaneously stated that the absence of a football shooting practice guidebook resulted in limitations in providing shooting practice menus to players so that coaches sometimes only provided shooting practice based on the coach's experience and intuition, the training schedule was not planned and systematic in providing training. From the results of these observations and preliminary studies, it can be concluded that players and coaches really need a more varied, effective, and planned soccer shooting training model in the form of a training guidebook so that shooting training for players can be carried out in a systematic and structured manner.

Meanwhile, according to (Sunarta, 2020) Of the many techniques in the game of football, shooting is the last technique used in the game of football to create goals. According to (Alfian & Faruk, 2019) Shooting effectiveness plays a very important role in creating goals and giving the team victory, but when shooting effectiveness is not controlled by the player, the player will not be able to create goals against the opponent's goal or out of target. The more the development of technical and physical skills, the greater the significant changes in the skills of each football player (Orozco et al., 2021).

From the problems above, it can be concluded that it is important to provide a standard training model to players so that shooting practice can be structured and systematic. According to (Lubis, 2018) Training must follow the concept of appropriate stages, and be well-planned and structured so that the expected goals can be achieved. According to (Hanafi et al., 2019) Exercise is a physical activity that is systematic, planned, and carried out repeatedly, marked by progress or improvement. So it can be concluded that unplanned and unsystematic training will not show maximum results either.

From the problem description above, the author took the initiative to conduct title research "Development of a Shooting Training Model for Football Players Aged 14-17 Years". With the hope that it can be useful and contribute to the world of football. With this training model, coaches can use it to provide training to players and students to improve each player's shooting skills and accuracy.

Material and Methods

Participant

This research is an experimental research designed using the pre-test and post-test control group design method. This research involves players PONRANG FC and RBS SOCCER SCHOOL aged between 14-17 years which is carried out on their respective football fields. The training program is given for six weeks and is carried out three times a week, namely on Monday, Wednesday, and Saturday. A total of 50 football players were divided into two treatment groups, with 25 people in each group. The experimental group was treated by applying an exercise model that had been designed, validated, and had gone through a testing process according to the stages of the Borg and Gall Research and Development (R&D) procedure. Then the control group was given shooting practice treatment using conventional methods.

Research Procedure

This research focuses on developing a shooting training model, so the approach and method used in this research is the Borg and Gall Research and Development (R&D) method. The following will describe the stages:

1. Research and Information Collecting, The first thing to do before looking for information is to conduct a needs analysis.
2. Planning, This stage is to plan and formulate the concept of a soccer player starting training model.
3. Develop preminary form of product, Create a shooting training model for soccer players according to the concept that has been prepared previously. Then proceed with expert validation.
4. Preliminary field testing, This testing stage is also called initial testing or small group testing by providing a soccer shooting training model that has been validated by expert judgment to 20 soccer players aged 14-17 years. This small group trial was carried out to obtain an initial qualitative evaluation of the model design being developed.
5. Main product revision, At this stage we will get several notes related to the shortcomings and weaknesses of the training model being developed.
6. Main field testing, main field trials or also called large group trials. After the training model developed has been revised, the next step is to carry out field trials on a larger group of subjects. Field trials at this stage involved 80 players at different football schools or clubs.
7. Operational product revision, After the main field trials or large group trials are carried out, product revisions will be carried out again based on the results of observations and interviews with players and coaches.
8. Operational field testing, The next stage after revising the field product is the operational test or effectiveness test stage. This was done to answer whether the soccer shooting training model product that is being developed is

more effective and efficient to give to research subjects compared to the old training model. For this effectiveness test, researchers used 50 football players as samples, of which 25 people were in the experimental group and 25 people were in the control group with 2 different football schools or clubs.

9. Final product revision, This stage is the final revision stage of the results of operational tests/effectiveness tests before the product is actually disseminated and implemented widely.

10. Dissemination and implementation, The final stage is the dissemination and implementation stage, this is the stage of disseminating the shooting training model product for football players to the general public.

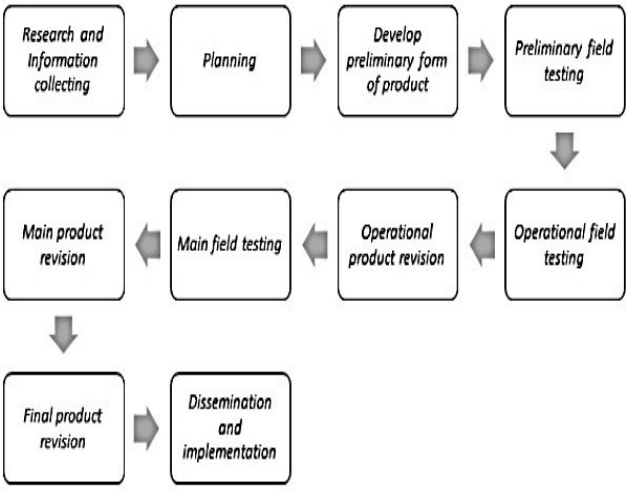

Figure 1. Stages of the Research and Development (R&D) Borg and Gall

Instrument

The test instrument in this study aims to assess or measure the shooting ability of football players. Researchers develop test instruments from Loughborough Soccer Shooting Test (LSST) (Stone & Oliver, 2009) by modifying the test arena, implementation procedures, and the named assessment process "Paisal Football Shooting Test (PFST)". Players are given the opportunity to take the test twice and the score deemed the best will be recorded by researchers. This instrument has been validated by Expert judgment and the instrument has been tested with a level of validity = 0,910 (Valid) while the level of reliability = 0,868 (Reliabel). So it can be concluded that both the validity of the Expert Judgment and the testing of this instrument are suitable for use in research.

Table 1.
Validity Test Results Using *Person Correlation*

	Correlations	X	Y
X	Pearson Correlation	1	,910**
	Sig. (2-tailed)		,000
	N	20	20
Y	Pearson Correlation	,910**	1
	Sig. (2-tailed)	,000	
	N	20	20

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

Based on the table above, a correlation coefficient of 0.910 is obtained. The closer the value is to 1 or -1, the closer the relationship, while the closer to 0, the weaker the relationship (Sepadanius et al., 2019). So it can be concluded that the valid "Paisal Football Shooting Test (PFST)" is in the "very strong" or valid category.

Table 2.
Correlation Test Results Pearson *Product Moment*

	Correlations	X1	X2
X1	Pearson Correlation	1	,868**
	Sig. (2-tailed)		,000
	N	20	20
X2	Pearson Correlation	,868**	1
	Sig. (2-tailed)	,000	
	N	20	20

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

An instrument is said to be reliable if it has a reliability value > 0,5. Based on the reliability test table above, the reliability value is 0,868 > 0,5. So it can be concluded that the reliability of the test "Paisal Football Shooting Test (PFST)" is in the "very strong" or reliable category.

Training Model

The training model used is a soccer shooting training model that has been validated by Expert Judgment and has gone through the Research Procedure stages of Research and Development (R&D) Borg and Gall. The following is the training model used:

Table 3.
Shooting training model in football for players aged 14-17 years

No	type of shooting training Football	Number of Training Models	information
1	Shooting with body shield to ball	6	worthy
2	Shooting from cross-pass	8	worthy
3	Shooting after dribbling	9	worthy
4	Shooting after passing the ball	19	worthy
	Total	42	worthy

Data Analysis

The data analysis technique in this research is using qualitative descriptive statistical techniques. In the form of percentage analysis of data collection in the form of interviews and trainer suggestions and expert validation in small-group trials and large-group trials. Meanwhile, in testing the effectiveness of the data analysis technique, the data analysis technique is descriptive quantitative by looking for the average value of the two groups, both the experimental group and the control group. Next, look for the difference between the two averages and compare them using statistical methods (uji-t) that is paired sample t-test and independent sample t-test by using the application SPSS to see the effectiveness of the training model provided and to determine whether or not there is a significant effect from using the model.

Result

This study aims to develop a shooting training model for football players after 14-17 years and to determine the feasibility of the training model, an effectiveness test is carried

out using the pre-test and post-test control group design method in accordance with the stages of the Borg and Gall Research and Development (R&D) procedure, then the control group is given shooting training treatment using conventional methods.

Following are the stages of research that have been carried out with Borg and Gall's Research and Development (R&D) procedures:

Research and Information Collecting

Based on observations made by researchers, it focuses more on shooting skills. During several tournaments attended by various Soccer Schools observed, generally the players are very constrained at the final finishing stage. It was also observed that players often wasted opportunities that existed, especially midfield and forward players so that they always failed to shoot on target and had an impact on the average goals produced. In connection with the above problems, it can be concluded that it is important to provide a standardised shooting training model to players so that shooting training can be structured and systematic.

Planning

The planning stage of the model product was carried out by the researcher and received direction from expert judgment in the field of football. Researchers conducted several stages in preparing training models such as: Collecting the latest and most renewable training materials, determining football experts who will be involved in expert reviews, coaches and football players as subjects of trials and effectiveness tests of the model, facilities and infrastructure, draft expert validation instruments, draft trial instruments, and draft test instruments and effectiveness test measurements.

Develop preminary form of product

a) Initial Product Draft

The initial draft of the shooting training model in football for players aged 14-17 years totalled 51 training variations. The estimation is implemented in shooting practice with body shield to ball with 6 variations of training, shooting from cross training with 8 variations of training, shooting after a dribble outside the penalty box 9 variations of training and 9 variations of training in the penalty box, and shooting practice after a pass with 19 variations of training. Furthermore, researchers conducted an expert validation test with the aim of obtaining the suitability of the model made and assessed directly from experts or experts in the field of football.

b) Initial Product Draft Validation

Based on the results of expert validation, it was concluded that of the 51 exercise models planned, only 42 exercise models were considered suitable to be continued to the next stage.

Preliminary field testing

The results of observations of small-scale group trials of shooting training models in football on players aged 14-17 years that have been implemented are able to be applied by athletes / football players. However, overall the product of the shooting training model in football for players aged 14-17 years can be implemented properly and is in the feasible category.

Main product revision

Based on the responses from the subjects of the small-scale trial in general gave a positive response, then at this stage there were no adjustments and or revisions that were fairly significant related to the shooting training model in football for players aged 14-17 years.

Main field testing

At this stage, the overall product of the shooting training model in football for players aged 14-17 years can be implemented properly and is known to be in the appropriate category to proceed to the next stage.

Operational product revision

Based on the responses from the large-scale trial subjects in general gave a positive response, then at this stage there were no significant adjustments and or revisions related to the shooting training model in football for players aged 14-17 years.

Operational field testing

The product effectiveness test aims to determine the level of effectiveness of the shooting training model product in football for players aged 14-17 years. The implementation process uses an experimental research design in the form of a 'pretest-posttest control group design'. Before determining the effectiveness of the shooting training model in football for players aged 14-17 years, a pre-requisite test was first carried out consisting of Normality Test and Homogeneity Test. The following are the results of descriptive data, Normality Test, Homogeneity Test, T-Test, and N-Gain Score Test.

This research data is the result of a pretest and posttest of a football shooting ability test using a test instrument Paisal Football Shooting Test (PFST).

Table 4.
Deskriptif Statistics Pre test dan Pos test

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Pre-test experiment	25	91,37	116,03	104,18	7,84
Post-test experiment	25	122,90	165,10	146,05	10,20
Pre-test kontrol	25	94,17	123,03	108,59	9,58
Post-test kontrol	25	107,90	140,17	123,26	10,12
Valid N (listwise)	25				

From the results of the table above, the average value of the shooting ability test The results show the pre-test and post-test scores for both groups. Before being given treatment, the experimental group obtained an average value of 104,18 and after being given a shooting practice model the average value was 146,05. Meanwhile, for the control class pre-test, the average value was obtained 108,59 and the control group post-test obtained a value of 123,26. The

descriptive results of the average value show an increase in the shooting ability of both groups. However, it can be seen that the increase in the shooting ability of the experimental group was much more significant compared to the control group.

Table 5.
Normality Test Results

Tests of Normality						
Kelas (Kelompok)	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre-test experiment	,182	25	,063	,934	25	,108
Post-test experiment	,117	25	,200*	,986	25	,969
Pre-test kontrol	,123	25	,200*	,923	25	,061
Post-test kontrol	,141	25	,200*	,937	25	,125

Based on the test results table above, it can be seen that significant data in the Shapiro-Wilk and Kolmogrov-Smirnov columns for the significance value of the pre-test and post-test results for the experimental group and control group is greater than the value α (0,05). So it can be concluded that the research data from the experimental group and the control group are normally distributed.

After carrying out the normality test, the next prerequisite test is the homogeneity test. Homogeneity test results were obtained from the experimental group and control group, homogeneity test results can be seen in the following table:

Table 6.
Homogeneity Test Results

Levene Statistic	df1	df2	Sig.
,236	1	48	,629

Table 7.
Paired Sample T-Test Results between Pre-test and Post-test Experimental Group

Paired Samples Test			
Class (group)	T	df	Sig. (2-tailed)
Pre-test experiment - Post-test experiment	-37,831	24	0,000

Based on the analysis in the table above, the values obtained levene statistics of 0,236 with a significance value of 0,629. It is known if the value sig > 0,05 then the data is homogeneous. Thus, the pre-test and post-test data from the experimental group and control group have homogeneous data.

From the output table above, it can be concluded that there is a significant influence before and after being given the shooting training model in football to players aged 14-17 years with a Sig value *(2-tailed* 0,000 < 0.05.

Table 8.
Independent Samples T-Test Results between Experimental Group Post-test and Control Group Post-test

Class (group)		t-test for Equality of Means		
		t	Df	Sig. (2-tailed)
Post-test eksperimen - Post-test kontol	Equal variances assumed	7,927	48	0
	Equal variances not assumed	7,927	47,996	0

From the output table above, it can be concluded that there is a significant difference in influence between the experimental group post-test and the control group post-test with the Sig value. *(2-tailed* 0,000 < 0.05.

The next analysis is to test the N-Gain Percent to find out the meaningfulness of the product being developed, namely the shooting training model in football for players aged 14-17 years. The N-Gain Percent calculation can refer to the table below, where when referring to N-Gain Percent, namely effective, quite effective, less effective, and Ineffective.

Table 9.
N-Gain Percent

N-gain value	Interpretation
< 40	Ineffective
40 – 55	Less effective
56 – 75	Quite effective
> 76	Effective

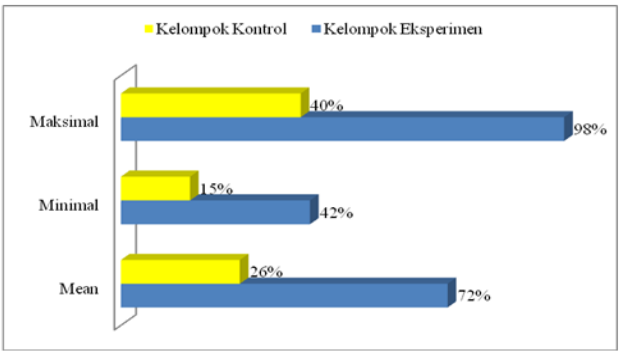

Figure 2. Comparison Chart of N-Gain Score Test for Experimental Group and Control Group. **Source: (Hake, 2002)**

The results of the N-Gain Percent test in Figure 2 show that the average N-gain percent value for the experimental group was obtained at a value of 72% included in the "quite effective" category, with a minimum N-Gain percent value of 42% and a maximum N-Gain percent of 98%. Meanwhile, the average N-Gain percent for the control group was 26%, included in the "ineffective" category, with a minimum N-Gain percent value of 15% and a maximum N-Gain percent value of 40%. Thus, it can be concluded that there is a meaningful difference between the experimental group that was given the soccer shooting training model treatment for players aged 14-17 years compared to the control group that underwent conventional soccer shooting training.

Final product revision

This stage is the final revision related to the product that has been developed, namely the shooting training model in football for players aged 14-17 years. Given that the objectives of this model development research have been fulfilled, namely the products that have been developed are considered feasible by experts, feasible by product user subjects, and have been proven to significantly improve football shooting skills, it is considered that there are no significant revisions so that the final stage can be implemented.

Dissemination and implementation

The final stage of this research is the dissemination of

research results, in this stage the dissemination of research results is expected to be published in the journal Retos.

Discussion

Football shooting ability really requires high accuracy. Shooting is quite easy to do, but high accuracy is required so that the shooting is difficult for the goalkeeper to anticipate so that it can result in a goal (Anam et al., 2021). Accuracy is the ability to direct something to the intended target, the target can be an object that is hit (Hunter et al., 2018). Apart from accuracy, other physical components that play a role when shooting are of course speed, strength and leg muscle power. As for training shooting skills, players must be given the opportunity to kick the ball into the goal (shooting) as much as possible during shooting practice sessions (Bahtra, 2022). These various explanations are certainly very appropriate in describing efforts to improve a football player's shooting ability. However, along with the development of science in the field of sports and the dynamism of modern football today, it is necessary to make efforts to improve shooting abilities not only on the physical component and as many repetitions as possible. The existence of this significant influence can be seen from the results of the descriptive analysis of the experimental group before being given treatment, obtaining an average value of 104,18 and after being given the training model the average value was 146,05. Meanwhile, for the control class pre-test, the average value was obtained 108,59 and the control group post-test obtained a value of 123,26. This means that there is an increase in the shooting ability of both groups. However, it can be seen that the increase in the shooting ability of the experimental group was much more significant compared to the control group.

Thus, the overall research results can be concluded that the soccer shooting training model has a significant effect on the shooting ability of soccer players aged 14-17 years in the quite effective category. So it will become a reference for players and coaches to improve the shooting abilities of football players so that it will have an impact on the quality of the game and match results. So it can provide benefits to football players throughout the world.

Conclusion

Test results The shooting ability test of players in the experimental group who were given the shooting training model in football for players aged 14-17 proved to be better than the control group who underwent conventional training. This is because the shooting training model in football for players aged 14-17 years, in its training variations, contains exercises to improve accuracy, speed, strength and power, and at the same time trains the interpretation of the concept of expected goals and decision making for players, and is carried out in an integrated manner. repeated according to the training program given for 18 meetings, so that the repetitions have a positive impact on the players' shooting abilities.

Conflict of interest

During the development and publication of this work, the authors did not reveal any conflicts of interest.

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Datos de los/as autores/as y traductor/a:

Paisal	faizpaisal71@gmail.com	Autor/a
Samsudin	samsudin@unj.ac.id	Autor/a
Iwan Setiawan	iwansetiawan@unj.ac.id	Autor/a
Abd Rahman	rahmanabd716@gmail.com	Traductor/a