



Development Of Engineering Skills Training Model *Passingin* Futsal Games For Students Pjkr Class Of 2024 Tadulako University

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Abstract

This study aims to develop a passing technique skill training model in futsal games for students of the Physical Education, Health, and Recreation (PJKR) Study Program, Class of 2024, Tadulako University, Palu City, using the Borg and Gall Research and Development (R&D) method consisting of ten stages. The research subjects were 30 students selected through purposive sampling techniques, with data collection carried out through questionnaires, expert validation sheets, and small group and large group trials. The validation results showed that two futsal experts gave a feasibility percentage of 72% with the category "used", while learning experts gave a percentage of 83% with the category "very suitable for use", and the results of small group and large group trials each obtained a percentage of 76% with the category "used". The results of the study indicate that the developed training model has a good level of validity, practicality, and usefulness in improving students' understanding, interest, and passing technique skills in futsal games, although some training variations still need to be refined, especially in terms of the level of difficulty and movement variations, so that further improvements are recommended to improve the quality of the training model as a whole.



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INTRODUCTION

According to (Ridwan & Arini, 2022) 80% of the techniques used in futsal are passing and controlling. Passing and controlling are crucial in futsal because they provide opportunities to score and keep the ball in the team's possession. *Passing* Effective training is crucial in futsal, as it can improve teamwork and accelerate game transitions. Several studies have been conducted to develop and analyze specific training models for futsal passing skills (Loughran 2021).

One of the best ways to develop training models is through research and development (R&D), which aims to create reliable and proven training products. Different training models have also been proven effective. One such training model is the drill model. The use of drill models has been shown to improve passing ability (Husyaeri & Saleh, 2022). Drills are commonly used techniques to master automatic movements with the aim of improving skill and proficiency. This is especially true for basic passing techniques, which are applied to all levels of futsal players (Rojabi et al., 2024). Furthermore, training models using a variety of drill approaches have also successfully improved basic passing skills in participants who did not participate in classes (Ardiyanto et al., 2021).

Training that focuses on agility and speed can improve fundamental technical skills such as passing. According to Setiawan et al. (2021), passing is the most important fundamental technique in futsal because it is used to connect running tactics to scoring goals (Halimah et al.,

2023). Furthermore, small-sided, two-sided games significantly influence fundamental passing skills, demonstrating the importance of diverse training methods. Developing a futsal training model can improve overall skills (Mahfud & Fahrizqi, 2020).

This study shows that developing a passing skill training model in futsal involves more than just physical elements; it also requires careful methodology and a variety of pedagogical approaches to achieve optimal results. As Sapardi et al. (2021) stated, if these issues are not addressed, they will remain unchanged. Consequently, without a systematic and organized training model, passing skills will not develop. By gaining a deeper understanding of proven strategies and approaches, training programs can be designed to help students improve their futsal skills.

To get a more accurate picture of the problems that occur in the field, researchers have conducted initial observations through the distribution of Google Forms questionnaires to a number of students who are interested and have talent in futsal sports in the PJKR Study Program, Tadulako University, Palu City, class of 2024, as many as 15 people using the questionnaire via Google Form, it was found that as many as 9 people answered that there were 2 passing techniques in the futsal game, 6 people said there were 3 passing techniques in the futsal game, it was also found that as many as 73.3% of students had not mastered all passing techniques, 26.7% of students had mastered passing techniques, it was also found that as many as 5 people answered that they often passed using the inside of

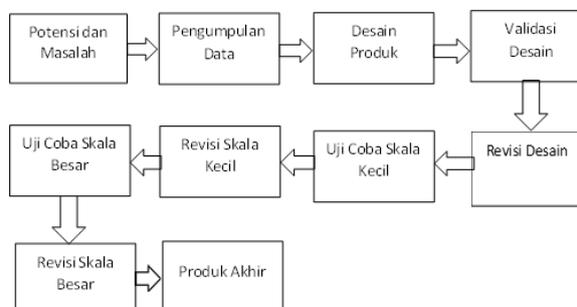
the foot, 4 people answered that they often passed using the outside of the foot, 2 people answered that they often passed using the instep, 60% of students did not really understand passing techniques in the futsal game, 40% of students already understood passing techniques in the futsal game, 73.3% of students had difficulty passing in the futsal game, 26.7 students did not experience difficulty passing in the futsal game, 100% of students answered that mastery of passing techniques is very influential during attacking transitions, 100% of students answered that they want to learn more about passing techniques in futsal games, 100% of students answered that it is necessary to develop passing technique training in futsal games, 73.3% of students have never done passing technique development training in futsal games, 26.7% of students have done passing technique development training in futsal games.

METHODS.

The research method used in this study is research and development, which is a process or method used to validate and develop a product. Product development, in the broadest sense, involves updating an existing product (making it more practical, effective, and efficient) or creating a new product (one that has never existed before) (Sugiyono, 2019).

According to Borg and Gall (Sugiyono, 2019), this research design or plan consists of 10 stages as shown in the image below.

This research will be conducted in the Physical Education and Health Study Program at Tadulako University, Palu City, and will last for three months.



The population in this study was all students of the Physical Education and Sports Research Program, Class of 2024, Tadulako University, who actively participated in futsal training. The sample size for this study was 30 people, selected using purposive sampling, with the criteria being students who possessed basic futsal skills and were willing to participate in the entire research process. The sampling technique used in this study was purposive sampling, which is characterized by the selection of sample members specifically based on the research objectives (Hardani et al., 2020).

Table 1. Percentage classification

No	%	Classification	Meaning
1	80%-	80%-100%	Used
2	60%-	60%-79%	Used
3	50%-	50%-59%	Replaced
4	< 50%	< 50%	Replaced

RESULT

The variables used in the observation of passing exercises in futsal, according to futsal experts' evaluations, are presented in Table 2 as quantitative data. The complete data is as follows:

Table1. Futsal Expert Evaluation Results Data 1

No	Aspect	Scale		
		X	Xi	
1	Training Model 1	1	4	25%
2	Training Model 2	4	4	75%
3	Training Model 3	3	4	75%
4	Training Model 4	3	4	75%
5	Training Model 5	1	4	25%
6	Training Model 6	3	4	75%
7	Training Model 7	3	4	75%
8	Training Model 8	4	4	100%
9	Training Model 9	4	4	100%
Amount		26	36	72%

Table 3.Futsal Expert Evaluation Results Data 2

No	Aspect	Scale		
		X	Xi	
1	Training Model 1	1	4	25%
2	Training Model 2	4	4	75%
3	Training Model 3	3	4	75%

4	Training Model 4	3	4	75%
5	Training Model 5	1	4	25%
6	Training Model 6	3	4	75%
7	Training Model 7	3	4	75%
8	Training Model 8	4	4	100%
9	Training Model 9	4	4	100%
Amount		26	36	72%

Table 4.Data from Learning Expert Evaluation Results

No	Aspect	Scale		
		X	Xi	
1	Training Model 1	1	4	25%
2	Training Model 2	4	4	75%
3	Training Model 3	4	4	75%
4	Training Model 4	4	4	75%
5	Training Model 5	4	4	25%
6	Training Model 6	3	4	75%
7	Training Model 7	3	4	75%
8	Training Model 8	3	4	100%
9	Training Model 9	4	4	100%
Amount		30	36	83%

1. Trial Group Data Processing

The variables that are aspects of observation in the development of skills training models *Passing* The results of the futsal game, according to the evaluation of the first stage trial (small group), are presented in Table 5 as quantitative data. The complete data are as follows:

Table 5.Phase 1 Trial Result Data (Small Scale).

N0.	ASPECT	SCORE		%
		X	Xi	
1.	What do you think about the exercise in picture 1 that you have done?	23	40	58%
2.	In your opinion, how did you carry out the exercise in Figure 1?	34	40	85%
3.	In your opinion, is the exercise in picture 1 that you have done useful in playing Futsal?	23	40	58%
4.	What do you think about the exercise in picture 2 that you have done?	37	40	93%
5.	In your opinion, how do you carry out the exercise in Figure 2?	34	40	85%
6.	In your opinion, is the exercise in picture 2 that you have done useful in playing Futsal?	32	40	80%

7.	What do you think about the exercise in picture 3 that you have done?	32	40	80%
8.	In your opinion, how do you carry out the exercise in Figure 3?	36	40	90%
9.	In your opinion, is the exercise in picture 3 that you have done useful in playing Futsal?	36	40	90%
10.	What do you think about the exercise in Figure 4 that you have done?	19	40	48%
11.	In your opinion, how do you carry out the exercise in Figure 4?	23	40	58%
12.	In your opinion, is the exercise in picture 4 that you have done useful in playing Futsal?	25	40	63%
13.	What do you think about the exercise in Figure 5 that you have done?	22	40	55%
14.	In your opinion, how	25	40	63%

	do you carry out the exercise in Figure 5?			
15	In your opinion, is the exercise in picture 5 that you have done useful in playing Futsal?	22	40	55%
16	What do you think about the exercise in figure 6 that you have done?	37	40	93%
17	In your opinion, how do you carry out the exercise in Figure 6?	32	40	80%
18	In your opinion, is the exercise in picture 6 that you have done useful in playing Futsal?	39	40	98%
19	What do you think about the exercise in figure 7 that you have done?	38	40	95%
20	In your opinion, how do you carry out the exercise in Figure 7 that you have done?	33	40	83%
21	In your opinion, is	38	40	95%

	the exercise in picture 7 that you have done useful in playing Futsal?			
AMOUNT		618	840	76%

2. Data from Phase 2 Trial Results (Large Group)

The variables that are aspects of observation regarding the training model *Passing* The results of the futsal game, according to the evaluation of the second phase trial (large group), are presented in Table 4.6 as quantitative data. The complete data is as follows:

Table 6.Phase 2 Trial Result Data (Large Scale)

NO.	ASPECT	SCORE		%
		X	Xi	
1.	What do you think about the exercise in picture 1 that you have done?	23	40	58%
2.	In your opinion, how did you carry out the exercise in Figure 1?	34	40	85%
3.	In your opinion, is the exercise in picture 1 that you have done useful in playing Futsal?	23	40	58%
4.	What do you think about	37	40	93%

	the exercise in picture 2 that you have done?			
5.	In your opinion, how do you carry out the exercise in Figure 2?	34	40	85%
6.	In your opinion, is the exercise in picture 2 that you have done useful in playing Futsal?	32	40	80%
7.	What do you think about the exercise in picture 3 that you have done?	32	40	80%
8.	In your opinion, how do you carry out the exercise in Figure 3?	36	40	90%
9.	In your opinion, is the exercise in picture 3 that you have done useful in playing Futsal?	36	40	90%
10.	What do you think about the exercise in Figure 4 that you have done?	19	40	48%
11.	In your opinion, how do you carry out the	23	40	58%

	exercise in Figure 4?			
12.	In your opinion, is the exercise in picture 4 that you have done useful in playing Futsal?	25	40	63%
13.	What do you think about the exercise in Figure 5 that you have done?	22	40	55%
14.	In your opinion, how do you carry out the exercise in Figure 5?	25	40	63%
15.	In your opinion, is the exercise in picture 5 that you have done useful in playing Futsal?	22	40	55%
16.	What do you think about the exercise in figure 6 that you have done?	37	40	93%
17.	In your opinion, how do you carry out the exercise in Figure 6?	32	40	80%
18.	In your opinion, is the exercise in picture 6 that you have done useful	39	40	98%

	in playing Futsal?			
19	What do you think about the exercise in figure 7 that you have done?	38	40	95%
20	In your opinion, how do you carry out the exercise in Figure 7 that you have done?	33	40	83%
21	In your opinion, is the exercise in picture 7 that you have done useful in playing Futsal?	38	40	95%
AMOUNT		618	840	76%

DISCUSSION

The model developed through this research indicates that the passing skills training model in futsal has a level of validity and utility, as determined by expert assessment and trials as a model that is "suitable for use." Therefore, the training model developed through this research proves that it has a level of validity or feasibility.

The evaluation by two futsal experts yielded a feasibility score of 72%, categorized as "usable." This means that most variations of the passing training models meet the technical and practical criteria for application in futsal training. However, several actual training models, as shown in Figures 1 and 5, still fall short of the 25% threshold, requiring improvement. It is suspected that the low

scores for both training models are due to the difficulty level not being appropriate for the students' abilities and the lack of movement variety.

The learning expert's evaluation of the results resulted in an 83% rating in the "very suitable for use" category. They felt that the training model we developed was not only technically appropriate for futsal, but also incorporated learning principles, such as clear instructions, systematic training, and principles that align with student characteristics.

The "use" rating reached an average of 76% during the small-scale trial phase. These results indicate that most students liked the implemented training models. Students found some training models, particularly those shown in Figures 2, 3, 6, and 7, engaging, easy to understand, and beneficial for improving passing skills. However, certain training models, such as those shown in Figures 4 and 5, received low ratings and require modification before widespread use.

The results of the large-scale trial also showed a score of 76%, which falls into the "usable" category. The consistency of results between the large-scale and small-scale trials indicates that the developed training model has a fairly high level of stability and effectiveness. This indicates that the designed passing training model is acceptable to students and can be applied sustainably in training activities.

Overall, the findings of this study align with those of Husyaeri and Saleh (2022) and Ardiyanto et al. (2021), who stated that drill-based training models and variations can improve basic passing skills. Structured, repetitive, and varied training can help students learn passing

techniques better. Furthermore, training involving visual elements, coordination, and reaction time has been shown to improve the quality of futsal play.

Initial observations showed that most students had not yet mastered all passing techniques and still experienced difficulties. After implementing the developed training model, students' understanding and skills improved. This demonstrates the importance of creating a structured training model to support futsal learning.

Therefore, the passing training model developed in this study can serve as an alternative for coaches and lecturers to improve the quality of futsal training. However, several variations of the training still need to be refined to better suit the participants' abilities and field conditions.

CONCLUSION

Research and development results indicate that the passing skills training model developed for futsal can be used in training. Futsal expert evaluations indicated a feasibility rating of 72% in the "useable" category, and learning expert assessments indicated a feasibility rating of 83% in the "very usable" category.

The results of both large and small group trials showed a 76% "used" category. These findings indicate that the training model was consistent, effective, and well-received by students. Most of the training variations improved futsal comprehension, interest, and passing skills.

However, there are several exercise variations that need improvement, particularly in Figures 1, 4, and 5, to better suit the participants' abilities and training objectives. It is hoped that the overall quality of the model will be enhanced by improvements

in the level of difficulty, movement variation, and systematic execution of the exercises.

In general, the passing training model developed in this study can be used as an alternative to improve the quality of futsal learning and training by lecturers, coaches, and sports practitioners. It is hoped that this model will help students learn basic passing techniques in a more structured, sustainable, and effective manner. Further research is recommended to develop more varied training models and test their effectiveness.

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