

UDC 796

DOI: 10.15587/2313-8416.2019.174680

DEVELOPMENT OF SKILLS TRAINING MODEL ATTACKING FUTSAL BY USING SMALL GAME-SIDE 3 VS 3 TO IMPROVE BASIC SKILLS ON HIGH SCHOOL STUDENTS

Ardhy Sabdono, Panggung Sutapa, Diajeng Tyas Pinru Phytanza

This research and development aims to develop an exercise model that will be useful and effective, can be used as a model to train students at high school level students.

The result of the research is (1) the formulation of the basic mind-base technique of attacking the futsal using a small game in accordance with the training program consisting of 5 models of dasrawanan skill (CVR=1), (2) the feasibility test indicates that the developed model quality has " Very Good ", and (3) Based on the results of the effectiveness test there is an effective against the basic teaching element that is mean pretest=75.88, meeting 1=74.65, meeting 2=74.65, meeting 3=72.82, meeting 4 / posttest=71.32

Keywords: *Futsal Practice Model, Basic Skills, Small Game, Futsal Game*

Copyright © 2019, Ardhy Sabdono, Panggung Sutapa, Diajeng Tyas Pinru Phytanza

This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0>).

1. Introduction

Futsal is a type of sport that much-loved by many people [1], especially in Indonesia. Futsal is played by five people each team and the scale used is smaller than the conventional football. With smaller sizes and fewer players, futsal is more likely to be dynamic and more in need of good fitness from players [2]. Futsal includes a team game consisting of five people, four goalkeepers, and four attacking players. According to Correa, et.al. [3] that with a narrow field, this game demands high ball possession techniques, team-player cooperation, and team cohesiveness.

2. Literature review

Futsal game is actually much influenced by the development of football, If observed further both types of sports games, both in terms of techniques and how to play almost the same, but there are basic rules that have been approved in the game futsal clearly different from each other [4]. The rules of the futsal sports game are made by FIFA in order for this game to run in fair play and also to avoid injury that may occur. Futsal sports have grown to become a very popular game, much loved by all walks of life, from kids, adults, to the likes of futsal sports. A few years ago futsal was still seen as a sport for amusement, the people who rented the field and played futsal afterward went home, but at this time futsal sport is experiencing very rapid development, especially in Indonesia. Futsal becomes a means to develop a student's potential. There have been many futsal events both amateurs of the age group of 6–13 years, 14–20 years of age, and age 20 and up [5], as well as official events organized by the District Futsal Association (AFK), Provincial Futsal Association

(AFP) and Futsal Indonesia Federation (FFI), from that there are many emerging futsal team from each level or level in elementary, junior high, high school and college students.

Futsal sports fall into the category of invasion game, according to Griffin, Mitchell, & Oslin [6] invasion game has the purpose to invade/attack the opponent's area to score/score and protect its own area from the opponent score. The purpose of the invasion game is to attack the opposing area must have good basic skills in order to suppress the opponent's territory, controlling the ball as well as possible and with the ultimate goal of creating goals against the opponent. A team consisting of players with good futsal skills will master a game, with indirect circumstances the team's defence will be safe from the opponent because the ball is in the control of the team, and the team does the attack because the best defence is attacking.

Achievements in futsal sports are inseparable from basic and correct basic engineering skills, as well as through disciplined and orderly hard work. Futsal is a sport that originally from soccer sport, the basic technical skills of futsal game is almost the same with basic soccer technique skills, According to Irawan [7], the basic techniques in playing futsal there are several kinds, such as receiving (receiving the ball), shooting (kicking the ball into the goal), passing (feeding), chipping (bumping hull), heading (header), and dribbling. There are techniques and movements that players can do in the field so there are different combinations of techniques and moves that each player has in support of the ball to achieve a victory. Like for example on futsal teams that are professional, futsal team can master the ball very well, good passing fastball flow, good dribble, accurate shooting, mutual

support teammates, open space for movement, solid cooperation, and also Individual skills possessed by players make this team a good team.

The development of futsal game, accompanied by the development of the trainers in determining the form of futsal exercise aimed at improving the effective basic skills, the trainer must create a form of training tailored to the need for a training objective, as in the basic futsal skills necessary variations of form exercises that support for example by using the game, the more variation of the game then the player will be motivated to the form of training that leads to the goal, the better the ability of basic skills are trained.

From the results of observations with the trainers in the four high schools of High School 1 Sayegan, High School 1 Pejagoan, High School 1 Kutowinangun, and High School 2 Kebumen. on extracurricular activities of futsal sports, there are still many students who are still weak about basic skills of attacking in play futsal, the basic skill of the child's pas is still random or just a ball in the feed, accuracy is less and not exactly the momentum. Basic skills of control on students, many children are still using control using the inner legs so the ball is wild. Basic skills dribbling, many students at the time bringing the ball a lot of children are still panicked when meeting the opponent, and on basic shooting skills, the accuracy of many less because of many mistakes between, the legs on the ball is not right, foot pedestrian is not precise, and the eyes are not yet led to the target.

Based on the observations and interviews to each trainer and students who follow extracurricular futsal, many problems that often arise include students' understanding of basic skills attacking futsal passing, control, dribbling, and shooting is still lacking, the form of practice is still using drill methods, and other causes namely the forms of exercise variation and the ability of the child's skill-less to perform passing, control, dribbling, and shooting. Therefore, it is necessary to develop a model of attacking exercises and variations in the form of basic skills training, passing, control, dribbling, shooting.

From the above problem is expected to have problem-solving that can be a solution to improve the quality of basic skills of passing, control, dribbling, and shooting. The solution to be implemented is how the training method can be achieved well. The training method should refer to the objectives of the exercise itself so that the expected later material is not trained drill of the program, it takes creative and innovative methods so that later the process of training students more than ever before. Creative and innovative new training models are required in the extracurricular futsal training process so it is necessary to research entitled: the development of an attacking training model using small-sided games 3 versus 3 to improve the futsal basic skills of high school students, to meet the objectives of passing, dribbling, shooting. This model is one of the developments of variation of futsal basic technique practice to improve basic skill of passing, dribbling, shooting and giving variation in practice.

3. The aim and objectives of research

The aim of this research is in development of an exercise model that will be useful and effective, can be

used as a model to train students at high school level students.

To accomplish the aim, the following tasks have been set:

1. Formulation of the basic mind-base technique of attacking the futsal
2. Feasibility test indicates that the developed model quality
3. Effectiveness test there is an effective against the basic teaching element

4. Research Methods

4.1. Subjects

Subjects in this development were 53 children, namely:

- a) 15 children for small field trials;
- b) 38 children for large field trials. Subject try high school students.

This development study was conducted at High School 1 Sayegan, High School 1 Pejagoan, High School 1 Kutowinangun, and High School 2 Kebumen. Conducted from August 2017 to November 2017, the duration of this study from the initial process until the final process is 4 months.

4.2. Ethics

This research is a research development or Research and Development (R & D) to produce a certain product used research that needs analysis and to test the feasibility of these products in order to be useful for the wider community. This research development procedurally passes several stages, as explained by Sugiyono [8] research and development done through 10, that is:

- 1) Research and information collecting (research and data collection);
- 2) Planning;
- 3) Develop preliminary form of product
- 4) Preliminary field testing;
- 5) Main product revision (revision of test results);
- 6) Main field testing (trial) main field);
- 7) Operational field revision;
- 8) Operational field testing;
- 9) Final product revision (final product revision);
- 10) Dissemination and implementation (dissemination and implementation).

4.3. Variables sample

The variable of this research is skills training model attacking futsal by using small game-side 3 vs 3 to improve basic skills. Instruments used to collect data to assess the products that have been developed in the form of instruments include observation, interviews, questionnaires, and skills tests. Observations were conducted to gather information about the basic skills training model for attacking the futsal.

Wawanvara conducted to collect information on needs analysis during the preliminary study, questionnaires were used to provide input and suggestions about developed products, and skill tests at the time of effectiveness test were conducted to determine the level of basic skill attacking student futsal.

4.4. Data Analysis

The data analysis technique used in this research is the data analysis technique using Likert scale with the criteria level calculation of questionnaire scale using ideal (Mi) and ideal deviation standard (SDi), with the formula and Table 1:

$$Mi=0.5 \times (\text{max score} + \text{low score});$$

$$SDi=1/6 \times (\text{max score} - \text{low score}),$$

where Mi – Ideal Average Value; SDi – Ideal Deviation Standard; x – The Average value Gained

Table 1

Calculation of Scale Questionnaire

Interval Skor	Criteria
$Mi+1.5 SDi < x$	Very Good
$Mi \leq x < Mi+1.5 SDi$	Good
$Mi-1.5 SDi \leq x < Mi$	Passably
$x < Mi-1.5 SDi$	Poorly

Source: Ali [9]

Validation is done by giving the initial product draft of the basic skills training model to attack the futsal, along with the validation sheet for the expert. The validation sheet is a questionnaire that examines aspects of the quality of the exercise model and the suggestions and comments of the experts. The validation result is a value for the quality aspect of the exercise model by using content validity (CVR) with the assessment of "1" and "0". Here is a formula from Content Validity Ratio [10].

$$CVR = \frac{\frac{n - N}{2}}{\frac{n}{2}}$$

where n – Number of Panelist "important or yes"; N – Total Number of Panelist

For the data analysis technique effectiveness test done by the quasi-experimental method. The effectiveness test data were processed using SPSS 21 with the Wilcoxon test. Wilcoxon test is done to test the differences between paired data and know the effectiveness of treatment with ordinal data.

5.Results and Discussion

The results of the assessment obtained from the assessment of small-scale test filled by the trainer against the basic skills training model attacked the futsal, obtained a score of 31, thus the value of small-scale testing is categorized as "good" because it is included in the interval $Mi + 1.5 SDi < 31$. Table assessment attached. Diagram Small Scale Test Assessment, in Fig. 1.

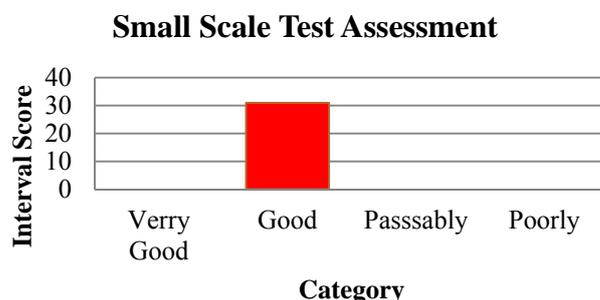


Fig. 1. Diagram Small Scale Test Assessment

Based on large scale test scoring tables filled out by trainers on the development of basic skills training model attacking futsal, obtained the number of scores of 36.25. Thus, large-scale test scores are categorized as "excellent" Because they fall into the $Mi+1.5 SDi$ interval < 36.25 . Diagram Big Scale Test Assessment in Fig. 2, Pretest Effectiveness Test Result with Meet 1 in Table 2, Meet 1 Result Effectiveness Test Result in Table 3, Meet 2 Result Effectiveness Test Result with Meet 3 in Table 4, Meet 3 Result Effectiveness Test Result with Meet Result Effectiveness Test Result 4/postest in Table 5, and Pretest Effectiveness Test with Postest in Table 6.

Big Scale Test Assessment

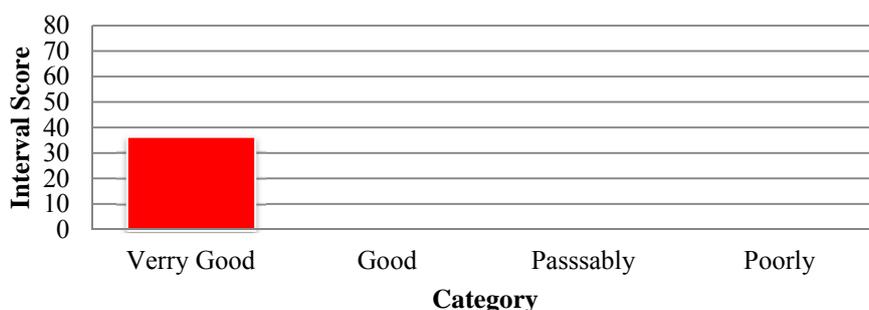


Fig. 2. Diagram Big Scale Test Assessment

Table 2

Pretest Effectiveness Test Result with Meet 1

Meet	N	Mean	Asymp. Sig. (2-tailed)
Pretest	15	76.77	0.001
Meet 1	15	75.88	

Table 3

Meet 1 Result Effectiveness Test Result

with Meet 2 Meet	N	Mean	Asymp. Sig. (2-tailed)
Meet 1	15	75.88	0.048
Meet 2	15	74.65	

Table 4

Meet 2 Result Effectiveness Test Result with Meet 3

Meet	N	Mean	Asymp. Sig. (2-tailed)
Meet 2	15	74.65	0.001
Meet 3	15	72.82	

Table 5

Meet 3 Result Effectiveness Test Result with Meet Result Effectiveness Test Result 4/postest

Meet	N	Mean	Asymp. Sig. (2-tailed)
Meet 3	15	72.82	0.000
Meet 4/postest	15	71.32	

Table 6

Pretest Effectiveness Test with Posttest

Meet	N	Mean	Asymp. Sig. (2-tailed)
Pretest	15	76.77	0.000
Posttest	15	72.82	

Several stages of this research have been conducted by researchers, of course starting from the stages of preparation, preparation and research process in the field. Some inputs from material validators are also taken into consideration and have been improved by researchers. It certainly becomes a reference so that the product can grow for the better. In its implications, the product can improve the basic futsal skills at the high school level. It is supported in the process of assessing effectiveness through a series of t-tests. The result of t-test is got the mean value at pretest is 76.77 with meeting 1 is 75.74, at meeting 1 is 75.88 with meeting 2 is 74.65, at meeting 2 is 74.65 with meeting 3 is 72.82, at meeting 3 is 72.82 with the 4 / postest meeting is 71.32, and at the pretest is 76.77 with the 4 / postest meeting is 72.82. This indicates that there is an increase in each meeting. So it can be concluded that the basic skills training model to attack futsal play if done continuously will experience an increase in basic skills to attack futsal so effective to use.

6. Conclusions

The result of the research is:

- 1) the formulation of the basic mind-base technique of attacking the futsal using a small game in accordance with the training program consisting of 5 models of attacking skill (CVR=1),
- 2) the feasibility test indicates that the developed model quality has " Very Good ",

3) Based on the results of the effectiveness test there is an effective against the basic teaching element that is mean pretest=75.88, meeting 1=74.65, meeting 2=74.65, meeting 3=72,82, meeting 4 / postest=71,32. Based on the results of the research that has been stated, the conclusions of the study are that the futsal attack training model uses 3-to-3 small sided games suitable for high school students and the implementation is easy so that students become enthusiastic and motivated by game-based learning. Several stages of this research have been carried out by researchers, of course, starting from the stages of preparation, preparation, research process in the field. Some entries from the material validator are also taken into consideration and have been corrected by the researcher. That certainly becomes a reference so that the product can grow better. In its implications, the product can improve basic futsal attack skills at the high school level. This was supported in the process of evaluating effectiveness through a series of t-tests. The t-test results obtained by the mean (mean) at the pretest is 76.77 with meeting 1 is 75.74, at meeting 1 is 75.88 with the meeting 2 is 74.65, at the meeting 2 is 74.65 with the meeting 3 is 72.82, at the meeting 3 is 72.82 with meeting 4 / posttest is 71.32, and at pretest is 76.77 with meeting 4 / posttest is 72.82. This shows that there is an increase from each meeting. So it can be concluded that the basic attack skills training model playing futsal if done continuously will experience an increase in the basic skills of attacking futsal so that it is effective to use [6, 3].

References

1. Moore, R., Bullough, S., Goldsmith, S., Edmondson, L. (2014). A Systematic Review of Futsal Literature. *American Journal of Sports Science and Medicine*, 2 (3), 108–116. doi: <http://doi.org/10.12691/ajssm-2-3-8>
2. Alentorn-Geli, E., Myer, G. D., Silvers, H. J., Samitier, G., Romero, D., Lázaro-Haro, C., Cugat, R. (2009). Prevention of non-contact anterior cruciate ligament injuries in soccer players. Part 1: Mechanisms of injury and underlying risk factors. *Knee Surgery, Sports Traumatology, Arthroscopy*, 17 (7), 705–729. doi: <http://doi.org/10.1007/s00167-009-0813-1>
3. Corrêa, U. C., Davids, K., Silva, S. L., Denardi, R. A., Tani, G. (2014). The Influence of a Goalkeeper as an Outfield Player on Defensive Subsystems in Futsal. *Advances in Physical Education*, 4 (2), 84–92. doi: <http://doi.org/10.4236/ape.2014.42012>
4. Carling, C., Bloomfield, J., Nelsen, L., Reilly, T. (2008). The Role of Motion Analysis in Elite Soccer. *Sports Medicine*, 38 (10), 839–862. doi: <http://doi.org/10.2165/00007256-200838100-00004>
5. Castagna, C., D'Ottavio, S., Vera, J. G., Álvarez, J. C. B. (2009). Match demands of professional Futsal: A case study. *Journal of Science and Medicine in Sport*, 12 (4), 490–494. doi: <http://doi.org/10.1016/j.jsams.2008.02.001>
6. Griffin, L. L., Mitchell, S. A., Oslin, J. L. (2003). Teaching sports concepts and skills: A tactical games approach. Human Kinetics Publishers (UK) Ltd.
7. Irawan, A. (2009). Teknik dasar modern futsal. Jakarta: Pena Pundi Aksara.
8. Sugiyono (2014). Educational Research Methods Quantitative, Qualitative Approach and R&D. Bandung: Alfabeta.
9. Ali, S. (2005). Teknik Analisis Data Penelitian. Jakarta: Uhamka, 71.
10. Dwivedi, Y. K., Choudrie, J., Brinkman, W. (2006). Development of a survey instrument to examine consumer adoption of broadband. *Industrial Management & Data Systems*, 106 (5), 700–718. doi: <http://doi.org/10.1108/02635570610666458>

Received date 24.06.2019

Accepted date 28.07.2019

Published date 31.07.2019

Ardhy Sabdono, Sport Science, Postgraduate Program, Universitas Negeri Yogyakarta, Colombo Street No. 1, Karangmalang, Caturtunggal, Depok District, Sleman Regency, Special Region of Yogyakarta, Indonesia, 55281, E-mail: ardhy114@gmail.com

Panggung Sutapa, Sport Science, Sport Science of Faculty, Universitas Negeri Yogyakarta, Colombo Street No. 1, Karangmalang, Caturtunggal, Depok District, Sleman Regency, Special Region of Yogyakarta, Indonesia, 55281
E-mail: panggung_s@gmail.com

Diajeng Tyas Pinru Phytanza, Faculty of Education, Universitas Negeri Yogyakarta, Colombo Street No. 1, Karangmalang, Caturtunggal, Depok District, Sleman Regency, Special Region of Yogyakarta, Indonesia, 55281
E-mail: phyt4nza@gmail.com