

FIELDING TECHNIQUE SKILLS TRAINING MODEL IN UNDER-17 ATHLETES IN CRICKET

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ABSTRACT The success of athletes in achieving success, one of which is the application of an appropriate training model, fun and easy to do, including in improving fielding technique skills. The purpose of this study was to produce a game-based fielding technique skill training model for cricket athletes U-17 years, with the result of a book product that can be used in cricket training. The research uses the research and development (R&D) method from Borg and Gall. The subjects of the study were the U-17 athletes at the PCI POPB Club DKI Jakarta and Central Java, totaling 48 people. The results of the study prove that from the evaluation results of test and measurement experts, game experts, and cricket experts, it is obtained that this product meets the criteria. From the calculation results, for the mean difference test, the mean = 63.346, with t-count = 105,122 with df = 47 and p-value = 0.000 < 0.05, which means there is a significant difference between the control group and the experimental group of the fielding technique skill training model. in the sport of game-based cricket for U-17 athletes. Thus, it can be concluded that the game-based fielding technique skill training model for U-17 athletes can effectively be developed and applied in training a series of fielding skill movement processes in cricket.

Keywords: *training method, fielding, cricket*



INTRODUCTION

Cricket is a sport that originated in England and is played in the summer. Cricket is one of the second most popular sports in the world and is played in more than 120 countries. Cricket is a game with two teams/groups of eleven people each. The game uses the bat as a bat and the ball as a hit object. Ideally cricket is played on a grass field and in the middle of the field is made a square area called a pitch measuring 20 meters by 4 meters (Sudarsono, 2020).

Although at this time the sport of cricket has begun to see development in each area still the contribution of experts in this field must continue to be improved. Such training programs and techniques given to athletes must continue to be innovative and varied in order to further attract athletes to continue to follow the training without getting bored. Some basic techniques in cricket such as batting, throwing (bowling), and guarding (Romi Mardela & irawan, 2017).

From the results of research, it is known that the success of achievement in playing cricket depends largely on the ability of physical condition and also the right training model (Divya et al., 2014). So, to achieve the achievement target,

there is a need for regular, directed and continuous coaching and training. The selection of the right exercise model becomes one of the factors that need to be considered in addition to the technical skills possessed. As in the results of the study, it is mentioned that success in playing Cricket requires a variety of physical abilities and techniques (Veness et al., 2017).

The provision of a training model by the coach can be said to have been a little easy to get, especially in fielding cricket techniques. However, the lack of variety of exercises from coaches causes athletes to get bored quickly in doing fielding technique exercises, causing the target of the exercise is not reached to the maximum.

For this reason, it is necessary to make a breakthrough in using a fairly developed training model in the sport of cricket, namely the new technique training model, where the form of training uses a training program that varies in each phase so as to improve the quality of mastery of techniques, especially fielding techniques and can contribute to the improvement of the achievement of cricket athletes.

METHOD

Research and development method focuses on the development of existing products for revision to become more attractive so that the value of its usefulness increases. Based on the understanding that has been spelled out in this study seeks to develop a model of game-based fielding technique training in under-17 athletes. Model used for this study is Borg and Gall Model. Research and development that developed by Borg & Gall (2007) is a development model for producing new products produced through research produced in field trials, evaluated, and refined so that the final product produced conforms to predetermined criteria that include its effectiveness, quality, or standards (Amirzan, 2017).

Based on the model, it can be seen that the design of the model design is used as a guideline for the concept of coaching children's age athletes which refers to the Long Term Athlete Development program that in the process of coaching must be adjusted to the stage of growth and development of children.

Coaching athletes of children's age or should be more towards funbased training so that athletes do not feel burdened and feel happier in doing the activities of training given by the coach.

Fun workouts will also have a good psychological impact for athletes, and can also insert modified physical components with a fun exercise approach such as games.

Research and development of this game-based fielding training model uses borg and gall methods (1983) consisting of 10 stages, including :

1. Research and Information Collecting

The stage of identification and needs analysis through preliminary research is carried out by carrying out activities including : (a) Collection of documents for coaching athletes in each cricket club, (b) observation of cricket training activities, and (c) interviews with coaches, athletes, and coaches of cricket clubs. Observations and interviews include several aspects, such as training time, the process and form of cricket training models that are focused on fielding training.

2. Planning

Based on the findings of preliminary studies and need analysis, a game based fielding technique skill training model is compiled in cricket which will be used for training variations so that during cricket training, especially

during fielding technique training, you can use a game-based training model. This training model is also adjusted to the purpose, characteristics and net method to be used.

3. Develop preliminary form of product

This preparation is based on the results of preliminary studies, the foundation of theories of cricket aids, the theory of model development, and the feasibility of their implementation. The design of the game based cricket fielding technique training model is designed and adapted to the needs of U-17 athletes. The model design, which is designed based on the stages in carrying out cricket technique movements, especially fielding technique skills, is in the form of a preliminary or preparation movement stage, an implementation movement stage, and a final or followthrough motion stage.

4. Preliminary field testing

This step is a limited product test, that is, conducting an initial field test of the product design, that limited in nature, both the substance of the design and the parties involved. Initial field tests are carried out

repeatedly so that a feasible design obtained both in substance and methodology.

5. Main product revision

This step is an improvement of the model or design based on limited field tests. At refining the initial product, more is carried out with a qualitative approach. The evaluation carried out is more about the evaluation of the process, so that the improvements made are internal improvements.

6. Main field testing

Small scale trials were conducted to determine and identify the implementation of the exercise model. In this process, observations were made on athletes through filling out questionnaires filled out by respondents or subjects, especially in the training model of game based cricket fielding techniques. The data obtained from the results of questionnaires filled out by respondents, used by researchers to evaluate exercise models applied before being used in usage trials or large scale trials.

7. Operational product revision

Input results from questionnaires and field notes in small group tests

used to revise products. This implemented for the refinement of the model that had been felt and experienced for the subjects for subsequent group tests.

8. Operational field testing

Furthermore, a large scale test stage was carried out on 30 athletes, in U-17 athletes were asked to provide an assessment of the usefulness, safety and comfort in various training models of cricket fielding techniques applied game based both through questionnaires and through interviews.

9. Final product revision

The results of the response from the athletes after conducting training directly that given as input for evaluating the improvement of model development. Evaluation of the U-17 athletes game based fielding technique skills training model using interview instruments and questionnaires for coaches. Once the game-based fielding technique skill practice model product used in trials both small scale and large scale, experts or trainers give impressions, inputs and suggestions. Furthermore, an analysis of the answers given for

the benefit of product improvement carried out.

10. Dissemination and implementation

After the final product revision completed then report the results are in international journals and the product results are packaged in the form of an exercise model book so that the product can be used and useful for sports actors in discussion groups and collaborate with publishers to distribute commercially.

RESULT AND DISCUSSION

Revision of the initial draft model is done based on the results of expert validation of the model that has been compiled. Validation is done by expert judgement. Experts / experts are selected to validate the model that has been compiled both academically and scientifically.

From the results of expert validation conducted against the game-based fielding technique skill training model, there are several variations of exercise model items that are recommended to continue (feasible) or not continued (not feasible). The

following is a summary of the results of expert validation outlined in the table below :

Table 1 Summary of Exercise Models After Expert Validation

| No | Excercise Variation | Information |
|----|---------------------------|-------------|
| 1 | Throw the Hole 1 Games | Proper |
| 2 | Throw the Hole 2 Games | Proper |
| 3 | Bounce Wall games | Proper |
| 4 | Bounch Back Games | Unproper |
| 5 | Thrower Box Games | Proper |
| 6 | Snake Chasing Games | Proper |
| 7 | Opposite Games | Unproper |
| 8 | Fielding soccer Games | Proper |
| 9 | Opposite High Catch Games | Proper |
| 10 | Crash Throwing Games | Unproper |

Source : Archive's

Small Group Trial

The skill training model of fielding cricket technique based on the game after being justified by experts / experts, then revised stage 1. The data of the next phase I revision will be used in the next stage, namely conducting small group trials.

From the results of inputs and suggestions and notes in the field, the researchers make revisions and improvements to the model developed. This improvement aims to perfect the design of the training model of cricket

fielding technique skills that have been compiled. After these revisions and improvements are made, it continues to the next stage, namely large group trials.

Based on the results of small group trials, there are several records for the improvement of this model in the future. Here are some suggestions and suggestions and notes found in the field.

Large Group Trial

Here are the results of the group-based trials that have been conducted, based on some inputs and suggestions and notes found in the field, among others:

- a. Variations of game-based exercise models can be applied during training by paying attention to the safety and security aspects of athletes so that athletes can train with fun and maximum.
- b. The duration of implementation of each variation of the fielding technique model of cricket sport by paying attention to each type of game to be used.

MODEL EFFECTIVENESS

In the effectiveness test this model uses a pre-experimental research design in the form of "one group pretest-posttest design". Before conducting an effectiveness test, then do a pre-test and

post-test to find out the initial ability and final ability in improving fielding (catching and throwing) skills. Pre-test is carried out before the implementation of 7 variations of game-based fielding technique skills training, while for post-test given treatment as many as 16 times.

Table 2 Results of Paired Sample Stastic (Pre-Test) and After Granted Treatment (Post-Test) on Fielding Engineering Skills

| Paired Samples Statistics | | | | | |
|---------------------------|----------|------|----|----------------|-----------------|
| | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | Pretest | 4.50 | 48 | 1.676 | .242 |
| | Posttest | 9.46 | 48 | 1.611 | .232 |

From the output table above, it can be known for fielding technique skills, getting the average value before being given treatment is 4.50. After being treated, the average value increased by 9.46.

Based on the description above there is a difference in the results of fielding engineering skills between pre-test and post-test, that the exercise model developed is effective and can improve fielding engineering skills.

Next, the first step that must be done before the effectiveness test is to perform a data normality test. From the results of processing normality test data with the Kolmogorov-Sminorv test obtained results in the table below :

Table 3 Pre-test normality test results and post-test

Fielding Engineering Skills

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------|---------------------------------|----|------|--------------|----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Pretest | .221 | 48 | .000 | .914 | 48 | .002 |
| Posttest | .278 | 48 | .000 | .874 | 48 | .000 |

a. Lilliefors Significance Correction

Based on the table above the test results can be seen in the Kolmogorov – Sminorv column, it is known that the significance values for both the pre-test and post-test data variables are sig p-values. $0,000 > 0.05$. Thus, it can be concluded that both data come from normal distributed populations.

After conducting the data normality test, the following analysis requirements that must be done are variant homogeneity tests. The variance homogeneity test conducted in this study is the testing of data homogeneity for fielding techniques.

Table 4 Homogeneity Test Pre-test Fielding Engineering Skills

| Test of Homogeneity of Variances | | | | | |
|----------------------------------|--------------------------------------|------------------|-----|--------|------|
| | | Levene Statistic | df1 | df2 | Sig. |
| Pretest | Based on Mean | 880 | 1 | 46 | 351 |
| | Based on Median | 848 | 1 | 46 | 360 |
| | Based on Median and with adjusted df | 848 | 1 | 93.726 | 360 |
| | Based on trimmed mean | 676 | 1 | 94 | 413 |

Table 5 Post-test Homogeneity Test of Fielding Engineering Skills

Test of Homogeneity of Variances

| | | Levene | df1 | df2 | Sig. |
|----------|--------------------------------------|-----------|-----|--------|-------|
| | | Statistic | | | |
| Posttest | Based on Mean | .008 | 1 | 46 | .931 |
| | Based on Median | .000 | 1 | 46 | 1.000 |
| | Based on Median and with adjusted df | .000 | 1 | 94.000 | 1.000 |
| | Based on trimmed mean | .000 | 1 | 94 | .985 |

Based on the analysis in the table above obtained a homogeneity test value for the pre test of 0.351, and for post-test of 0.931, and it is known that all sig values. > 0.05 or H0 is accepted.

Thus, that pre-test and post-test data are homogeneous in population.

Table 6 Results of Paired Samples Correlation Before Treatment (Pretest) and Results After Treatment (Posttest) on Fielding Engineering Skills

| Paired Samples Correlations | | | | |
|-----------------------------|--------------------|----|-------------|------|
| | | N | Correlation | Sig. |
| Pair 1 | Pretest & Posttest | 48 | .599 | .000 |

Based on the table above it can be known that the correlation coefficient of fielding techniques before and after being given treatment is 0.599, with a p-value of 0.000 < 0.05. So, the conclusion is that there is a significant relationship.

Table 7 Results of Paired Sample Statistics (Pre-Test) and (Post-Test) on Fielding Engineering Skills

| Paired Samples Test | | | | |
|---------------------|-----------------|---|---|--------------------|
| | | Paired Differences | t | Sig. df (2-tailed) |
| Mean | Std. Deviation | 95% Confidence Interval of the Difference | | |
| | Std. Error Mean | | | |

| | | Lower | Upper |
|--------|------------------|-------|--------|
| Pair 1 | Pretest-Posttest | 4.958 | 23.328 |

In the average difference test with SPSS obtained mean = 4,958 showing the difference from pre-test and post-test results, t-calculated results = 23,328, df = 47 and p-value = 0.00 < 0.05 which means there is a significant difference between before and after being given the treatment of variation in game-based exercises.

Based on these results it can be concluded that the game-based fielding technique skill training model for under-17 year old athletes is effective and can improve fielding skills. The exercise model developed has significant effectiveness.

Table 8 Paired Sample Results on Fielding Engineering Process Skills

| Paired Samples Statistics | | | | | |
|---------------------------|------------|-------|----|----------------|-----------------|
| | | Mean | N | Std. Deviation | Std. Error Mean |
| Pair 1 | kontrol | 9.46 | 48 | 1.611 | .232 |
| | eksperimen | 73.10 | 48 | 3.709 | .535 |

From the output table above, it can be known for fielding engineering skills, in the control group the average value is 9.46. Meanwhile, the average score for the

Experimental class increased by 73.10. Which means that there is an increase resulting from the experimental group so that fielding technique skills are seen increase.

Table 9 Results of Paired Samples Correlation on Fielding Engineering Process Skills

| Paired Samples Correlations | | | |
|-----------------------------|----|-------------|------|
| | N | Correlation | Sig. |
| Pair 1 kontrol & eksperimen | 48 | -.104 | .480 |

Based on the table above it was obtained that the correlation coefficient of fielding techniques in the control and experiment group amounted to -0.104 with a p-value of 0.480 > 0.05 so the conclusion is that there is no significant relationship.

Table 10 Results of Fielding Engineering Skills Effectiveness Test

| Paired Samples Test | | | | | | |
|-----------------------------|--------|----------------|-----------------|---|---------|-----------------|
| | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | Sig. (2-tailed) |
| | | | | Lower | Upper | |
| Pair 1 kontrol & eksperimen | 63.646 | 4.195 | .605 | -64.864 | -62.428 | .000 |
| | | | | | 105.122 | 47 |

From the results of the SPSS calculation, for the average difference test obtained mean = 63,346, with t-count = 105,122 with df = 47 and p-value = 0.000 < 0.05 which means there is a significant difference between the control group and the experimental group of fielding technique skill training models in game-based cricket sports for under-17 athletes.

Product Discussion

Based on the results of research and product studies it is known that this product has several effective advantages in improving the skills of fielding techniques based on U-athlete- Some of the advantages that can be seen are:

- a. The result of the research product is a variation of the training model of fielding techniques of cricket sport fielding based under-17 athletes.
- b. The results of the research product provide easy, fun training and motivate under-17 athletes to perform movements in fielding technique skills training.
- c. The results of the product model of fielding technique training cricket sports fielding based U-17 athletes in the form of module books or guidelines.
- d. The results of this product are useful and can be used as one of the references in supporting the needs of training materials for cricket coaches.
- e. The results of this product can improve the ability in fielding skills of the sport of cricket.

CONCLUSION

A game-based fielding technique training model for under-17 athletes can be developed and applied in training a

series of fielding skill movement processes in the sport of cricket based on research data obtained effective results used to improve fielding skills for under-17 year old athletes.

The implications of the game-based cricket fielding technique training model for under-17 athletes make a positive contribution to the child in the training process. The development of this model is expected to follow up in the implementation of the exercise program in real terms.

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