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Development of a Baseline Game Learning Model to Improve Field Tennis Learning Outcomes

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Abstract

The aims of this research is (1) to unveil how is the product, (2) to discover the effectiveness of the learning model, and (3) to determine the acceptance response of baseline game product as a learning model in increasing tennis-learning outcome of students in Physical Sport and Recreation Study Program, Universitas Negeri Gorontalo. This is a Research and Development type of research where the subject of the research is the student of Physical Sport and Recreation Study Program, Universitas Negeri Gorontalo. Data of this research are product's quality evaluation result, suggestion for product improvement, and students' questionnaire result, which are obtained from expert evaluation, experimental study of small group (20 students), and experimental study of large group (50 students). The results of this study are a product of the baseline game learning model for tennis games. The results of the product assessment for the standard game learning model were 88 % (good) for small-scale trials and 93.13 % (good) for large scale trials. Based on the findings of the study and assessment, it can be said that the baseline game learning model for tennis games can be used to enhance the learning outcomes of field tennis for students enrolled in Physical Sport and Recreation Study Program, Universitas Negeri Gorontalo.

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INTRODUCTION

Tennis has reached a stage of development very rapidly and can attract some people's attention since the holding of world-class matches that include tennis in it has encouraged the spread of this sport throughout the world. Close friendship. Cross (2020) explained that the fundamental goal in tennis is to hit the ball in such a way that the opponent finds it difficult to return the ball. One obvious technique is to attack the ball as quickly as possible, but that technique increases the risk that a player will hit the ball out or snap in the net. Tennis is a sport that always involves many aspects of the match. This is explained by du et al. (2017). Tennis is a complex sport. Complexity is reflected not only in the game and the process of competing games but in the structure of the sequence of technical actions of correctness and stability. Orlenko & malyk (2017) tennis is a sport that requires many qualities from the physical components involved in it. These components include strength, speed, flexibility, endurance, and agility, reflecting the essential physical attributes required for competitive athletes. Gale ansodi et al. (2017), in tennis, these physiological demands differ from other intermittent sports. Bags & bagis (2020) for tennis players to perform at a higher level, they must first develop technical and tactical characteristics. Then, they must consider psychological and physiological factors and structural elements.

On the other hand, body measurements and ratios, physics, and body composition are important factors affecting physical

performance. The results in tennis depend on many factors, such as physical condition, technical skills, and tactical strategy. One crucial performance indicator is producing high ball speed with high accuracy (delgado garcia et al., 2019). Tennis is artificially created and differs significantly from humans' daily movements (tomov et al., (2021). A groundstroke or drive is one of the basic techniques that are important in the game of court tennis. Sunardi (2017) groundstroke or drive is a hit made either forehand or backhand

After the ball bounces onto the field. In addition, (prasentiono & gandasari, 2018) groundstroke is a blow made after the ball touches the area or bounces off the field. During tennis, especially in singles, groundstroke is one of the most dominant basic punch techniques and can be used as an offensive or defensive weapon. Groundstroke is divided into two, namely forehand and backhand groundstrokes. (budi et al., 2020) groundstroke is a basic hitting technique performed from under the ball after the ball has bounced once; groundstrokes can be from the right side or forehand and the left side or backhand. Forehand and backhand groundstrokes are essential in playing tennis because forehand and backhand groundstrokes can defend and kill the ball from opponents.

Groundstroke is one of the attacking techniques that need attention for coaches and players because groundstroke is one of the dominant techniques used in a game and court tennis match jefri et al. (2021). The success of groundstroke must pay attention to the balance

of the body, which is most important. Because if we are not balanced, we cannot hit the ball perfectly h. Amni et al. (2019). The primary hitting stages start from the beginning, implementation, and ending. Shimokawa et al. (2022) to achieve high-speed groundstroke with sufficient accuracy is one of the fundamental requirements for athlete development in modern tennis. A. Sahan et al. (2018) three main round variations in tennis groundstroke: flat, topspin, and slice. Classically, the flat stroke technique is considered a basic stroke technique, and it is what is taught in the early stages of learning.

Mastery of good basic techniques is an essential part of tennis. Goyena & fallis (2019) explained that in tennis, mastery of punching techniques is essential to play well. There are several basic types of strokes in the game of tennis. There are four basic types of strokes that tennis players must master, namely serve, forehand drive (ground stroke), backhand drive (ground stroke) dun volley. Sianipar (2018) p. The forehand stroke is the safest stroke to use in tennis. In addition, the forehand punch is the primary attacking weapon because its movements are not as challenging to learn and master this punch as other punches. In line with the explanation from sudarmada (2017) that forehand strokes are one of the primary tennis techniques that every player must master. Irjaba et al. (2022) forehand groundstroke is one of the most dominant strokes in court tennis, so applying accuracy in this stroke is necessary for winning matches. Loman (2015) forehand is the most basic and effortless stroke to teach in

tennis. Forehand is a shot that swings from the back of the body to the front and the front of the racket or the palm of our hand facing the ball. This punch is always used as the player's primary weapon because forehand punches are usually more complex than backhand punches.

The backhand is one of two strokes in tennis made after bouncing the ball off the ground. The second stroke is the forehand. In addition, the backhand is a punch with a racket swing from the left side of a left-handed player to handle shots that come to this site (Alexandros et al., 2013). Explained that backhand is a basic punching technique played by tennis players sudarmada (2017). Backhand is one of the basic techniques that must be mastered by a player before a player master another basic punching technique doewes (2012). Therefore, this backhand technique should be taught early on for someone who is going to learn to play court tennis. The backhand is one of the two basic groundstrokes in tennis and can be played with one or two hands, topspin, or backspin (genevois et al., 2014).

The ability to hit a groundstroke backhand is one of the basic techniques that every court tennis player must master. Wibowo (2017) explained that backhand groundstroke is a type of court tennis shot made against the ball on the left of the player if the left-handed player of the ball is on the right. Backhand groundstrokes are most often performed in court tennis games compared to other groundstrokes. If trained properly, this backhand punch can be a helpful storage weapon, so this punch is significant. If your

backhand is strong, you can use it as an alternative to get points. All of the basic techniques above are a unity that cannot be separated in playing court tennis. The game will run well if the player has mastered these basic techniques. The drive punch is a mainstay hit in a game that can generate points. Forehand drive punches and backhand drive punches are often weapons in doing groundstrokes (sianipar, 2018)

Learning is a way of presenting learning material that is carried out systematically to encourage the achievement of teaching goals in the process of making people learn. The application of the suitable learning model in the groundstroke forehand tennis court learning process will also provide opportunities for coaches and teachers to utilize the available facilities optimally so that there is no reason for coaches and court tennis coaches because of the hampering the training process of court tennis games and the inadequate factor of available court tennis facilities. As a teacher, you should know and understand related sciences (wibowo, 2017).

This is important because this knowledge can be called underlying concepts in establishing an effective physical exercise program. Determining the suitable learning model is closely related to the practice situation. Consideration of specific learning models must pay attention to the conditions of how and where the exercise process is carried out. Training conditions are also related to the characteristics of the material to be trained. Thus the characteristics of the training material must also be considered in choosing a

learning model. This is clarified by agustiyanto's opinion (2014) to improve the accuracy of forehand groundstrokes, the right way of teaching is needed. A physical education teacher is required to have creativity in teaching. For learning objectives to be achieved as desired, a teacher must be able to package attractive learning facilities so that students become enthusiastic and motivated to follow the learning process. One of them is by using target media as the proper learning media. Backhand punches are strokes used in court tennis games. Efforts to improve the ability of backhand groundstrokes must be exercised by applying reasonable and appropriate methods. In the game of court tennis, what is very important is accuracy first and then the speed of the ball (kusuma & adibowo, 2022).

The success of learning court tennis is not just that students can hit the ball on the court, but the ball is directed precisely to the opponent's field of play. In addition, success is also obtained if students understand tennis learning quickly and are done in a pleasant atmosphere. The results of observations of researchers in the field related to the tennis learning process in court tennis lectures still needed to be improved, which allowed students to find it challenging to learn court tennis. The shortcomings include the learning aspect. Namely, students can only hit the ball and are still far from the target; the results of the ball being hit are still out. Furthermore, in respect of achievements where students sometimes have difficulty hitting the ball on the right target. In evaluating the results of

strokes, students need factual data on the development of stroke results during learning, and students need to know the extent of the increase in forehand and backhand strokes that have been done. As researched (irawan, 2017), the purpose of making innovative tennis court game products is to overcome the limitations of tennis courts in lecture activities.

This study aims to (1) find out how the baseline game product as a learning model improves court tennis learning outcomes, (2) find out how the baseline game e is effectively used to improve court tennis learning outcomes, and (3) find out the response to the acceptability of the baseline game product as a learning model to improve the learning outcomes of field tennis students of si-pjkr study program, gorontalo state university.

METHODS

The research model used, namely the development research model (research and development / r & d), is a research method used to research so as to produce new products and then test the effectiveness of the product (sugiyono, 2013).

Research procedures include potential and problem stages, data collection, product design, design validation, product trials, product revisions, usage trials, product revisions, and mass production. The instruments used to collect data are in the form of observations, evaluation sheets, and questionnaires. The subjects and places of research are students in the vi semester of the

si-pjkr study program at gorontalo state university. The data analysis technique used in this development research uses percentage descriptive analysis techniques. Meanwhile, data in the form of suggestions and reasons for choosing answers are analyzed using qualitative analysis techniques.

FINDINGS AND DISCUSSION

Findings

The stages of research and data collection include observations, evaluation sheets, and questionnaires. Observations were made to collect information about implementing the learning process in court tennis lectures at the jjkr study program at gorontalo state university. Evaluation sheets are used to collect data from court tennis learning experts. Questionnaires are used for data from expert evaluations and trials.

The product is developed, and researchers prepare the learning baseline game's design, framework, and product model for the next stage. After the analysis process is complete, the initial product of the baseline learning model of the court tennis game is produced. Several tennis learning experts validated early drafts of the baseline learning model of court tennis games. After validation by experts, then product revisions are carried out. The product description of the game baseline learning model is presented in table 1. Development of a baseline learning model for field tennis games.

Table 1. Development of the Game Baseline Learning Model P

No	Subject Matter	Material Description
1	Introduction to the baseline learning model of the court tennis game	Definition of the game baseline learning model
2	Simple tennis playing facilities and tools through a baseline game learning model	The material contains tools and facilities used in simple tennis games such as courts, tennis balls, tennis rackets, sportswear, and sports shoes.
3	Teknik play simple tennis through the game baseline learning model	The material contains basic techniques used in simple tennis games such as ready positions, how to hold rackets, and punching techniques.
4	Kaedah simple tennis game safety through a game baseline learning model	The material contains what things must be considered in playing simple tennis such as stretching, using facilities, and correct playing techniques.
5	Asimple tennis game tour through the game baseline learning model.	Material for the rules of play such as the number of players, player equipment, scores in the game, getting points / numbers, ball in / out, ball goals , winning team.
6	Thingsto note in simple tennis learning	The ability to master the raket, control the ball, control of the racket at the time of contact with the ball
7	Aspec contained in the learning model of baline gеме court tennis game	The material is in the form of aspects obtained from learning tennis ini, namely cognitive, affective, and psychomotor aspects.
8	The difference between court tennis and simple tennis is through a baseline learning model.	The material contains the difference between a simple tennis game and an actual tennis game.
9	Disadvantages and limitations of the game baseline learning model	The material contains what are the shortcomings and limitations of the game baseline learning model.

The initial product of developing a baseline game learning model for students of the SI-PJKR Study Program, Gorontalo State University, before being tested in a small group test, the resulting product needs to be validated by experts in this research field. Validation is carried out by providing an initial product draft of the game baseline learning model and an evaluation sheet for experts.

Evaluation sheet in the form of a questionnaire containing the quality of learning models, suggestions, and comments from tennis learning experts from lecturers teaching court tennis courses

Against the game baseline learning model. The evaluation results are in the form of values from the quality aspect of the learning model using a Likert scale of 1 to 5,

how to check one of the numbers in the evaluation sheet. Based on the results of filling out questionnaires conducted by experts, an

average score of more than 4 (four) was obtained or included in the "good" assessment category

Table 2. Small and large group trial data

Small Group Trials				
No	Assessment Aspect	Total Number of Students	Students who answered according to the expectations of the researcher	Percentage
1	Psychomotor	20	172	86%
2	Affective	20	177	89%
3	Cognitive	20	177	89%
Large Group Trials				
No	Assessment Aspect	Total Number of Students	Students who answered according to the expectations of the researcher	Percentage
1	Psychomotor	50	467	93%
2	Affective	50	470	94%
3	Cognitive	50	460	92%

The results showed that the baseline learning model product of the court tennis game could be accepted with good criteria because it can help students learn court tennis quickly. The samples in small-scale and large-scale trials are students of semester VI of the SI-PJKR Study Program at Gorontalo State University. The product is needed when learning court tennis courses.

The results of this study were conducted by giving questionnaires to students. This game's baseline learning model still has

limitations: the limitations of this study have advantages and disadvantages, including:

Product Excellence, Make it easier for students to learn court tennis. Make it easier for students to master the basic techniques of forehand and backhand groundstrokes. Make it easier for students and faculty to evaluate the results of forehand and backhand strokes directly. There is a variety of court tennis learning for forehand and backhand strokes through simple tennis games. Through the game, learning tennis is more fun.

Product Weaknesses, In this learning model, students will have less chance to hit the ball because it is done alternately. In this learning model, students are required to wait for their turn to hit the ball. This game's baseline learning model cannot accommodate some of the other tennis techniques, such as volleyball and overhead. They are only devoted to forehand and backhand groundstrokes.

Discussion

Baseline game is a simple tennis game learning model used to improve the learning outcomes of court tennis games, in this case, forehand and backhand punch skills. This product is a learning tool expected to make it easier for students to learn court tennis, such as forehand strokes and backhand groundstrokes. This podunk applies communication without using words or what is called non-verbal communication. The target of this product is to hit the ball into the opponent's field of play to make it easier for students to see the target ball hit in the opponent's game area. The target of the ball is in the baseline area.

As research by Tarigan & Supriadi (2021) explained that the development of a tool for the toughness of forehand drive in field tennis is used to help practice forehand drive strokes in court tennis. The data obtained through trials are classified into quantitative and qualitative. Qualitative data before criticisms and suggestions by experts in court tennis lessons. The quantitative data analysis technique in this study uses descriptive

analysis in the form of percentages in the form of statements not good / not worthy, less good / less feasible, good enough / decent enough, and sound / feasible. The scores in percentage terms < 40%, 40-55%, 56-75%, and 76-100%, respectively Arikunto (2002: 210).

This research is development research. This research produces a product of the baseline learning model of the field tennis game. There are problems behind the development of products in this study, including: 1) The learning carried out in the field tennis lectures of students of the SI-PJKR Study Program, Gorontalo State University, could have been more optimal. 2) Students of the SI-PJKR Study Program at Gorontalo State University need help learning tennis in court tennis lectures. 3) Learning strategies are not enough to make it easier for students to learn and master the basic techniques of forehand and backhand strokes of court tennis games. Researchers developed this field tennis game baseline learning model product to help students more easily learn tennis and improve court tennis learning outcomes.

Measurement of effectiveness tests is carried out by conducting small-scale trials and large-scale trials. From the results of these trials, is there an excellent opportunity to measure the effectiveness of the baseline learning model product of the field tennis game? The results of small-scale trials showed "good" criteria, while large-scale trials also showed "good" criteria with a higher percentage of small-scale trials. The existence of this baseline game learning model helps

students to learn court tennis and master fundamental techniques.

This research and development is carried out through the stages of research and development according to (Sugiyono, 2013: 407), explaining that there are ten stages in research and development. The research and data collection stage is to collect information about implementing the learning process in court tennis lectures at the JJKR Study Program, Gorontalo State University, and collect data from experts and students. The stages of product development include expert validation, initial draft revision, small-scale trials, large-scale trials, and product revisions. The next stage of the researcher becomes a product of the baseline learning model of the court tennis game in the form of a guidebook.

CONCLUSION

This study concluded that this baseline game learning model product aligns with the learning needs of the court tennis course at the SI-PJKR Study Program, Gorontalo State University. The result of this product development is a guidebook for the baseline learning model of court tennis games that can be used to improve learning outcomes in court tennis courses.

This game's baseline learning model is more effective and efficient. Use with "good" small group trial results of 88%. Test the product's effectiveness in a large group with a "good" criterion of 93.1 3%. Using the baseline game learning model is necessary because it helps students learn court tennis

more efficiently, and learning outcomes also increase.

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