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Development of A TGFU-Based Pe Learning Model for Bulutangkis Games at State Madrasah Aliyah Sleman

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ABSTRACT: The research objectives are: (1) to describe the conceptual design of the learning model of PJOK on badminton game material based on TGfU in MAN in Sleman Regency; (2) to explain the feasibility of PJOK learning model on badminton game material based on TGfU in MAN in Sleman Regency; (3) to identify the practicality of PJOK learning model on badminton game material based on TGfU in MAN in Sleman Regency; and (4) to explain the effectiveness of PJOK learning model on badminton game material based on TGfU in MAN in Sleman Regency.

The research method is Research and Development method. The research location was at the State Aliyah Madrasah in Sleman Regency. The research began on 10 June 2024 until 2 August 2024. The research subjects involved grade X students at MAN Sleman Regency by random sampling. The stages of development with the TGfU approach, including: Analysis stage, Planning stage, Development stage, Implementation stage, and Evaluation stage. Data collection techniques using instruments: observation, interviews, and documentation. Data validity using source triangulation and technique triangulation. Data analysis includes: data collection, data reduction, data presentation, and drawing conclusions.

Research results: (1) The conceptual design of the TGfU-based badminton learning model in MAN in Sleman Regency consists of 5 games, namely '3 against 2' and '2 against 2'. (2) The feasibility of the TGfU-based badminton game material PJOK learning model at MAN in Sleman Regency based on the assessment of expert lecturers, teachers, and students on the game model are all included in the 'good' criteria and so it is feasible to use as a learning medium. (3) The practicality of the TGfU-based badminton learning model in MAN in Sleman Regency is with a low net 2 vs 3 rally with cones and a low net 2 vs 2 rally with cones. (4) The effectiveness of the PJOK learning model of TGfU-based badminton game material at MAN in Sleman Regency is seen with the changes and development of materials that will help teachers to be more creative and have variations in providing learning materials. The development of this learning material is very useful for teachers and students in carrying out teaching and learning activities to achieve real learning goals.

KEYWORDS: Learning Model, Badminton Game, TGfU

I. INTRODUCTION

The interrelated process between learning and teaching is the art of communicating reciprocal relationships. Teaching is often assumed to be an activity of conveying something from someone who has more experience and learning as a means of learning. Teaching activities include conveying knowledge, transmitting attitudes, skills or learning that is arranged in accordance with the environment and connecting it with the subject who is learning. Meanwhile, learning is a process that occurs within each individual.

Changes that are better than before can be in the form of learning, knowledge, skills, habits, and attitudes. Changes in learning outcomes are usually permanent as a result of experience, practice or repeated learning over a period of time. The result of an effective and meaningful learning process will provide success and satisfaction for all sectors related to teachers, students, parents, and even the government. The hope of realising good learning is highly dependent on the communication that is built between the teacher (message sender), students (message receiver), and subject matter (student component). Teachers in this case really need to be able to develop learning strategies by utilising various media and learning resources as intermediaries that are able to provide the same meaning between the communicator and the communicant. Physical education, sports and health

(PE) prioritises physical activity in the learning process. PE plays a role in fostering and developing individuals to grow and develop physically, mentally, socially, and emotionally to be harmonious, harmonious, and balanced.

The function of physical education sports and health (Penjasorkes) which prioritises physical activities, plays a role in fostering and developing individuals in physical, mental, social and emotional growth and development that is harmonious, harmonious and balanced. While the goal is to help students to improve physical fitness through the movement and cultivation of positive attitudes, basic abilities and various physical activities and sports. One of the most popular sports and included in school curriculum learning is badminton. Through badminton students are invited to increase their interest in sports in supporting physical, mental, social, and emotional growth and development.

The paradigm shift from the concept of 'teaching' which emphasises active and dominating teachers to 'learning' which integrates harmoniously between teachers and students in the learning process. With the aim of helping students manipulate the environment and engineer activities and create learning experiences. Students will learn actively both cognitive (concepts), affective (attitudes), and psychomotor (physical skills).

The syllabus of the PE subject for SMA/MA in class X, states that the Knowledge Competency: '3.2 Analyse the movement skills of one of the small ball games to produce good movement coordination'. Small ball games include table tennis, kasti, sepak takraw, handball and badminton. While the Skill Competency is: '4.2 Practicing the results of analysis of movement skills of one of the small ball games to produce good coordination of motion'.

The results of preliminary observations show that MAN (State Aliyah Madrasah) in Sleman Regency, especially learning PJOK badminton material, has several important points, namely the lack of time in delivering PJOK learning material (2 X 40 minutes a week). As is the case in learning badminton games at MAN in Sleman Regency which is held 2-3 meetings each semester, it is still insufficient to improve the ability to play basic techniques of playing badminton students.

MAN in Sleman Regency shows that badminton learning outcomes are classically low. Based on initial interviews with PJOK teachers, they said that the low badminton learning outcomes were due to: 1) lack of student motivation to learn; 2) non-standard infrastructure and facilities in badminton learning; 3) monotonous teacher learning methods and media; and 4) lack of creativity in teacher evaluation tools.

The low enthusiasm for badminton learning is due to the lack of equipment owned by the school such as rackets, courts, and other supporting facilities. Related to learning methods, many teachers do not understand how to teach effective badminton material to improve the ability to play badminton. Related to learning media, teachers lack mastery about making media for badminton games. Teachers also lack understanding in developing evaluation tools for badminton game learning outcomes. In addition, it is identified that there is no PJOK learning model packaging that is interesting and fun and acceptable to students. The monotonous teaching style (theory, practice, and demonstration) has an impact on students who are bored and bored to take part in learning and low learning outcomes.

Learning model is a wrapper or frame of the application of a planning approach, methods, strategies, and learning techniques. This thesis research will develop a TGfU (Teaching Game for Understanding) based badminton learning model at the State Aliyah Madrasah in Sleman Regency. The development of TGfU-based physical education learning model is based on the fact that students are at school with: (1) lack of attention in their performance, (2) knowing very little about the game, (3) partially achieving endurance, (4) depending on coaches and teachers, and (5) lack of development on material understanding.

The TGfU approach proposes that for a player's technique to be understood as a first introduction, the student must know why and when the skill is needed in the context of the game, the technical execution of the skill is displayed. The TGfU approach should be applicable to children's physical activity practice, increasing enthusiasm for participation, and in turn improving psychological and physical health.

The TGfU-based badminton game learning model at MAN in Sleman Regency has not been maximised in its application. However, there are several Madrasahs that have used the TGfU model in badminton games. In the process of implementing the TGfU model, the learning steps need to be further improved. The TGfU model to be developed is a development of Joyce and Weil which has five main elements, namely: syntax, reaction principles, social systems, support systems and accompanying effects.

II. METHOD

The research approach uses mixed methods (a combination of qualitative and quantitative research). The method that will be used in this research is the Design and Development method of Richey and Klein (2007: 41). The place of research was Madrasah Aliyah Negeri Sleman Regency. The research subjects were Physical Education, Sport and Health teachers and grade X students of the Madrasah Aliyah Negeri in Sleman Regency. The procedure for developing a Physical Education learning model for badminton game material that the author will study adapts from the D&D research model.

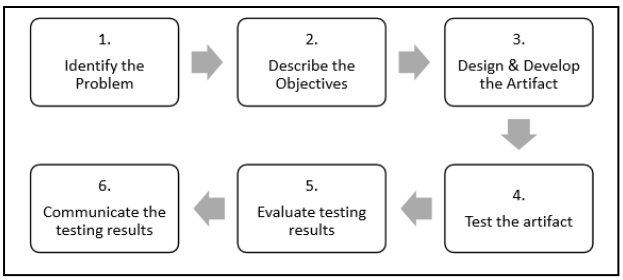

Figure 1. Design and Development Research Procedure

In collecting data for this research, there are several techniques used to obtain valid data about the development of the PJOK learning model for badminton game material based on TGfU. 1) Observation, 2) Interview, 3) Documentation. In this study researchers used simple research instruments as auxiliary instruments in data collection. These instruments are in the form of observation guidelines, interview guidelines, and documentation guidelines.

The stages of development with the TGfU approach include: Analysis stage, Planning stage, Design stage, Development stage, Implementation stage, Evaluation stage. Data collection techniques using instruments: observation, interviews, and documentation. The criteria for the degree of trust in checking the data are carried out by field observation techniques and data triangulation, namely researchers checking data from one source of information with other sources of information.How to interpret the data obtained, in relation to the problems and research objectives, needs to be clearly described.

III. RESEARCH RESULT

A. Research Outcome Design

1. First Meeting

The conceptual design of the TGfU-based badminton learning model in MAN in Sleman Regency consists of 5 games, namely '3 against 2' and '2 against 2'. By using tools namely; Racket, Shutllecock. Cone, Field, Whistle, Stopwatch Rally 2 vs 3 Low Net with Cone.

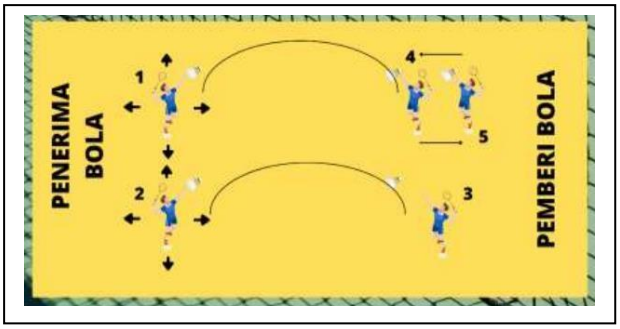

Figure 2. 2 vs 3 Low Net Rally Game with Cone (Game 1) First Meeting Final Product

a) Learning Focus

Ability to make decisions, ability to perform skills, and support.

b) Learning Objectives

Provide students with the opportunity to make decisions to direct the shuttlecock. Improve students' skill ability. Supporting students by providing directional feeds and shuttlecock returns.

c) Game Form

1) The game is played by 5 students (team 1 consists of 2 students and team 2 consists of 3 students).
2) Field size 8 x 5 metres, cone as net
3) Startinggame starts from one of the teams according to the agreement by doing service.
4) The game does not use rally points because it is learning, introducing, and learning. The reward system or service transfer system is more suitable for use.
5) Every time you hit a shot accompanied by a shout calling the name of the opponent who will receive the shuttlecock.
6) The player whose name is mentioned immediately chases the shuttlecock and hits to be directed back to the opponent's field.
7) If the shuttlecock is out of the field area, it will start with a service by the team that gets the point.
8) The shuttlecock must not hit the cone, if it hits the cone it is declared dead and the opponent gets a point.

d) How to play

To start the game a service is made by one of the teams according to agreement. Each student plays a rally game or lob shot by directing the shot to the opponent's field which is limited by a cone. Between players communicate with each other by calling the name of the shutllecock recipient to be able to return by hitting the shutllecock.

At this stage students have played rallies with friends so that each student can communicate and think about how best to return each other's punches and try to kill the opponent's game by dropping the ball without being able to be returned by the opponent. The shuttlecock used in this game is only 1.

The team is declared the winner if they get 10 points first. With a reward system or moving service this game will feel like learning to get enough experience without eliminating the fun element. If the shuttlecock is out it will generate points or move the service and the game begins with a service as a start by the team that managed to kill the opponent. The team that hits the shuttlecock into the cone is also considered dead.

Rally 2 x 2 Low Net with Cone

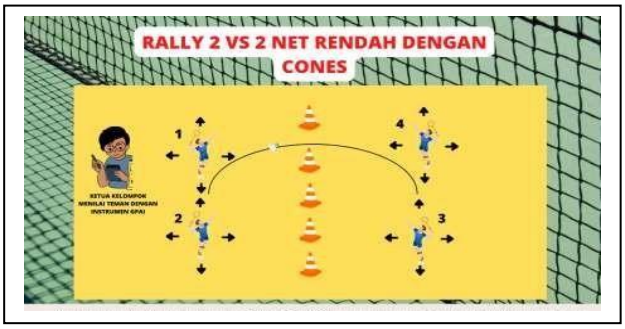

Figure 7. Rally Game 2 vs 2 Low Net with Cone (2nd Game) First Meeting Final Product

The focus of learning, learning objectives, and how to play are the same as game 1. However, game 2 is close to the original game where students will play double or double. The form of the game is;

1) The playing field is widened to 6 X 12 metres.
2) Each pair tries to kill each other to get a score of 10.
3) At this stage students will compete 2 vs 2 resembling the Original game.
4) The modified net is low as the height of the cones.
5) 1 student in his group collaborates with the teacher to assess his partner using the GPAI instrument.
6) The rules of the game resemble the original game (students already know the rules because they have watched the game).

After practising games 1 and 2, students are invited to discuss with several questions asked, including;

1) What was the objective of the game?
2) How did you achieve that goal?
3) When is the best time to hit a forehand?
4) When is the best time to hit a backhand?
5) How to score points?

2. Second meeting

Low Net 2 vs 3 Rally with Cone

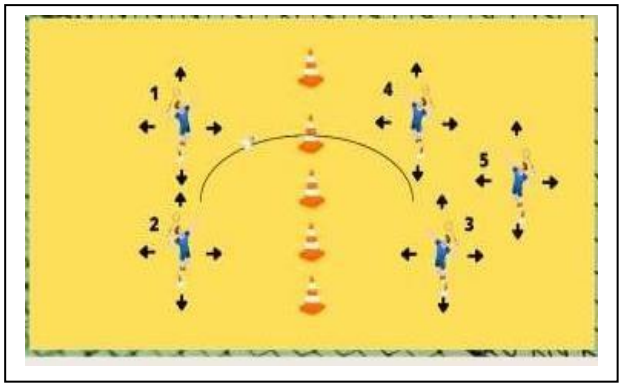

Figure 8. Low Net 2 vs 3 Rally Game with Cone (Game 1) Second Meeting Final Product

a) Learning Focus

Ability to make decisions, ability to perform skills, and support.

b) Learning objectives

Provide students with the opportunity to make decisions to direct the shuttlecock. Improve students' skill ability. Supporting students by providing directional feeds and shuttlecock returns.

c) Game Form

1) The game is played by 5 students (team 1 consists of 2 students and team 2 consists of 3 students).
2) Field size 6 x 12 metres, cone as net.
3) Startinggame starts from one of the teams according to the agreement by doing service.
4) The game does not use rally points because it is learning, introducing, and learning. The reward system or service transfer system is more suitable for use.
5) Every time you hit a shot accompanied by a shout calling the name of the opponent who will receive the shuttlecock.
6) The player whose name is mentioned immediately chases the shuttlecock and hits to be directed back to the opponent's field.
7) If the shuttlecock is out of the field area, it will start with the following If the shuttlecock is out of the field area, it will start with a service by the team that gets the point.
8) The shuttlecock must not hit the cone, if it hits the cone it is declared dead and the opponent gets a point.

d) How to play

To start the game a service is made by one of the teams according to agreement. Each student plays a rally game or lob shot by directing the shot to the opponent's field which is limited by a cone. Between players communicate with each other by calling the name of the shutllecock recipient to be able to return by hitting the shutllecock.

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Team is declared to win if they get 10 points first. With a reward system or moving service this game will feel like learning to get enough experience without eliminating the fun element. If sutllecock out then it will generate points or move service and the game begins with a service as a start by the team that managed to kill the opponent. The team that hits the shuttlecock into the cone is also considered dead.

Rally 2 x 2 Low Net with Cone

Figure 9. Rally Game 2 vs 2 Low Net with Cone (2nd Game) Second Meeting Final Product

The focus of learning, learning objectives, and how to play are the same as game 1. However, game 2 is close to the original game where students will play double or double. The forms of the game are;

1) The playing field is widened to 6 X 12 metres.
2) Each pair tries to kill each other to get a score of 10.
3) At this stage students will compete 2 vs 2 resembling the Original game.
4) The modified net is low as the height of the cones.
5) 1 student in his group collaborates with the teacher to assess his partner using the GPAI instrument.
6) The rules of the game resemble the original game (students already know the rules because they have watched

After practicing games 1 and 2, students are invited to discuss with several questions asked, including;

1) What was the purpose of the game?

2) How to achieve the goal?
3) When is the best time to hit a forehand?
4) When is the best time to hit a backhand?
5) How to score points?

B. Final Product Review

In the early stages of development, the product is a draft model of developing learning materials for Badminton games based on TGfU, for learning Badminton games. The process of making it through several stages of procedures in research and development. After the initial product is produced, the product needs to be evaluated to experts through the validation stage and needs to be tested by going through various stages of trials.

The validation stage was carried out by PE teachers and expert lecturers, while the trial stage was carried out in a series of trial stages consisting of small group trials and large group trials. In the validation process to experts, data is generated that can be used to revise the initial product. After the product was validated by expert PE teachers, the product was then validated by expert lecturers.

Expert validation produces data, suggestions, comments, and input that are useful for improving the quality of the product of the TGfU-based Badminton game learning material development model being developed. After the validation and revision process is carried out, the product is ready to be tested. The trial was carried out in two stages, namely the small group trial stage and the large group trial stage.

The data obtained from each stage of the trial is used as material to revise the product in order to produce a quality final product, so that the product draft model of the development of TGfU-based Badminton game learning materials can be used as learning materials in schools. The product quality of TGfU-based Badminton game learning material according to the PE teacher expert is included in the 'good' criteria, according to the expert lecturer the product quality is included in the 'good' criteria. While the product quality of TGfU-based Badminton game learning materials according to student assessments is included in the 'good' criteria. This statement can be proven from the results of the analysis of the assessment of small group trials 'good' and large group trials 'good'.

In addition, comments from students were also obtained that students were happy with the TGfU-based Badminton game so that students understood better and were easier to follow the learning. Overall, according to PE teachers and lecturers, the development of TgfU-based Badminton game learning materials must be developed as much as possible so that students are easier to accept and practice in learning.

Product development from the beginning to changes tailored to the needs of the product and the quality of this product is expected to have a positive effect in the process of developing games in playing Badminton. This reviews the characteristics of Badminton games that can be developed and many solutions to modify so that the material can be easily delivered and students are easy to receive material as a development of their playing skills.

With the changes and development of material will help teachers to be more creative and have a variety in providing learning materials. This is considering that Badminton games are favoured by most students but not many students have good playing skills. So that the development of this learning material is very useful for teachers and students in carrying out teaching and learning activities to achieve real learning goals. In addition, the development of this material does not only aim to achieve learning objectives but as a means to improve students' playing skills. This development can be done regularly so that learning always gets new things.

IV. CONCLUSION

Based on the results of research and product development, the TGfU-based Badminton game learning material has a conceptual design of the PJOK learning model for TGfU-based badminton game material at MAN in Sleman Regency consisting of 5 games, namely '3 against 2' and '2 against 2'. Based on the assessment of expert lecturers, teachers, and students on the game model, all of them are included in the 'good' criteria and are suitable for use as learning media. The practice of the TGfU-based badminton game material PJOK learning model at MAN in Sleman Regency is with a low net 2 vs 3 rally with cones and a low net 2 vs 2 rally with cones. With the changes and development of materials, it will help teachers to be more creative and have variations in providing learning materials. The development of this learning material is very useful for teachers and students in carrying out teaching and learning activities to achieve real learning objectives, especially in the practice of learning PJOK material for badminton games based on TGfU.Conclusions can be generalised findings according to research problems, can also be in the form of recommendations for next steps.

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