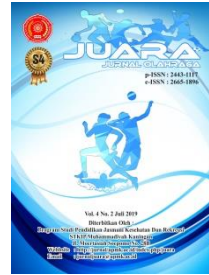




**JUARA: Jurnal Olahraga**  
E-ISSN 2655-1896 ISSN 2443-1117  
<https://doi.org/10.33222/juara.v9i1.3789>



## **Volleyball Learning Model Based On Teaching Games For Understanding (TGFU) Junior High School Category**

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### **Info Artikel**

Article History:

Received January 2024  
Approved February 2024  
Published March 2024

**Keywords:**

*Learning Model,  
TGFU, Volleyball,  
Junior High School*

### **Abstract**

*The purpose of this study was to develop a volleyball learning model based on teaching games for understanding (TGFU) for Junior High School Student in SMPN 13 Bekasi City. The research method uses research and development methods adopted from the theory of Borg & Gall. The research subjects in the volleyball passing learning model are upper grade Junior High School students. There are ten steps used in this research, namely needs analysis, initial product creation, expert evaluation, small group trial, product revision, large group trial, product revision, effectiveness test, revision, and final product. The results of the expert validation of Physical Education and Sports learning for the bottom pass of 77.08%, the upper pass of 81.25% so that the is valid. The results of the expert validation of volleyball games were obtained for the lower pass of 79.17% and the upper pass of 83.33% so that it was suitable and easy to use. improve volleyball passing skills worth using. The results of the small group trial obtained 80.73% indicating a good category, the large group trial results were 81.10% with good classification, and the results of the effectiveness test obtained a post-test mean difference test in the control group and the experimental group obtained  $t_0$  of 3.386 and  $t$  table 1.671 with 60 degrees of freedom and  $= 0.05$ . Thus,  $t_0 = 3.386 > t_{table} = 1.671$  or  $H_0$  is rejected. The implication of this research is that the volleyball learning model is feasible and effective for use by upper grade Junior High School students.*

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## INTRODUCTION

Physical education is an educational process through physical activity to move, and learning through motion (sports). Physical education is education that provides overall physical development, and not only provides benefits for the physical but also provides benefits for the spiritual aspect. because what is developed is not only aspects of movement skills and physical fitness, but cognitive and affective development is also developed through physical education (Paturisi, 2012).

There are differences in the improvement of volleyball passing learning outcomes through drill and play learning methods (Samsudin & Rahman, 2016). Previous research using the drill and playing method has proven that it is better to use the drill method to improve volleyball passing skills. However, based on the observations made using the drill method, the teacher only provides material according to experience and applies to all students. This learning is considered less interesting and beneficial for students who have different abilities/less capable in practicing the basic movements of passing a volleyball game so that the learning objectives will not be achieved optimally. Additional softball is suitable in physical education, especially for girls, project promotion can greatly improve the psychological quality of girls, lots of balls, psychological needs to throw the ball are mostly satisfied and feel successful, interest to bring happiness (Nikšić et al., 2020). The progress shown by the experimental group and the significant differences noted compared to the control group using the two methods presented for the study (via above and below) confirm the effectiveness of the new working method used to optimize motor learning and basic learning. volleyball technique (Mirela & Valeria, 2012).

Based on the problems above, the researchers are interested in developing a physical education learning model by utilizing new facilities created by researchers as a vehicle for creating innovative learning, to make learning more fun and the results

achieved are expected to be better and beneficial for all parties.

The development of the times that increasingly demands creativity for students. The twelve stages formulated by the authors above can be adjusted or modified by reducing, adding, changing as needed to maximize research activities by other parties, because this is in line with the concept of developing the borg and gall model.(Borg & Gall, 1983)

## MATERIALS AND METHODS

Based on the background of the problem and the reasons described above, the focus of this research is how to develop a lower and upper pass learning model for volleyball based on Teaching Games for Understanding in junior high school children. Development research is a research approach that is connected to work design and development and has the aim of designing in a learning environment and seeking to understand scientific fundamentals. Development research is not to detail and implement a complete intervention but is aimed at providing motivation to learn by presenting interesting and creative learning. Making good teaching materials should be done through research and development. In the field of education the main objective of research and development is not to formulate or test theories, but to develop effective products for use in schools". (Airasian & Emzir, 2012)

### Materials

To be able to create a certain product, research that is needs analysis can be used and testing of the product that has been made, so that the product can be used and utilized by the wider community. A product from the results of research and development (R&D) is needed, especially learning media products or learning resources based on advanced and developing technology (Sugiyono, 2016).

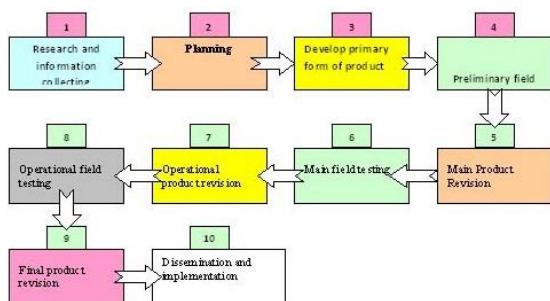


Figure. 1 Step Model Development

Research and development is research that is used to create new products and or develop existing products based on needs analysis contained in the field observations, interviews, initial needs questionnaires (James Tangkudung, 2016).

### Methods

Learning strategies are the chosen ways to deliver learning methods in a particular learning environment. Furthermore, they explained that the intended learning strategy includes the nature of the scope and sequence of learning activities that can provide students with learning experiences. (Uno, 2016) Learning strategies can be interpreted as planning that contains a series of activities designed to achieve certain educational goals. (Majid, 2015)

Characteristics in this study using Research and Development, namely research in the form of a "cycle", which begins with a need, a problem that requires a solution with a particular product. In the field of education, the products produced through Research and Development are expected to increase education productivity. Conceptually, the research and development approach includes 10 general steps as follows: 1) Research and information collecting, 2) Planning, 3) Develop premier form of product, 4) Preliminary field testing, 5) Main product revision, 6) Main field testing, 7) Operational product revision, 8) Operational field testing, 9) Final product revision, and 10) Dissemination and implementation (Gall et al., 2007).

In simple terms the authors choose or adopt the Borg and Gall model are as follows: 1) The stages or steps of the development design are structured, clear and complex., 2) The steps are very easy to understand and apply to the research development process. 3) It is hoped that it can be applied to the research that the author will examine, namely the development of a physical education learning model based on Teaching Games For Understanding (TGFU) in junior high school students. The following is the TGFU passing training model that is used, among others:

Variable	Experiment Passing
Based Lower Passing learning model TGfU	<ul style="list-style-type: none"> <li>• It states that the Happy Ball learning model can be implemented by elementary school students.</li> <li>• The "Happy Ball" learning model rotates and can be practiced by elementary school students.</li> <li>• The "moving happy ball" learning model explained in 1st place can be implemented even by elementary school students.</li> <li>• Moving happy ball learning model 2nd prize, can be introduced by elementary school students.</li> <li>• The designated learning model "pass under the target box" can be implemented by elementary school students.</li> <li>• It states that the cross-box bottom-pass learning model can be implemented even by elementary school students.</li> <li>• The specified paired lower passing learning model can be implemented even by elementary school students.</li> <li>• The Passing Down 2 vs 2 learning model can be implemented by elementary school students.</li> <li>• The Passing Down 3 vs. 3 learning model can be implemented by elementary school students.</li> </ul>

Variable	Experiment Passing
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- |  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>It states that the lower pass 4:4 learning model can be implemented by elementary school students.</li> </ul> |
|--|--|

4. Small Group Trial, After being evaluated and deemed feasible by experts, the next activity in this development is to conduct small group trials. After the data was obtained from small group trials, then the data were analyzed.

## POPULATION AND SAMPLE

The population in this study was at the SMPN 13 Bekasi City and the sample of this study used a purposive sampling technique. The number of samples used in this study were 62 people consisting of 2 groups of 31 people each. Purposive sampling is a sampling technique with certain considerations (Sugiyono, 2016)

## RESULT

Data technique following is an explanation of each step of the design/model development used as follows:

1. Needs Analysis, analysis is used to collect information which is carried out by means of initial observations in the form of field observations, giving questionnaires and interviews with teachers, as well as observing research subjects during the learning process and summarizing all the problems encountered.

2. Initial Product Manufacturing, After completing the needs analysis stage, the initial product was made in the form of a game, namely by designing a teaching games for understanding model in volleyball subjects at the elementary level.

3. Evaluation of Experts/Expert Judgment, Expert reviews are used to input the initial product that has been made using a justification test where the product that has been made will be validated using an instrument that has been made and consulted with experts. Revision of the product after the initial product is reviewed by experts and given an assessment and input then the data is analyzed and revised for initial trials.

5. Product Revision, Revisions are made if in the small group test the results are not good, it needs to be revised and proceed to the second field trial (large group).

6. Large Group Trial, The next stage is a large group trial. Namely by testing products that have been developed on a larger scale. After the data can then be analyzed.

7. Product Revision, The results of the field test are then revised to the product, this is done to improve the product from the results of the evaluation of the experts, testing in accordance with the needs and objectives of research and development.

8. Main Trial / Effectiveness Test (Field Testing), The trial data is used as the basis for determining the significance of the products that have been developed. The type of data to be collected is adjusted to the information needed about the product model being developed and the learning objectives to be achieved.

9. Major Trial Revision, After the main trial or testing the effectiveness of the model product, the next step is to revise the product model that has been developed and tested to get perfect results.

10. Final Product/ Final Product, The product of the developed model is effective and ready to be used or utilized by users, namely students, teachers or the wider community.

The following are the results of the data from the research results

**Table 1. Experimental Group Mean Difference Test**

		Mean	N	Std Deviation	Average Difference	t-tabel
Pair 1	Pre-Test	15,581	31	2,349	30,482	1,696
	Post-Test	20,000	31	2,049		

**Table 2. Test of Control Group Mean Differences**

		Mean	N	Std Deviation	Average Difference	t-tabel
Pair 1	16,5484	3,385	31	13,991	13,991	1,696
	18,7097	2,759	31	2,049		

**Table 3. Test of Differences in Mean Post-Test of Control and Experiment Groups**

		Mean	N	Std Deviation	Average Difference	t-tabel
Pair 1	Control	18,710	31	2,759	3,386	1,671
	Experiment	20,000	31	2,049		

## Conclusion

The results of other studies say that most teachers are likely to use TGfU in the future, to implement skills-based learning during physical education teaching practices (Wang & Ha, 2015).

. In developing the TGfU learning model, researchers present games, organize classes, provide

feedback between teachers and students and modify games. This is in accordance with research which states that the best pedagogical by teachers form areas for consideration, including: (1) preparation; (2) management; (3) starting TGfU lessons; (4) teacher behavior; 5) teacher focus during the game; (6) learning

environment (Butler, 2014). TGfU promotes a learning environment that supports autonomy, inclusion and equity as all students have the opportunity to increase engagement, fun, and social interaction in physical education lessons (Gil-Arias, Claver, et al., 2020) A teacher from can encourage students to take responsibility and make decisions during physical education lessons delivered through the TGfU direct instruction model (Gil-Arias, Harvey, et al., 2020)

The importance of choosing a learning model can achieve the learning objectives to be achieved. Therefore, the right learning model and adapting to the characteristics of elementary school students is the TGFU learning model. TGfU learning model is dynamic in its application, some mastery will be obtained by students such as mastery of knowledge, skills, strategies and tactics, rules of the game, and mastery in the context

The research that has been carried out starting from needs analysis, expert validation, small group trials, large group trials and the effectiveness of the model obtained satisfactory results. The discussion that has been made in the research on the development of the TGfU-based volleyball passing learning model is that the product developed is feasible and effective to use. It can be proven that from the results of the study concluded that: 1. Based on the data obtained from the validation of physical education learning experts, it is stated that the overall TGfU-based volleyball passing learning model is feasible and valid to be used in field trials. 2. Based on the data obtained from the validation of volleyball game experts, it is stated that the overall TGfU-based volleyball passing learning model is appropriate and easy so that it is valid to be used in field trials. 3. Based on the data obtained from the validation of motion learning experts, it is stated that the overall TGfU-based volleyball passing learning model is safe and can improve students' skills, so it is valid to be used in field

of the game. The teacher designs TGfU-based games based on objectives, game areas, game forms, feedback and game modifications. It is hoped that students will have the responsibility of each practicing the learning model. Four aspects of TGfU: (a) lesson design; (b) cooperation from planning to teaching units between researchers and teachers; (c) related learning tasks; and (d) the use of two reflective periods that help students understand and apply new knowledge (Morales-Belando et al., 2018). The results of other studies confirm that to overcome the traditional approach in teaching games and informal learning using TGfU is successful with a conducive implementation and sufficient (O'Leary, 2015). Physical education teachers regard TGfU as a constructivist approach to understanding pedagogical approaches in teaching/training a game (Harvey et al., 2017)

4. Based on data obtained from small group trials and large group trials, it is stated that overall the TGfU-based volleyball passing learning model is easy and can be practiced by junior high school students. 5. Based on the data obtained from the effectiveness test, the developed model states that overall the TGfU-based volleyball passing learning model is more effectively used to improve volleyball passing skills and understanding in junior high school students. Based on the results of this research and development, the product in the form of a TGfU-based volleyball learning model book for elementary school students has been valid according to experts for testing. In accordance with the average percentage of learning experts in physical education, which is 77.60%, the average percentage of volleyball game experts is 80.20%, the average percentage of movement learning experts is 80.73%. The results of the small group trial were 80.73% while the large group was 80.73%. The results of the effectiveness of the

Developed learning model obtained a value of  $t_0 = 3.386 > t_{table} = 1.671$  so that the model was declared more effective to improve students' skills and understanding of volleyball passing.

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