



The Effect of TGT (Teams Games Tournament) Learning Model on Table Tennis Learning Achievement

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Abstract

Study Purpose. The success of the learning process depends on the educator, where an educator plays an important role in the learning process. This study aimed to determine the effect of learning media on the learning achievement of forehand strokes in table tennis games.

Materials and Methods. The method used in this research was a quasi-experimental research with one group pre-test post-test design. The population used in this study were students in MTS Sunan Giri class VIII the sample used was 36 students. The research was conducted 4 times. The data collection technique used was a table tennis forehand test. The analysis technique used was descriptive analysis, normality test, and hypothesis testing.

Results. There was an effect of learning media on the learning achievement of forehand shots in table tennis games. this is evidenced by the t-test results obtained of 0.00 which means a significant value <0.05 .

Conclusion. Through these results, it can be concluded that there was a significant influence of learning media on the learning achievements of forehand strokes in table tennis games.

Keywords: Learning Media, Learning Achievement, Table Tennis

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Introduction

The changing times in the era of globalization have had a considerable impact on various aspects of life, especially in education. Education is currently entering the digital era where every human activity cannot be separated from the use of technology and information. The world of education at this time began to prepare for a generation that is able to survive in the competition of the industrial era 4.0 or what is called the digital era (Syamsuar & Reflianto, 2018). Indirectly, education is currently getting a major challenge to be able to adjust to the times, besides that it can create superior human resources. The development of the current era requires the ability to solve complex problems, to think critically, and creatively (Arsanti et al., 2021). Therefore, education is very important for each individual to obtain changes and improve

their quality. The quality of human resources must be considered and prepared seriously (Marhadi, 2015). Educators are one of the most important components in determining the implementation of education. Educators become the dominant determining factor in the learning process so that they can achieve their goals optimally (Rohmawati, 2015). The quality of education is determined by how the learning process takes place, to achieve maximum goals there needs to be cooperation between educators and students.

The success of the learning process depends on the educator, and how to package the teaching and learning process to be more interesting so that it can create an active learning atmosphere. The learning paradigm so far considers the learning process to be sourced only from the teacher, this makes the learning process run in one direction which is dominated by the teacher (Fратиwi et al., 2021). One way to break the previous paradigm is to use learning methods or media that can attract the attention of students to be able to actively participate in the learning process. If educators make mistakes in determining the learning media used, it can cause students to feel bored and not interested in participating in learning. This situation will result in the achievement of learning achievement that are not optimal. The current learning paradigm is no longer teacher-centred, but student-centred where educators are not the only source of learning or source of information obtained. Learning that is fun and effective is collaborative and student-centred. To achieve all aspects of learner development and create an effective and efficient learning process, there needs to be reciprocity between teachers and students, so that it will affect the learning achievement obtained (Sengottuvel & Aktharsha, 2015). The utilization of technology as learning media is currently widely used in the learning process, one of which is in PJOK subjects.

Physical Education Sports and Health (PJOK) learning that is usually carried out in the field requires educators to be more creative and innovative in using appropriate learning media (Pamungkas, 2019). The use of media is very important in the success of the learning process which is influenced by the increasing quality of the teaching and learning process. In addition, the use of learning media can help clarify the messages conveyed during the learning process (Supartini et al., 2016). Along with the times, science and technology (IPTEK) is increasingly sophisticated and provides many benefits, especially in the application of media during the learning process. The development of the nation's science and technology has created many quality and qualified future generations (Mulyani & Haliza, 2021). Indirectly, advances in science and technology make it easier for educators to create media that are suitable for the material to be conveyed (Marryono Jamun, 2018). Many materials in PJOK subjects can be provided by utilizing learning media. These efforts are believed to be able to solve the problems of students in understanding the material provided, one of the materials provided is table tennis. Based on observations and interviews with students, it is stated that so far table tennis material is rarely given because it is considered very difficult to understand, besides that teachers do not make good and appropriate use of learning media so that students have difficulty in mastering the material provided. Educators also still often use the lecture method so that students are less interested and feel bored when receiving the material. Therefore, researchers are interested in conducting research with the title "The Effect of Learning Media on Learning Achievement of Forehand Punches in Table Tennis Games".

Materials and Methods

Study participants

The population used in this study was students at Mts Sunan Giri class VIII. The sample used was 36 students. The research was conducted 4 times. The data collection technique used was the table tennis forehand shot ability test. After that, the data that had been collected will be analyzed to find out the final results.

Study Organizations

In this study, the method used was pseudo-experimental research (Sugiyono, 2019) with the aim of knowing the effect of learning media on learning achievement for forehand shots in table tennis games. The design used was one group pretest-posttest, this study did not use a control class as a comparison.

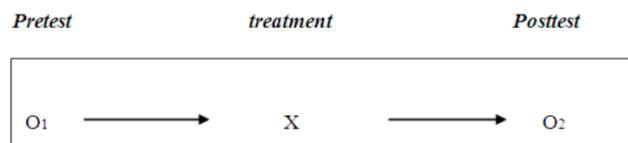


Figure 1. One group pretest-posttest design (Hermawan, 2019)

Statistic Analysis

The analysis technique used was descriptive analysis to determine the summary of the data collected (Sholikhah, 2016), and then a normality test was conducted to determine whether the data distribution was normally distributed or not. After that, hypothesis testing was carried out to determine the effect of the independent variable (learning media) on the dependent variable (learning achievement of forehand shots). Data testing using the SPSS application by entering the data results by distinguishing between the pretest and posttest columns, then the normality test was first carried out on the analyze > descriptive statistics > explore > normality menu. After knowing the distribution of data, it was continued with hypothesis testing on the analyze > compare means > paired sample t-test menu.

Results

Based on the results of research conducted at Mts Sunan Giri related to table tennis learning using appropriate learning media. Then it can be described as follows:

Table 1. Data calculation results

	Min	Max	Mean	Std. dev
Pre-test	60	78	68,92	5,310
Post-test	70	88	81,72	4,075
Difference	10	10	12,80	-1,235

Based on the description of the table above, it can be concluded that judging from the average pretest and post-test data, it shows that the results are quite improved, known through the difference from the average pretest and post-test scores of 12.80. Next, a normality test was carried out to find out that the data was normally distributed.

Table 2. Normality Test Results

	Stat.	Sig
Pretest	0,959	0,19
Posttest	0,945	0,07

It can be seen from the description of the table above, the results of the normality test using shapiro-wilk. The pretest and posttest data show that the data was normally distributed, because based on the results of testing the pretest and posttest data obtained a significant value > 0.05. Therefore, it means that it was in accordance with the requirements of normally distributed data if the significance value was greater than 0.05. Then a hypothesis test was carried out to determine the effect.

Table 3. Results of the t-test

	N	Sd	T Stat	Sig.
Pre-stest	36	5,280	-14,553	0,00
Post-test				

Through the explanation of the table above, it can be seen that there was a significant effect of the application of learning media on the learning achievement of forehand shots in table tennis games. This statement was proven by the results of data analysis obtained by 0.00. This proved that one of the data requirements was declared to have an influence if the sig value was <0.05. More detailed factors, advantages, and disadvantages of using learning media can be described in the next discussion.

Discussion

Table tennis is one of the sports listed in the education curriculum. Table tennis is included in a small ball game that uses a table as a place to bounce the ball (Jamaluddin, 2022). Another opinion says table tennis is a game that uses a table as a field bounded by a net using a small ball that is hit using a tool (Rachman et al., 2017). Table tennis game is one of the sports that is quite familiar among the public. This game is better known as ping pong. Regular practice is needed in order to play table tennis games because these games focus more on the accuracy between the ball and the bat. There are several basic techniques that must be mastered to play table tennis, one of which is the forehand shot. The stroke technique is considered more dominant and most basic to master and do. A forehand shot is a ball shot with the position of the hand holding the bat facing forward (Lestari, 2017). Through forehand shots, it will later cause a blow with the position of the bat when it touches the ball which will produce various variations of shots (Pratama et al., 2017). It is necessary to understand the basic techniques of table tennis regarding the direction of rotation, speed, timing, and stroke variations. To maximize understanding of the material, educators need tools to assist in the delivery of material. One of the efforts made is the use of learning media.

The use of learning media must be adjusted to the material and characteristics of students in order to achieve optimal learning objectives. In addition, the use of appropriate learning media can overcome the problem of low learning achievement. The existence of learning media is expected to play an important role in improving students' abilities and learning

achievement. In addition to the utilization of learning media, the teaching skills of an educator are also needed for the smooth running of the learning process. It is necessary to have a detailed and detailed design before carrying out the learning process so that learning is more directed and controlled. The success of the learning process is determined by how it is planned (Purwono, 2018). The role of learning media is very important in the transformation of knowledge because learning media can have a positive impact on students such as increasing attractiveness so that students are increasingly motivated to participate in the learning process, in addition it can also make it easier for students to understand the material (Subagja et al., 2020).

Learning media by utilizing technology is currently increasingly widespread in the learning process. Learning media provides a lot of innovation and diversity in presenting material. There are several types of learning media that can be used, including:

1. Audio media

This audio media is packaged in auditive form (can only be heard). The use of this media can stimulate students' thoughts, feelings, attention, and ability to understand the material (Firmadani, 2020). The utilization of this audio media can be packaged in the form of podcasts so that the material can be stored or even shared on various social media platforms to make it easier to re-listen to the material provided. However, there are disadvantages of utilizing this type of media, namely that it only relies on sound, and students tend to be more bored, especially when used for long material (Asmi et al., 2019).

2. Visual media

Visual media is packaged in the form of pictures, slides, paintings, and so on. The use of this media can only be seen and does not contain sound. Visual media is a tool that can represent something that cannot be conveyed by educators through sentences (Sari & Lestari, 2018).

3. Media audio visual

Audio-visual media is more widely used by educators in delivering material. In addition to being more practical, the use of this type of media is very varied and utilizes two senses, namely the sense of sight and the sense of hearing. That way students can analyze through the display seen while listening to the explanation of the material provided (Ridwan et al., 2017). The use of audio-visual media has an impact on the role of educators to be more positive because it reduces the time in explaining the material so that educators can pay attention to other aspects needed by students in gathering information and solving problems during the learning process (Ahmadi, 2020).

One of the factors that determine the success of the learning process is that the media used can be interesting so that the attention of students can focus on the presentation of the material.

Similar research (Rahmatullah et al., 2020) states that students more easily master the material using application-based audio-visual learning media, this is evidenced by an increase in the percentage of learning achievement in the first cycle of 67.12% and the second cycle of 88%. Another study submitted by (Nursifa & Budi, 2022) states that there is an effect of modified media using board aids on forehand ability in students. Evidenced by the results of the data obtained, namely t count greater

than t-table ($17.202 > 1.729$). Similar research was also conducted by Hardiansyah (2019) who stated that training using video has a significant effect on footwork skills.

Based on the description of the discussion above, it can be concluded that the use of learning media greatly affected the learning achievement of students in understanding the material. In addition, it could require students to be more active in the learning process and be able to think critically in solving learning problems (Solihin, 2020).

Conclusion

Based on the results of the research and discussion above, it can be concluded that there was an effect of learning media on the learning achievement of forehand shots in table tennis games. This is evidenced by the t-test results obtained of 0.00 which means a significant value < 0.05 . For further research, researchers suggest exploring more research on methods, media, and learning models that are carried out to improve student learning achievement.

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Conflict of interest

The author states that there is no conflict of interest whatsoever in this study.

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