

Comparison of Assisted and Unassisted TGT Learning Models Using Playing Cards Media on the Learning Interest of Grade XI Students in Wave Material at Al Bahra Jeneponto Senior High School

Nur Wahyunengsi¹, Jusman¹, Hasbullahair Ashar¹

¹UIN Alauddin Makassar, Indonesia

Email: wahyunengsinur@gmail.com

Abstract. *The purpose of this study is to determine a) the learning interest of students taught by the TGT Learning Model Assisted by Playing Cards Media b) the learning interest of students taught by the TGT Learning Model Not Assisted by Playing Cards Media c) the difference in Learning Interest of Students taught using the TGT Learning Model Assisted and Not Assisted by Playing Cards Media in class XI on Wave Material at SMAS Al-Bahra Jeneponto. This type of research is Quasi Experimental Design with The Matching Only Post-Test Control Group Design. Design involving the independent variable is the TGT learning model. The population in this study were students of class XI SMAS Al-Bahra Jeneponto who studied science subjects consisting of two classes and totaling 44 students. While the sample was class XI MIPA 1 as the control class and XI MIPA 2 as the Experiment class. The results of descriptive research show that the average value of learning outcomes of students taught using the TGT model without playing cards media is 47.78 and those taught with the TGT learning model assisted by Playing Cards media is 71.95. The results of the Hypothesis testing on students' learning interests showed that there were differences in the learning interests of students taught using the TGT learning model assisted by Playing Cards media.*

Keywords: Education, Learning Models, learning media, Interest in Learning

Received: June 4, 2025

Revised: July 17, 2025

Accepted: August 6, 2025

INTRODUCTION

Education is an effort to improve the quality of human resources. As the main actor in the development process, humans need sufficient knowledge to become quality individuals and interact with others equally in various aspects of life (Rafiqah et al., 2021). Teachers have a very influential role in learning because teachers must not only convey knowledge but also make learning more active (Holt-Reynolds, 2000). The methods and models used by teachers certainly affect student activity.

Tanjung & Namora (2022) said that, if the teacher uses a student involvement model to make students work harder, on the other hand if the teacher only explains then students will be bored and fed-up during class learning. Wijaya et al. (2021); Rosnidar et al. (2021); Sumyadi et al. (2020); Muthik et al. (2022) said that, the use of the right teaching model will affect students' interest in learning, make teaching more active and improve learning outcomes. In reality, many teachers only use the lecture method when learning (Konopka et al., 2015; Smith & Van, 2004; Hafeez, 2021; Jian, 2019). This makes students feel bored and tired (Bahtiyar, 2022).

This is because the success of the learning process as an educational process in schools depends on factors that come from within (internal) (external) the students themselves, such as learning activities, motivation, interests, talents, and others, as well as factors that come from within (external) the students themselves. Therefore, it is influenced by both. External (external) educators, environment, facilities, curriculum, learning methods, and learning models (Rafiqah et al., 2021).

Based on the results of a brief interview with several students of class XI at SMAS AL BAHRA JENEPONTO who are taking physics lessons, it is known that the teaching methods applied are generally in the form of theoretical lectures. This causes some students to be less motivated in taking part in learning. In addition, students feel forced to understand the material only through learning methods that focus on textbooks (Kember, 2015). As a result, many students are not active in the learning process because the teaching model applied by the teacher does not involve them enough.

This learning model causes students to be reluctant to participate in class, often absent, and the number of students attending physics lessons decreases compared to other subjects. From a total of around 30 students in the class, the number present during physics lessons decreased to around 20 students. Based on the explanation above, an interesting learning model is needed, along with media that can increase students' interest in learning. So the researcher is interested in conducting a comparative study with the title "Comparison of Assisted and Unassisted TGT Learning Models Using Playing Cards Media on the Learning Interest of Class XI Students in Wave Material at SMAS AL-BAHRA Jenepoto.

The purpose of this study is to determine a) the learning interests of students who are taught using the TGT Learning Model Assisted by Playing Cards Media b) the learning interests of students who are taught using the TGT Learning Model that is not Assisted by Playing Cards Media c) Differences in Learning Interests of Students who are taught using the TGT Learning Model Assisted and Unassisted by Playing Cards Media in Grade XI on the Wave Material of SMAS Al-Bahra Jeneponto

METHODS

For research purposes, many methods are used. These methods include research plans, including research time, data sources, and methods of data collection, processing, and analysis. Based on the description along with the problems and objectives, namely Quasi Experimental Research is a type of research that tests a variable using two groups or classes, the experimental class and the control class. For this study, a research design called Matching Only Posttest Control Group was used. In other words, this design aims to find subjects who have the same characteristics or the same scores on control variables that are considered to be related to the performance of the related variables. In other words, the researcher tries to find other subjects who have the same characteristics or the same scores on the control variables (variables on which the subjects are matched). Population is the entire group or individuals who are the subjects of research with the same attributes, while a sample is a small part of the population taken to describe its attributes (Krueger & Clement, 1996).

Table 1. Population of class XI SMAS AL BAHRA Jeneponto

Class	Number of Students		Amount
	Lk	Pr	
XI MIPA 1	8	13	21
XI MIPA 2	10	13	23

A sample is a portion of a population and has the same characteristics as the population. When the population is very large and difficult to study as a whole due to limited resources such as funds, manpower, and time, researchers can use samples that represent the population. The sampling method in this study was carried out using samples taken as many as two classes of one-step matching sampling or one-stage matching samples. Research instruments are used to collect

research data. In the scientific method of solving problems, the selection of data collection instruments is very important. Choosing the wrong instrument can lead to undesirable research results because the empirical data needed in research can only be obtained through the right instruments and data collection techniques, the instrument used is a learning interest questionnaire.

RESULTS AND DISCUSSION

The results of students' learning interest in wave material with the TGT learning model assisted by Playing Cards media, obtained data of one student who obtained a score of 37, one student who obtained a score of 40, one student who obtained a score of 41, one student who obtained a score of 42, one student who obtained a score of 43, one student who obtained a score of 45, two students who obtained a score of 46, one student who obtained a score of 47, two students who obtained a score of 50, two students who obtained a score of 51, two students who obtained a score of 52, one student who obtained a score of 54, one student who obtained a score of 56, one student who obtained a score of 57. Thus, from the distribution table, descriptive.

Table 2. Descriptive Statistics of the Results of the Physics Learning Interest Test of Students Taught Using The TGT Learning Model Assisted by Playing Cards Media For Class XI SMAS AL Bahra Jeneponto

No	Range	f	%	Information
1	$X \leq 32$	0	0%	Very Poor
2	$32 < x \leq 44$	0	0%	Poor
3	$44 < x \leq 56$	0	0%	Enough
4	$56 < x \leq 68$	6	33%	Good
5	$X > 68$	12	67%	Very Good

Based on table 2, it can be seen that the number of samples is eighteen students. The maximum value is 79, the minimum value is 61, the average value is 71.95, so that the standard deviation obtained is 5.42 and the standard variance obtained is 29.35. If the results of students' learning interests are grouped into very good, good, sufficient, less, and very less categories, the frequency and percentage will be obtained after being given a learning interest questionnaire.

Table 3. Categorization of interest in learning physics using the TGT learning model assisted by Playing Cards media for class XI students at Al-Bahra Jeneponto Senior High School

Parameters	Value
Number of samples	18
Mean	71,95
Standard deviation	5,42
Variance	29,35
Minimum value	61
Maximum value	79

Based on Table 3, the distribution of physics learning interest scores in the experimental class can be obtained based on the frequency distribution category. There are no students included in the categories of very less, less, and quite interested in learning physics. There are 6 students in the category of interested in learning physics with a percentage of 33% of the total number of students. There are 12 students in the category of very interested in learning physics with a percentage of 67% of the total number of students.

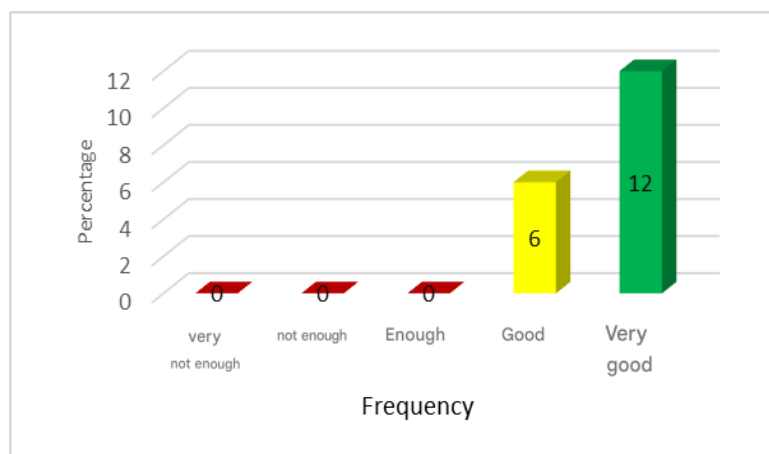


Figure 1. Histogram of Physics Learning Interest Score Categories of Students in Classes Taught with the TGT Learning Model Assisted by Playing Cards Media

Based on the histogram in Figure 1 above, it shows the categorization of values in the experimental class where the most students' physics learning interest values are in the very good category, namely 12 students with a value range of 68 and 6 people are in the interested category in the value range of 56-68. The results of the Descriptive Analysis of the Learning Interest Values of Class XI Students of SMAS Al-Bahra Jeneponto (Control Class) applying the TGT Learning Model without Playing Cards obtained data on one student who got 61, one student who got a score of 64, one student who got a score of 66, one student who got a score of 67, two students who got a score of 68, two students who got a score of 69, one student who got a score of 75, five students who got a score of 76, one student who got a score of 77, one student who got a score of 78, and one student who got a score of 79.

Table 4 Descriptive Statistics of the Results of the Physics Learning Interest Test of Students Taught Using the TGT Learning Model for Class XI of Al-Bahra Jeneponto Senior High School

Parameters	Value
Number of samples	18
Mean	47,78
Standard deviation	5,69
Variance	32,42
Minimum value	37
Maximum value	57

Based on table.4, it can be seen that the number of samples is eighteen students. The maximum value is 57, the minimum value is 37, the average value is 47.78, so that the standard deviation obtained is 5.69 and the standard variance obtained is 32.42. If the results of students' learning interests are grouped into very good, good, sufficient, less, and very less categories, the frequency and percentage will be obtained after being given a learning interest questionnaire.

Table 5 Categorization of interest in learning physics using the TGT learning model of class XI students at Al-Bahra Jeneponto Senior High School

No	Range	f	%	Information
1	$X \leq 32$	0	0%	Very Poor
2	$32 < x \leq 44$	5	28%	Poor
3	$44 < x \leq 56$	12	67%	Enough
4	$56 < x \leq 68$	1	6%	Good
5	$X > 68$	0	0%	Very Good

Based on Table 5, the distribution of physics learning interest scores in the Control class can be obtained based on the frequency distribution category. There are no students included in

the category of very less interested in learning physics. There are 5 students in the category of less interested in learning physics with a percentage of 28% of the total number of students. There are 12 students in the category of quite interested in learning physics with a percentage of 67% of the total number of students. There is 1 student in the category of interested in learning physics with a percentage of 6% of the total number of students.

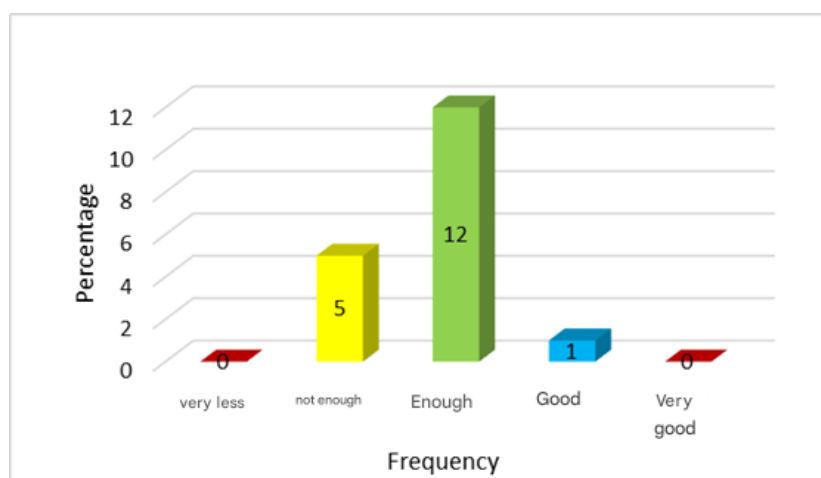


Figure 2. Histogram of Physics Learning Interest Score Categories of Students in Classes Taught with the TGT Learning Model without Playing Cards

Based on the histogram in Figure 2 above, it shows the categorization of values in the control class where the value of students' interest in learning physics is mostly in the category of quite interested, namely 12 students with a value range of 44 - 56 and 1 person is in the good category in the value range of 56 - 68. And 5 people whose interest in learning is in the less interested range of 32 - 44.

Description of Learning Interests of Students Taught Using the TGT Learning Model Assisted by Playing Cards

The learning interest of students is related to the style of movement that drives someone to face or deal with people, activities, objects and experiences that are stimulated by the activity itself. Based on the results of data analysis, the learning interest of students in the wave material of class XI mipa 2 assisted by playing cards in the TGT learning model has been depicted in the descriptive analysis. The average obtained from the descriptive analysis can be one of the references for knowing the learning interest of students in the wave material of class XI mipa 2 Smas Al-Bahra Jeneponto. Data analysis The learning interest of students in the wave material applied to the TGT Learning Model assisted by playing cards media obtained an average value of 71.95, where six students were in the good category, and twelve students were in the very good category. Thus, these results are in line with research conducted by Yolanda Dwi (Prastika 2020).

Description of Learning Interests of Students Taught Using the TGT Learning Model without Playing Cards

Class XI Science 1 (control class) is a class that is only given the TGT Learning Model treatment without applying Playing Cards. Based on the descriptive results in table 4.3, which have been carried out in the control class with an average value of 47.78, it shows that the data category is 5 students with a percentage of 22% in the less category, and 1 student with a percentage of 5% in the good category, and 12 students with a percentage of 66% in the sufficient category. The results of the descriptive analysis show that there is an interest in learning students who are taught the TGT learning model without playing cards in the sufficient category range. This indicates that the use of learning models can also affect student interest even without Playing cards. This is the same as what was stated by Rohmah and Proyito in their research, it was explained that the TGT Model is a cooperative learning model based on games that can increase student learning motivation.

However, the results obtained were higher interest in learning students who were taught using playing cards compared to learning using the TGT model without the help of playing cards media. The TGT learning model without playing cards media has not been able to show optimal results in the control class. Although TGT is basically an active and collaborative model, the absence of supporting media causes a decrease in interest in attracting attention, facilitating interaction, and increasing understanding of concepts. Therefore, to achieve better learning outcomes, the use of media such as playing cards is highly recommended so that the TGT model can run according to its essence. The TGT model without media tends not to be able to present a pleasant and challenging atmosphere, which is very important to foster students' interest and motivation to learn.

Comparison of Learning Interest Results of Students Taught Using the TGT Learning Model Assisted and Not Assisted by Playing Cards Media in Class XI SMAS Al-Bahra Jeneponto

In this study using the t2 sample test, the test results showed that the significance value was 0.05, which was greater than the expected significance value of 0.018. This shows that there is a significant influence on the learning interest of students taught with the TGT learning model assisted by Playing Cards. There are several indicators of learning interest, one of which is a feeling of pleasure (Ainley & Ainley, 2011; Ainley, 2006; Laosum, 2023). The feeling of pleasure in question is that students have a feeling of pleasure towards the subject so that there is a feeling to continue to search for and study the subject without any coercion. From the results of the researcher's observations, this is what makes students' interest in learning increase and there is a difference between the experimental class and the control class, because the feeling of pleasure towards physics material increases students' interest in learning with the presence of playing cards. This is based on the recognition of students in the learning process who say that physics is a difficult subject, but the existence of the TGT model assisted by playing cards media makes students happier in the physics learning process (Hernandez et al., 2022; Azizah et al., 2021).

Based on the results of the research that has been conducted, the use of the Teams Games Tournament (TGT) learning model assisted by playing cards media has been proven to have a significant influence on improving student learning outcomes compared to TGT learning that does not use the media. This is indicated by the quite striking difference in average scores between the experimental class and the control class. In the experimental class that implemented the TGT model assisted by playing cards media, students showed higher average learning outcomes, and the dominant distribution of scores was in the good and very good categories. While in the control class that only used the TGT model without playing cards media, student learning outcomes tended to be in the sufficient and less categories, with lower average scores. Thus, it can be stated that the TGT learning model assisted by playing cards media is not only more effective in improving learning outcomes, but also provides a more meaningful and enjoyable learning experience for students. Therefore, the use of interesting learning media, such as playing cards, is highly recommended to be applied widely in the learning process, especially in the application of cooperative learning models such as TGT, in order to increase student motivation, participation, and overall learning outcomes.

CONCLUSION

Based on the research that has been conducted, the following conclusions are presented: The interest in learning physics of students taught by the TGT Learning Model without Playing Cards is in the interested category and is seen as being in the sufficient category. The interest in learning physics of students taught by the TGT Learning Model Assisted by Playing Cards media is in the interested category and is seen as being in the very good category. There is a difference in the interest in learning physics, where the interest in learning physics of students taught using the TGT Learning Model assisted by Playing Cards media is higher than that of classes taught using the TGT Learning Model without Playing Cards media.

SUGGESTION

In connection with the results obtained in this study, the author makes several suggestions, as follows: Game-based learning must be improved, especially in Physics subjects, so that students gain better learning interest and learning objectives can be achieved. The results of the study can be used as a reference and comparison for subsequent researchers. This is especially true for those who want to conduct similar research.

REFERENCES

- Ainley, M. (2006). Connecting with learning: Motivation, affect and cognition in interest processes. *Educational psychology review*, 18(4), 391-405. <https://doi.org/10.1007/s10648-006-9033-0>
- Ainley, M., & Ainley, J. (2011). Student engagement with science in early adolescence: The contribution of enjoyment to students' continuing interest in learning about science. *Contemporary educational psychology*, 36(1), 4-12. <https://doi.org/10.1016/j.cedpsych.2010.08.001>
- Azizah, N., Nengsih, E. W., Wati, L., & Nastiti, L. R. (2021). The perspective on monopoly as media in physics learning by using teams games tournament. In *Journal of Physics: Conference Series* (Vol. 1760, No. 1, p. 012015). IOP Publishing. <https://doi.org/10.1088/1742-6596/1760/1/012015>
- Bahtiyar, Y. (2022). Pelatihan Tahsin Alquran Bagi Guru Madrasah Ibtidaiyah dengan Metode Yanbu'a. *Journal of Integrated Elementary Education*. <https://doi.org/10.21580/jieed.v2i1.10671>
- Hafeez, M. (2021). Impact of Teacher's Training on Interest and Academic Achievements of Students by Multiple Teaching Methods. *Pedagogical Research*, 6(3).
- Hernandez, E., Campos, E., Barniol, P., & Zavala, G. (2022). Phenomenographic analysis of students' conceptual understanding of electric and magnetic interactions. *Physical Review Physics Education Research*, 18(2), 020101. <https://doi.org/10.1103/PhysRevPhysEducRes.18.020101>
- Holt-Reynolds, D. (2000). What does the teacher do?: Constructivist pedagogies and prospective teachers' beliefs about the role of a teacher. *Teaching and teacher education*, 16(1), 21-32. [https://doi.org/10.1016/S0742-051X\(99\)00032-3](https://doi.org/10.1016/S0742-051X(99)00032-3)
- Jian, Q. (2019). Effects of digital flipped classroom teaching method integrated cooperative learning model on learning motivation and outcome. *The Electronic Library*, 37(5), 842-859. <https://doi.org/10.1108/EL-02-2019-0024>
- Kember, D. (2015). Motivating students through teaching and learning. In *Understanding the nature of motivation and motivating students through teaching and learning in higher education* (pp. 79-97). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-287-883-0_6
- Konopka, C. L., Adaime, M. B., & Mosele, P. H. (2015). Active teaching and learning methodologies: some considerations. *Creative Education*, 6(14), 1536-1545. <http://dx.doi.org/10.4236/ce.2015.614154>
- Krueger, J., & Clement, R. W. (1996). Inferring category characteristics from sample characteristics: Inductive reasoning and social projection. *Journal of Experimental Psychology: General*, 125(1), 52.
- Laosum, T. (2023). Development of indicators of happiness in learning of Thai open university students. *Asian Association of Open Universities Journal*, 18(1), 61-77. <https://doi.org/10.1108/AAOUJ-10-2022-0144>

- Muthik, A., Muchyidin, A., & Persada, A. R. (2022). The effectiveness of students' learning motivation on learning outcomes using the reciprocal teaching learning model. *Journal of General Education and Humanities*, 1(1), 21-30. <https://doi.org/10.58421/gehu.v1i1.7>
- Prastika, Y. D. (2020). Pengaruh minat belajar siswa terhadap hasil belajar matematika siswa SMK Yadika Bandar Lampung. *Jurnal Ilmiah Matematika Realistik*, 1(2), 17-22.
- Rafiqah, R., Suhardiman, S., & Fauziah, F. (2021). Efektivitas Penerapan Model Modifikasi Tingkah Laku (Behavioral Modification) Terhadap Peningkatan Hasil Belajar Fisika Peserta Didik. *Al-Khazini: Jurnal Pendidikan Fisika*, 1(1), 19-38. <https://doi.org/10.24252/al-khazini.v1i1.20832>
- Rosnidar, R., Yusrizal, Y., Mustafa, M., & Susanna, S. (2021). Application of discovery learning model in increasing student interest and learning outcomes. *Jurnal Penelitian Pendidikan IPA*, 7(4), 542-548. <https://doi.org/10.29303/jppipa.v7i4.745>
- Smith, L. W., & Van Doren, D. C. (2004). The reality-based learning method: A simple method for keeping teaching activities relevant and effective. *Journal of marketing education*, 26(1), 66-74. <https://doi.org/10.1177/0273475303262353>
- Sumyadi, Y., Umasih, U., & Syukur, A. (2020). The Effect of Teacher Teaching Skills and Student Interest on History Learning Outcomes. *Journal of Education Research and Evaluation*, 4(3), 319-324. <https://doi.org/10.23887/jere.v4i3.28349>
- Tanjung, W. U., & Namora, D. (2022). Kreativitas guru dalam mengelola kelas untuk mengatasi kejenuhan belajar siswa di Madrasah Aliyah Negeri. *Jurnal Pendidikan Agama Islam Al-Thariqah*, 7(1), 199-217. [https://doi.org/10.25299/al-thariqah.2022.vol7\(1\).9796](https://doi.org/10.25299/al-thariqah.2022.vol7(1).9796)
- Wijaya, H., Darmawan, I. P. A., Setiana, S. C., Helaluddin, H., & Weismann, I. T. J. (2021). Active reconnecting learning strategies to increase student interest and active learning. *Indonesian Journal of Instructional Media and Model*, 3(1), 26. <http://dx.doi.org/10.32585/ijimm.v3i1.1290>