



## The Effect of Think Pair Share Learning Model on Informatics Learning Outcomes of Junior High School Students

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### Abstract

This study was motivated by the low learning achievement of class VIII students in Informatics subjects at Junior High School 6 Samarinda. This study aimed to determine the effect of the Think Pair Share (TPS) learning model assisted by Canva media on student learning outcomes. The method used is a Quasi-Experimental design with two different groups, namely the experimental class that applies the Think Pair Share model and the control class that uses conventional methods. Data were collected through pre-test and post-test, then analyzed using normality test, homogeneity test, and hypothesis test (Independent Sample T-Test) with the SPSS Version 25 program. The results showed that the average Post-Test score of students in the experimental class reached 77.34, exceeding the Minimum Competency Criteria set. This finding shows that the application of Think Pair Share supported by Canva media significantly improves student learning outcomes compared to conventional methods. Therefore, this strategy is recommended to be applied to other subjects to improve learning effectiveness.

**Keywords:** Think Pair Share; Canva Media; Learning Outcomes; Cooperative Learning; Informatics

### Abstrak

*Penelitian ini dilatarbelakangi oleh rendahnya hasil belajar siswa kelas VIII pada mata pelajaran Informatika di SMP Negeri 6 Samarinda. Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran Think Pair Share (TPS) berbantuan media Canva terhadap hasil belajar siswa. Metode yang digunakan adalah Kuasi Eksperimen desain dengan dua kelompok yang berbeda, yaitu kelas eksperimen yang menerapkan model Think Pair Share dan kelas kontrol yang menggunakan metode konvensional. Data dikumpulkan melalui Pre-Test dan Post-Test, kemudian di analisis menggunakan uji normalitas, uji homogenitas, dan uji hipotesis (Independent Sample T-Test) dengan program SPSS versi 25. Hasil penelitian menunjukkan bahwa nilai rata-rata Post-Test siswa pada kelas eksperimen mencapai 77,34 melebihi Kriteria Ketuntasan Minimal (KKM) yang telah ditetapkan. Temuan ini menunjukkah bahwa penerapan Think Pair Share yang didukung oleh media Canva terdapat pengaruh secara signifikan meningkatkan hasil belajar siswa dibandingkan dengan metode konvensional. Oleh karena itu, strategi ini direkomendasikan untuk diterapkan pada mata pelajaran lain untuk meningkatkan efektivitas pembelajaran.*

**Kata Kunci:** Think Pair Share; Media Canva; Hasil Belajar; Pembelajaran Kooperatif; Informatika

### Introduction

In line with the advancement of technology, the education sector needs to make changes to utilize the latest advances. According to Siringoringo and Alfaridzi (2024) this is very important to improve the quality and effectiveness of the learning process. In

today's digital era, the use of technology is something that cannot be avoided due to the progress of the times and developments in the field of digital technology. As stated by Rizal (2023) science and technology are rapidly advancing, thus encouraging the world of education to produce students with high competence, both in mastery of material and in critical and creative thinking skills. An effort to improve learning standards is to apply an appropriate learning model, as stated by Musdalifah (2023) so that the teaching process uses a suitable learning model to help students understand the material better.

Education aims to provide an environment and learning process for actively developing students abilities, as explained by Rahman et al., (2022) and is expected to produce satisfactory learning achievement. Learning achievement refers to positive changes experienced by individuals or learners. According to Rachmawati and Erwin (2022), this learning achievement can be seen from the increase in knowledge, attitudes, and skills. As explained by Udju et al., (2023) learning outcomes are changes that occur in students related to aspects of knowledge, attitudes, and skills learning outcomes are also defined as individual abilities obtained through the learning process.

According to Ridho'i (2022) student learning outcomes are influenced by internal factors such as biology, psychology, maturity, intelligence, training, motivation, and attitudes as well as external factors, such as family, community, and school environments. One important influence is the emotional intelligence of individual students. Learning model is an approach or strategy in the learning process that is used when delivering material so that learning objectives are achieved so that student learning outcomes can improve (Udju et al., 2023).

Various learning models have been created, including cooperative models that encourage students to be active in the learning process, as expressed by Huda (2023) where this model focuses on cooperation among students in small groups to achieve common goals, as described by (Mujoko et al., 2024). According to Atikah et al., (2024) this model provides opportunities for learners to interact openly in a pleasant atmosphere and encourages active participation from each group member. Students not only receive information from the teacher, but also play an active role in learning activities, as expressed by Magdalena et al., (2024) which creates positive dependence between group members and encourages direct interaction.

This allows individual assessment, building relationships between groups, as well as accepting classmates with lower academic abilities and increasing students self-confidence, as described by (Octavia et al., 2024). The learning process at Junior High School 6 Samarinda is facing difficulties in Informatics subjects, where many students have difficulty understanding the material and lack of interest in learning students in participating in learning in Informatics subjects. This tends to reduce interaction between students and teachers.

Based on interviews conducted with class VIII Informatics subject teachers at Junior High School 6 Samarinda, it was explained that there was a low class average score below the Minimum Competency Criteria set, which is 75. and can be seen in Table 1. To overcome these problems, there needs to be an effort to find a learning model that is expected to improve student learning outcomes and the selection of learning models carried out by teachers. From a teacher-centered learning model, it is changed to a student-centered learning model, one of which is by applying the Think Pair Share (TPS) learning model.

According to Udju et al., (2023) the Think Pair Share (TPS) learning model is an approach where students learn in pairs, giving them more time to think, respond, and help each other solve a problem. It can also increase student activeness in the learning process because cooperation and interaction between peers are important aspects in this model,

as stated by (Hasanah & Himami, 2021). This model is applied with the steps described by Magdalena et al., (2024) as follows, (1) the educator asks questions in classes and students are encouraged to think individually (think) about the answer. (2) students discuss with their peers (pair) to discuss the answer. (3) The pair shares the results of their answer discussion with the whole class.

Table 1. Average Grade of Informatics Daily Test  
Class VIII A- VIII E Junior High School 6 Samarinda

Class	Number Of Student	Average
VIII-A	32	70
VIII-B	30	71
VIII-C	32	80
VIII-D	32	76
VIII-E	29	75

According to Sumarsya and Ahmad (2020) there are advantages to this model including; improving reasoning, encouraging cooperation and increasing understanding of opinions between students. However, this model also has disadvantages such as requiring considerable time, the need careful monitoring of groups, and the need for customized teaching materials. In addition to applying the Think Pair Share model, the Canva app is used as a teaching aid, allowing teachers and students to present content in a more interesting way, which increases student engagement. With an attractive design, students are more motivated to be part of discussions and study activities.

Previous study shows that the Think Pair Share (TPS) cooperative learning model positively effect student on learning outcomes in various subjects. Study by Tegine and Rungkat (2022); Pradana (2021); and Sholihah and Agustina (2023) supports this model in improving students understanding amd learning achievement. Based on this, this study applies the Think Pair Share model assisted by Canva media in Informatics subject to determine its effect on the learning outcomes of class VIII students. Table 2 further explains the relevant study.

Table 2. Relevant Studies

Study Title	Year	Key Findings
The Effect of Think Pair Share Type Cooperative Learning Model on Science Learning Outcomes on Human Excretory System Material	2022	The Think Pair Share model positively influences student learning outcomes in the human excretory system (Tegine and Rungkat, 2022).
The Effect of Think Pair Share (TPS) Cooperative Learning Model on Mathematics Achievement of Junior High School Students	2021	The Think Pair Share model has a significant positive impact on mathematics achievement (Pradana, 2021).
The Influence of Think Pair Share Strategy Towards Student' Writing Ability of Recount Text (A Quasi Experimental Research at the even semester of Junior High School 1 Gudo Jombang in the Academic Year 2021/2022).	2023	The Think Pair Share model positively affects student's writing ability at Junior High School 1 Gudo (Sholihah and Agustina, 2023).

## Methods

This study is a quantitative research with an experimental approach. It uses a Quasi-Experiment Method with a Non-equivalent Control Group Design. This study chose the design because it does not use randomization in forming control and experimental groups. The following design can be seen in Table 3. This study used two different groups, namely the control group who studied with conventional methods and the experimental group who used Think Pair Share model assisted by Canva media. This study includes two variables, Think Pair Share Learning Model as the independent variable (X) and Student Learning Outcomes as the dependent variable (Y). The population in this study were all students in classes VIII A-VIII E totaling 155 students and the sample was determined by purposive sampling technique with certain criteria, such as the class average score which was still below Minimum Competency Criteria, namely the experimental class (VIII-A) amounted to 32 students and the control class (VIII-B) amounted to 30 students. Data collection techniques were carried out through Pre-Test and Post Test. The Pre-Test was conducted before the action, while the Post-Test was conducted after the action to measure student learning outcomes. The test used was a multiple choice of 20 items with four choices. Data collection instruments include tests and documentation. The data analysis techniques used were normality test, homogeneity test and hypothesis test (Independent Sample T-Test) with the help of SPSS Version 25 Program.

Table 3. Non-equivalent Control Group Design

Class	Pre-Test	Treatment	Post-Test
Experiment	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>
Control	O <sub>3</sub>	X <sub>2</sub>	O <sub>4</sub>

Description :

- O<sub>1</sub> : Giving the first test to the experimental class (Pre-Test)
- O<sub>2</sub> : Giving the final test to the experimental class (Post-Test)
- O<sub>3</sub> : Giving the first test to the control class (Pre-Test)
- O<sub>4</sub> : Giving the final test to the control class (Post-Test)
- X<sub>1</sub> : Treatment in the experimental class by applying the Think Pair Share learning model
- X<sub>2</sub> : No treatment (Control Class)

## Result and Discussion

The research implemented a Pre-Test which was given before the implementation of learning activities. After carrying out the Pre-Test, each class received treatment for 3 meetings. In the control class, learning activities apply conventional methods, while in the experiment class learning activities apply treatment with the Think Pair Share (TPS) learning model that utilizes canva media. After each class gets treatment, then carry out the Post-Test. The results of the pre-test and post-test can be seen in table 4 and table 5:

Table 4. Pre-Test Result Data Of Control and Experimental Classes

Data	Control Class	Experiment Class
Minimum Score	20	35
Maximum Score	85	75
Average Score	48.50	56.09
Standard Deviation	18.106	11.691

Completed	3 (10%)	2 (6.25%)
Incomplete	27 (90%)	30 (93.75%)

Source: Researcher's Data Processing Results, 2025

Based on table 4, the value of pre-test results in the control class that has not been applied to conventional methods shows the average value is still in the low category because it is below the Minimum Competency Criteria, which is below the value of 75. Then, the value of the pre-test results in the experimental class before the application of the Think Pair Share learning model is also still in the low category because it is below the Minimum Competency Criteria, which is below the value of 75.

Table 5. Post-Test Result Data Of Control and Experiment Classes

Data	Control Class	Experiment Class
Minimum Score	10	50
Maximum Score	75	100
Average Score	38.17	77.34
Standard Deviation	16.840	13.736
Completed	1 (3.33%)	22 (68.75%)
Incomplete	29 (96.67%)	10 (31.25%)

Source: Researcher's Data Processing Results, 2025

Based on table 5, the value of the post-test results in the control class after the application of the conventional model shows that the average value is still in the low category because it is below the Minimum Competency Criteria, namely with an average value of 38.17, while the value of the post-test results in the experimental class after applying the Think Pair Share learning model shows an increase in learning outcomes with the value obtained exceeding the Minimum Competency Criteria limit, namely with an average value of 77.34. After that, from these data, the normality test, homogeneity test, and hypothesis test will be calculated using the IBM SPSS Version 25 program. The following are the results of the normality, homogeneity, and hypothesis tests, which can be seen in tables 6, 7, and 8.

Table 6. Normality Test

Statistics	Pre-Test		Post-Test	
	Control	Experiment	Control	Experiment
Sig (2-Tailed)	0.177	0.105	0.568	0.130
Sig Level	0.05			
Conclusion	Normal		Normal	

Source: Researcher's Data Processing Results, 2025

The experimental group Pre-Test normality test results obtained a significance value of  $0.105 > 0.05$ , indicating that the data was normally distributed. The same applies to the Post-Test, with a significance value of  $0.130 > 0.05$ , indicating normal distribution. The control group showed normality test results with a significance value of  $0.177 > 0.05$  for the Pre-Test and  $0.568 > 0.05$  for the Post-Test. Both indicate that the data in this group is also normally distributed.

Table 7. Homogeneity Test

Statistics	Control	Experiment
Sig (2-Tailed)	0.281	0.281
Sig Level	0.05	
Conclusion	Homogeneous	Homogeneous

Source: Researcher's Data Processing Results, 2025

After all data is normally distributed, a homogeneity test is carried out to determine whether the data variants of the two groups have the same characteristics. The homogeneity test results show a significance value of  $0.281 > 0.05$ , so it can be concluded that the data is homogeneous.

Table 8. Hypothesis Test

Statistics	Control	Experiment
Sig (2-Tailed)	0.000	0.000
Sig Level	0.05	
Conclusion	$H_0$ is rejected and $H_1$ is accepted	

Source: Researcher's Data Processing Results, 2025

Hypothesis test was conducted using a Independent Sample T-Test to test the difference in learning outcomes before and after treatment in each group. The hypothesis test results show that the significance value for both group is  $0.000 < 0.05$ . This means that  $H_0$  is rejected and  $H_1$  is accepted. Thus, it is concluded that the Think Pair Share Learning Model significantly effect the improvement of student learning outcomes in informatics subjects. The Think Pair Share Learning Model statistically has a significant effect on student learning outcomes in informatics subjects.

This is reinforced by the increase in scores and the percentage of learning completeness in the experimental class. In the Pre-Test and Post-Test results from 56.09 to 77.34 and the percentage of learning completeness from 6.25% to 68.75%. The increase in Post-Test scores reflects that this model gives students space to think individually which deepens understanding of computer system material, encourages cooperative thinking in pair, and facilitates the exchange of opinions, as well as improving communication skills and self-confidence.

Theoretically, these findings are in line with the theory of constructivism which emphasizes students constructing knowledge actively through direct involvement in the learning process. In addition, these results support Vygotsky's views described by Tohari and Rahman (2024) on the importance of social interaction in cognitive development. Cooperation through discussion, exchange of opinions and group activities helps students develop within their zone of proximal development. Therefore, the application of this model which focuses on peers, collaboration and student participation also has a strong basis in modern educational theory to improve students thinking ability and social skills. Applying this approach allows the teacher to act as a facilitator who guides the learning process, not just as a source of information, so that students become active in building their knowledge meaningfully. The results of this study are in accordance with previous researchers conducted by Tegine and Rungkat (2022) who found that learning using the Think Pair Share (TPS) learning model affects science learning outcomes on human excretory system material in class VIII. In addition, the results of research conducted by Pradana (2021) found that Think Pair Share is more effective in improving students math achievement than conventional learning. Research by Sholihah and Agustina (2023) also found that the application of the Think Pair Share (TPS) strategy has a significant effect on students writing skills.

The success of the Think Pair Share learning model, supported by canva media to present material with an attractive display as a learning approach, can be explained through a collaborative approach that improves student learning outcomes, especially in Informatics subject. This model provides an enjoyable learning experience involving students discussion and cooperation. As described by Magdalena et al., (2024) this model strengthens understanding of the material, hones communication and collaboration skills. In the computer system material, students are invited to think independently, discuss with a partner, and share their understanding in front of the class. This process deepens knowledge of the material through discussion and exchange of opinions, encourages overall students participation, and creates a fun learning situation.

Students also do independent exercises every meeting after the treatment to understand the material that has been taught and evaluate how well they understand the material taught. The situation in the classroom shows that learning activities by applying this model invite students to actively participate, so that students are interested in asking each other questions, exchanging opinions, and respecting each other's opinions. This model also proves to be fun for students, making them more enthusiastic and involved in the learning process thus created a positive situation, where students feel more comfortable to express their opinions and cooperate with friends.

This is in line with the theory put forward by Sumarsya and Ahmad (2020) on the advantages of the Think Pair Share learning model, namely this model increases cooperation between students because they learn in groups. This finding is reinforced research by Siregar (2021) showing that the application of active learning models such as Think Pair Share can improve students critical thinking skills, students are also given the opportunity to think individually before discussing with a partner, which allows them to understand the material more deeply.

Research by Madi and Tutu (2023) also shows that cooperative learning models such as Think Pair Share support positive social interactions between students, contributing to improved learning outcomes. By applying the Think Pair Share learning model, students not only listen to explanations, but also actively involved in discussions, which can strengthen their understanding of the material being taught. In addition, research conducted by Khaq and Febriana (2023) showed that the use of the Think Pair Share model can improve the mathematical communication skills of VIII grade students.

Overall, these findings show that the Think Pair Share learning model is not only capable of improving learning outcomes but, encourages students to be active in learning, cooperation and involves them in the process of thinking, discussing, and sharing knowledge. This model can also increase students confidence because they are allowed to express their opinions and listen to the opinions of others, which indirectly trains their communication and discussion skills. Think Pair Share creates an engaging learning environment where every students can contribute to learning. Thus, Think Pair Share provides benefits not only in academic achievement but also in the development of students social and emotional skills.

## **Conclusions**

This study proves that the applying the Think Pair Share (TPS) learning model assisted by Canva media significantly effect learning outcomes of class VIII students in Informatics subjects at Junior High School 6 Samarinda. Based on data analysis, the average Post-Test score of students in the experimental class reached 77.34, which exceeded the Minimum Competency Criteria set, showing a real increase in learning outcomes. Applying this model using Canva media proved to increase student activeness, interaction, and motivation in learning. Therefore, it is recommended that this model be

applied in Informatics and other subjects with similar learning methods to improve student learning outcomes. However, this study has limitations such as the study design used is a quasi-experiment with two groups that are not randomly selected so that the results cannot be widely generalized, limited implementation time for three meetings, and the variables used are still on the cognitive aspect only. Therefore, further study is recommended to use a factorial design or time series and expand the learning outcomes variables to include quantitative affective, psychomotor, and concept understanding aspects so that the results obtained are more in-depth.

## References

- Atikah, A., Ayuni, F., Hidayat, I., & Gusmaneli, G. (2024). Implementasi Strategi Cooperative Learning Dalam Pembelajaran. *PUSTAKA: Jurnal Bahasa Dan Pendidikan*, 4(3), 90-105.
- Hasanah, Z., & Himami, A. S. (2021). Model Pembelajaran Kooperatif Dalam Menumbuhkan Keaktifan Belajar Siswa. *Irsyaduna: Jurnal Studi Kemahasiswaan*, 1(1), 1-13.
- Huda, M. K. (2023). Efektivitas Penggunaan Model Pembelajaran Cooperative Learning Dalam Mata Pelajaran Biologi Terhadap Hasil Belajar Siswa. *Multiverse: Open Multidisciplinary Journal*, 2(3), 363-367.
- Khaq, A., & Febriana, M. (2023). The Effect of Think Pair Share Learning Model with the Help of Geogebra Software on Students Mathematical Communication Skills. *International Journal of Research in Mathematics Education*, 1(2), 151-162.
- Madi, R., & Tutu, M. (2023). Penerapan Model Pembelajaran Kooperatif Tipe Think Pair Share. *Journal of Elementary School (JOES)*, 6(2), 225-239.
- Magdalena, I., Agustin, E. R., & Fitria, S. M. (2024). Cendikia Pendidikan Konsep Model Pembelajaran. *Jurnal Sindoro Cendikia Pendidikan*, 3(1), 41-55.
- Mujoko, H. S., Abbas, N., Nisaa, S., & Jannah, N. N. H. M. (2024). Implementasi Model Pembelajaran Kooperatif Pada Mata Pelajaran Fiqih di Madrasah Tsanawiyah Negeri 6 Sragen. *Journal: Bulletin of Community Engagement*, 4(2), 415-428.
- Musdalifah, M. (2023). Implementasi Pembelajaran Kooperatif Dalam Meningkatkan Motivasi Belajar Siswa di Madrasah. *Al-Miskawaih: Journal of Science Education*, 2(1), 47-66.
- Octavia, N. A., Aisyah, D., Nurmalasari, P., & Pebriyanti, R. (2024). Model Belajar Kelompok Dalam Pengelolaan Kelas Di Sekolah Dasar: Sebuah Kajian Teori Dan Praktek. *Jurnal Media Akademik*, 2(7).
- Pradana, O. R. Y. (2021). Pengaruh Model Pembelajaran Kooperatif Think Pair Share (TPS) Pada Prestasi matematika Siswa Sekolah Menengah Pertama. *Jurnal Jendela Pendidikan*, 1(1), 1-6.
- Rachmawati, A., & Erwin, E. (2022). Pengaruh Model Pembelajaran Think Pair Share (TPS) Berbantuan Media Video Animasi Terhadap Hasil Belajar Siswa Sekolah Dasar. *Jurnal Basicedu*, 6(4), 7637-7643.
- Rahman, A., Munandar, S. A., Fitriani, A., Karlina, Y., & Yumriani, Y. (2022). Pengertian Pendidikan, Ilmu Pendidikan dan Unsur-Unsur Pendidikan. *Al Urwatul Wutsqa: Kajian Pendidikan Islam*, 2(1), 1-8.
- Ridho'i, M. (2022). Analisis Faktor-Faktor Yang Mempengaruhi Hasil Belajar Matematika Siswa MTs Miftahul Ulum Pandanwangi. *Jurnal E-Dumath*, 8(2), 118-128.
- Rizal, A. S. (2023). Inovasi Pembelajaran untuk Meningkatkan Hasil Belajar Siswa di Era Digital. *Attanwir: Jurnal Keislaman Dan Pendidikan*, 14(1), 11-28.

- Sholihah, B., & Agustina, R. K. (2023). The Influence of Think Pair Share Strategy Towards Students Writing Ability of Recount Text (A Quasi Experimental Research at the even semester of SMPN 1 Gudo Jombang in the Academic Year 2021/2022). *Jurnal Ilmiah Wahana Pendidikan*, 9(1), 1-8.
- Siregar, M. H. (2021). Pembelajaran Think-Pair-Share (TPS) Dalam Meningkatkan Berpikir Kritis dan Akademik Siswa. *Journal of Educational Integration and Development*, 1(4), 270-280.
- Siringoringo, R. G., & Alfaridzi, M. Y. (2024). Pengaruh Integrasi Teknologi Pembelajaran terhadap Efektivitas dan Transformasi Paradigma Pendidikan Era Digital. *Jurnal Yudistira: Publikasi Riset Ilmu Pendidikan Dan Bahasa*, 2(3), 66-76.
- Sumarsya, C. V., & Ahmad, S. (2020). Think Pair Share Sebagai Model untuk Meningkatkan Motivasi Peserta Didik dalam Pembelajaran. *Jurnal Pendidikan Tambusai*, 4(2), 1374-1387.
- Tegine, W. B. S., & Rungkat, J. A. (2022). Pengaruh Model Pembelajaran Kooperatif Tipe Think Pair Share Terhadap Hasil Belajar IPA Pada Materi Sistem Ekskresi Manusia. *SCIENING: Science Learning Journal*, 3(1), 47-53.
- Tohari, B., & Rahman, A. (2024). Konstruktivisme Lev Semonovich Vygotsky dan Jerome Bruner: Model Pembelajaran Aktif dalam Pengembangan Kemampuan Kognitif Anak. *Nusantara: Jurnal Pendidikan Indonesia*, 4(1), 209-228.
- Udju, A. D., Bano, V. O., & Enda, R. R. (2023). Penerapan Model Pembelajaran Kooperatif *Think Pair Share* (TPS) Menggunakan Media Gambar Untuk Meningkatkan Hasil Belajar Siswa Di SMP Negeri 4 Mauliru. *Jurnal Inovasi Penelitian*, 4(1), 155-168.