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LITERATURE REVIEW: THE APPLICATION OF TPS COOPERATIVE LEARNING MODEL IN IMPROVING STUDENT LEARNING OUTCOMES

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Abstract: *Cooperative learning is defined as a method in which students work together in small groups to support each other in the learning process. The cooperative learning model of Think Pair Share (TPS) consists of several stages of learning. The TPS cooperative learning model aims to enhance student engagement and interaction through the exchange of ideas. This study aims to investigate the effectiveness of implementing the TPS cooperative learning model to improve student learning outcomes. The research methodology employs a literature review with a qualitative approach and appropriate data collection techniques. The findings indicate that the implementation of the TPS cooperative learning model can improve students' cognitive learning outcomes. The TPS learning model is suitable for application in science education as it effectively meets students' learning needs through its implementation.*

Keywords: *Cooperative Learning, Learning outcomes, TPS*

INTRODUCTION

Education has an important role in the progress and development of a country. The development of developed countries in various fields, such as economics, technology, and agriculture, is inseparable from the role of education. This happens because intelligent and knowledgeable individuals are able to have a positive impact on the nation. It is important to note that the effectiveness of education depends heavily on a consistent alignment between all components of education, from the primary level to tertiary level, with national education goals (Komariyah, 2022). Essentially, education is a transformative process that allows individuals to develop capacity to face and solve the challenges and complexities of change more easily and intelligently. Therefore, education plays a very important role in improving the quality of society and individuals of a nation (Lestari & Ningrum, 2016).

Improving the quality of society and individuals requires a learning process that is supported by teachers' proficiency in designing the curriculum, choosing learning models according to student characteristics, and utilizing effective learning media to achieve learning goals (Dewita et al., 2023). Teachers have an important role in creating a conducive learning atmosphere and motivating students to be open to new ideas while actively participating. The use of creative and varied instructional techniques helps to keep students engaged throughout the learning process, prevent boredom, and ensure that the learning experience remains engaging. An engaging learning process can inspire students to understand the material in depth and achieve the expected educational

outcomes (Sukadana, 2022).

Achieving optimal learning outcomes is one of the main goals in the learning process. Field experience often shows that conventional learning methods are not always effective in improving student learning outcomes. Teachers can overcome these challenges by implementing a cooperative learning model *Think-Pair-Share* (*TPS*) as an alternative approach. Learning model *TPS* allows students to engage in individual reflection, share thoughts with their partners, and help each other in understanding the material. Learning model *TPS* emphasizes the importance of cognitive processing time or latency, which plays a major role in improving students' ability to respond effectively. Learning model *TPS* practical application without the need for major changes in seating or group settings, as well as encouraging students to express their thoughts confidently and respectfully from peer viewpoints (Larasati et al., 2022; Yanti, 2017).

Learning model *TPS* is a cooperative approach designed to increase student activity and interaction in learning. This instructional approach offers a new framework that includes different stages of learning design, with the aim of improving student engagement and interaction patterns. Practice *Thinking in Pairs and Shares* help prevent a monotonous learning process. Each group in this model is made up of pairs or small groups, which ensures the dynamic involvement of students in learning, as their active participation is necessary to solve problems and answer questions. Learning model *TPS* encourage students to collaborate in groups of 2-6 people. This cooperative approach, as demonstrated by Rachmawati & Erwin, (2022), emphasizing the importance of collective appreciation rather than individual appreciation to facilitate deeper assistance between students.

This study aims to investigate the effectiveness of the application of *the TPS* learning model in improving student learning outcomes. This article uses 11 sources consisting of 10 national journals and 1 international journal. The eleven articles were selected based on the use of *the TPS* learning model and the ranking of the journals that published the articles. This research is expected to provide new insights into the benefits of *the TPS* learning model in increasing student engagement effectively. The novelty of the research lies in the systematic analysis of the articles with a special focus on the TPS learning model and its impact on student learning outcomes in various educational contexts.

RESEARCH METHODOLOGY

This study applies a literature review methodology to obtain relevant data. Literature review is a focused activity that involves a critical analysis of texts related to the topic of interest. The methodology used in this literature review is based on a qualitative approach and data collection techniques from existing sources. The literature includes the examination of information obtained from various sources as well as previous investigations relevant to the investigation, aiming to establish a theoretical basis for the problem being studied.

The literature used in this study focuses on the application of the TPS-type cooperative learning model and its impact on improving student learning outcomes. This review of the literature includes literature published in the last 10 years. The journal is accessed through *Google Scholar, Connected Papers*, and Garuda Kemdikbud. This literature review uses 11 articles consisting of 10 national journals and 1 international journal. The selected journal is relevant to the learning model used. The reviewed national journal meets the criteria as an article with a Sinta rating of 4.

RESULTS AND DISCUSSION

Result

This study used 11 articles in the literature review, consisting of 10 national journals and 1 international journal, as presented in Table 1. The table includes the author's name, article title, method, and research results of each article.

Table 1. Article Review Results

Code	Researcher Name	Method	Characteristic	Research Results
A1	Mardiyah (2017)	The subjects of this study are 36 grade VIII junior high school students, who are involved in Classroom Action Research	Test	The learning outcomes of science students through the *TPS cooperative learning model* have increased. The learning outcomes of students in cycle I

Code	Researcher Name	Method	Characteristic	Research Results
		(PTK).		are in the Sufficient category and in cycle II are in the Very Good category.
A2	Aristiawan & Andryansah (2023)	PTK is carried out in grade IX of junior high school with 23 students in science subjects.	Tests and LKPD	The average student score increased from pre-cycle (60.2) to cycle II (86.3).
A3	Idayani (2021)	PTK involved as many as 27 students in grade IX of junior high school.	Test	The average student score in the first cycle was 69.07 while in the second cycle it was 82.59.
A4	Sukadana (2022)	PTK involving 40 junior high school students in grade VIII	Test	The average learning outcome in cycle I was 72 and classical completeness was 97% (incomplete). The average learning outcome in cycle II was 82 and classical completeness was 97%.
A5	Arlinah (2021)	PTK	Test	84.6% of students achieved learning completeness on formative tests in each cycle and summative tests. This percentage is above the benchmark assessment set at 70.
A6	Fransiska et al. (2020)	PTK with research subjects of 29 students of class VIII C	LKPD	Students' understanding of concepts increased from pre-cycle to cycle I, with an average of 55.50 and classical learning completeness of 31.03%. The percentage of achievement of all students for all indicators of concept understanding was 61.22% (moderate).
A7	Fadhillah et al. (2019)	PTK with research subjects of 33 students in	Observation Sheet	Students in cycle I were quite active from an average

Code	Researcher Name	Method	Characteristic	Research Results
		class VII		score of 21 and rose to 28. In cycle II, students are quite active with an average score of 30.
A8	Mamad (2023)	PTK with research subjects of 31 grade IX students	Test	Student activity in the first cycle (65%) increased in the second cycle to 80%, as well as student learning achievement. The average test and observation scores in Cycle I of 68 and 72 increased to 75 respectively.
A9	Atipa (2023)	PTK with the subject of 36 Grade VII MTS Students	Test	The average learning outcome score of Grade VII students at the end of the first cycle was 62.61 (high) and increased in the second cycle to 77.75 (high).
A10	(Rahmawati & Fatmala, 2023)	PTK involving 31 students	Test	Cycle I showed an increase with an average of 36.5 (the highest score of 80 and the lowest score of 35). Cycle II showed a further increase with an average of 41.25 (the highest score of 84 and the lowest score of 45).
A11	(Falentina et al., 2022)	Using purposive samples and random samples. The population in this study is all grade VIII students (256 students)	Test	The average post-test score of students is 63.38 (adequate). The results *of the t* test show that t_{counts} (3.825) > t_{table} (2.04).

Discussion

This review identified 10 journals that used the PTK method, while one journal used a purposive and random sampling technique. The PTK method is educational research conducted in the classroom to overcome teaching challenges, improve the quality and outcomes of learning, and explore innovative approaches to improve the overall quality of learning (Azizah, 2021). Method *purposive sampling* is a sampling technique that considers specific criteria, such as individual expertise or authority, thus facilitating researchers in investigate a specific relevant social object or situation (Lenaini, 2021).

Application of the cooperative learning model *TPS* important in improving students' cognitive learning outcomes. Anugrah et al. (2023) states that the model *TPS* has the potential to increase student motivation and

learning outcomes. Type *TPS* It has been widely used in research to assess various competencies of students. In this model, students receive learning materials and work in pairs or small groups. The teacher gives questions to each student, who are then asked to think independently to compile answers. Students discuss with their partners to reach an agreement on the answers that have been formulated. The teacher then instructs the students to present the collectively generated solution to the entire class (Agustin et al., 2019). Despita (2022) found that students in class X Science 2 in Physics showed better learning outcomes after the application of this model. Maryoto (2018) also shows that *TPS* have a positive impact on student academic achievement.

Cooperative learning paradigm *TPS* improve student learning outcomes by giving more time to think, respond, and help each other in groups. This model encourages students to share ideas in group discussions before the results are presented to the whole class. Type *TPS* It also expands student participation in learning, providing opportunities for each group member to contribute to the maximum. Teachers who apply the model *TPS* able to improve the academic achievement of students who were previously below the expected standard (Masana, 2022). Kasimuddin (2021) examined the learning outcomes of grade XI science students and found that students were superior in learning physics after using the *TPS*, with a significant increase above the level of adequacy.

Type cooperative learning model *TPS* have a significant impact on various aspects of student learning. This model not only improves cognitive learning outcomes, but also develops students' affective abilities, including a sense of responsibility and involvement in the group. Alfahmi & Gunansyah (2014) in his research showed that students who used the model *TPS* tend to be more active in expressing opinions and are better able to adapt to group dynamics, strengthening their ability to work together. This process also improves students' empathy and listening abilities, two important aspects of cooperative learning. Type *TPS* help students deal with different situations in the study group, encouraging them to interact constructively. That way, the social development of students is one of the aspects that contributes to the effectiveness of the model *TPS* Ini.

Cooperative learning model *TPS* has great potential in improving students' affective and psychomotor learning outcomes. Model application *TPS* helping to improve students' emotional abilities and psychomotor skills, especially in the context of biology learning (Pangestuti, 2017). These affective and psychomotor learning outcomes refer to the changes students experience, including improved cognitive skills, interpersonal skills, and physical coordination (Putri & Sukma, 2023). Model *TPS* also provides benefits such as fostering creativity and actively engaging students in communication to achieve their learning objectives (Rosba, 2020). Mulyani & Natalliasari (2016) states that the application of the *TPS* which emphasizes that mutual assistance can increase students' motivation to learn, especially for those who have learning difficulties. Model-provided support *TPS* proven to be able to revive student motivation, thus contributing to improving academic achievement (Mudana et al., 2023).

Learning model *TPS* It is specifically designed to meet the diverse stages of the learning process and has been proven to increase student engagement in lessons. This study indicates that the *TPS* can be effectively applied in the classroom to improve student learning outcomes. The increase in student involvement in the learning process can be seen from teacher observations and student responses. Students are trained to increase confidence in understanding the material through discussions with assigned learning partners (Priyana et al., 2021; Rukmini, 2020).

Model *TPS* provides an equal opportunity for each student to engage in class discussions, ultimately fostering confidence and increasing cooperation between them. The level of student involvement in the classroom and their confidence have a major impact on their understanding of the material as well as active involvement in the discussion (Ni Nyoman After, 2023). Model *TPS* enabling students to overcome challenges actively and working together in groups to deepen understanding, draw conclusions through discussion, and present the results in front of the class as a form of learning evaluation (Pandi et al., 2020). Model application *TPS* proven to be able to support students' academic achievement. Nida & Julianingsih (2023) indicates that the model *TPS* allowing students to learn independently and collaboratively, as well as solve problems by discussing in groups. This model has proven to be effective in increasing student collaboration and engagement in learning.

Type *TPS* providing ample opportunities for students to develop communication skills, especially in speaking and conveying ideas clearly. Khoirudin & Supriyanah (2021) reveals that students who learn with models *TPS* experience an increase in the ability to present arguments and give constructive responses to other people's ideas. These communication skills are crucial in the learning process, especially in today's collaborative era. Type *TPS* Train students to be more confident in expressing opinions in front of the class and listening to the opinions of classmates. This activeness in communicating ultimately facilitates a more effective learning process. Thus, the model *TPS* supporting better communication skills for students.

In addition to the academic aspect, the model *TPS* facilitate the development of students' social skills. Rivai & Mohamad (2021) showed that students who engaged in this model had more positive social attitudes, such as listening to others' opinions and providing help when needed. Type *TPS* allowing students to learn to work together, respect differences, and support each other in the learning process. Cooperative environment created in the model *TPS* supports better social interaction among students. These social attitudes are important to help

students thrive in group interactions outside of the classroom. Thus, the application of the model *TPS* contribute to developing students' interpersonal skills that are important in the modern world.

Model learning *TPS* play a role in reducing the gap in academic achievement among students. Cahyono (2020) explained that this model allows superior students to help friends who have difficulty understanding the material, thereby improving their learning outcome scores. Group discussions that are in the model *TPS* allowing students to better understand the concepts taught with the help of peers. This model helps to create an inclusive learning environment, where students can support each other to achieve a better understanding. Type *TPS* providing opportunities for students to collaborate in understanding the subject matter more effectively. This process creates a model *TPS* contribute to increasing the equitable distribution of learning achievements.

Type *TPS* play a role in honing students' metacognitive skills, especially in planning, monitoring, and evaluating their own thought processes. Yanti (2017) Explain that the implementation of the *TPS* encourage students to develop problem-solving strategies, both independently and in groups, so that they are better able to formulate clear learning objectives. Type *TPS* Train students to design systematic learning steps and achieve goals effectively. High-level thinking skills can also be developed with this model because students not only understand the material but are also able to devise the best way to learn it. Model application *TPS* in the end, it helps students in achieving learning goals in a more structured manner. These results show that the model *TPS* have a positive impact on the development of students' thinking skills.

Marsilawati (2022) Examining the obstacles faced by students in the first cycle of learning using the *TPS*, especially in expressing their thoughts effectively when solving problems individually. Cycle II shows positive development, with students becoming accustomed to articulating their thoughts, so engagement in learning increases. The frequency of students expressing opinions is also higher than cycle I. Application of the learning model *TPS* In both cycles, it succeeded in increasing student activity, which led to improved learning outcomes and positive responses to the applied learning model. Research Sunarti et al. (2023) supports these findings, suggesting that the *TPS* not only improve students' critical thinking skills but also significantly improve cooperation skills.

This learning style Addressing students' limitations in access to learning resources, so educators can create a more engaging learning environment and encourage higher academic achievement (Surayya et al., 2017). Learning model *TPS* relying on learning resources such as videos, student worksheets (LKPD), and other forms of assessment to improve students' cognitive learning outcomes. This learning media has proven to be effective in increasing student involvement in the learning process and has a positive impact on academic achievement. Articles that have gone through reviews with codes A1 to A10 also show similar findings. The use of video in cooperative learning *TPS* effective in improving learning outcomes in the cognitive and psychomotor domains, which ultimately leads to more optimal student learning outcomes (Team & Karyaningir, 2018).

Facilities from teachers play an important role in the effectiveness of the model *TPS* in the classroom. Rukmini (2020) states that teachers who are skilled in managing the *TPS* can create an inclusive and productive learning atmosphere. Teachers who actively monitor group discussions provide opportunities for each student to feel valued in the learning process. Increased student learning motivation can be achieved because they feel supported by teachers and peers. This emphasis on the role of the teacher also allows for maximum student involvement. Thus, the quality of teacher facilitation is one of the important factors in the success of the model *TPS* in the classroom.

The results showed a clear difference between the groups of students taught with the model *TPS* and groups of students taught with a standard model. A literature review found that student learning outcomes improved in each cycle when the cooperative learning model *TPS* applied consistently. Some studies indicate that this model is more effective in heterogeneous groups, where more capable students are paired with less fortunate students. Individuals in groups can communicate with each other to exchange information and clarify material that has not yet been understood with peers. Research Kurjum et al. (2020) indicates that the model *TPS* that involves cooperative learning can increase students' interest and their reasoning and critical thinking skills. The study includes two stages of testing, namely before and after the implementation of the model *TPS*. Learning model *TPS* It proves to be a more attractive alternative to the standard model, which is often considered boring and less stimulating.

The TPS *learning model* shows its effectiveness in improving the overall quality of student learning. Several studies reveal that *the TPS* mode is able to improve students' critical thinking skills, involvement in learning, and learning motivation. With the right teacher support and guidance, students can experience more meaningful learning through this model. The *TPS* model can be applied in various educational contexts, both in science and social subjects. The success of this model in various situations shows that *the TPS* model is a good alternative to improve student learning outcomes.

CONCLUSION

Conclusion

Based on the literature review research that has been carried out, the application of the TPS Type Cooperative Learning Model is consistently able to improve student learning outcomes. A literature review identified that *the TPS* model was effective in improving student engagement and cognitive, affective, and psychomotor learning outcomes. The *TPS* model is proven to provide opportunities for students to collaborate, communicate, and clarify material with peers. Research also indicates that this model is more effective in heterogeneous groups, where more able students are paired with less fortunate students. The application of *the TPS* model not only increases students' interest and reasoning ability but is also able to encourage better academic achievement. Thus, the TPS Type Cooperative Learning Model is an interesting and innovative alternative in improving the quality of learning in schools.

Suggestion

The research suggestion that can be submitted is to conduct a more in-depth study of the application of *the TPS* Type Cooperative Learning Model in various educational contexts. This research should focus on the influence of the use of test media and Student Worksheets (LKPD) on student learning outcomes. Further research is also recommended to consider factors such as interests, profiles, learning styles, and student readiness in order to optimize the effectiveness of the learning model. In addition, it is hoped that there will be continuous research on literature review that is in line with the TPS learning model in order to improve the learning process in schools.

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