The Effect of Think Pair and Share on Student Participation and Learning Outcomes in Economic Subjects at SMA Negeri 2 Surakarta

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Abstract:

The purpose of this research is to compare the effect of implementing the Think Pair and Share (TPS) learning model and the Share (S) model on student participation and learning outcomes in Economics subjects at SMA Negeri 2 Surakarta. The student participation variable used indicators of shyness, state anxiety, students who raise their hands, students who don't raise their hands, liking with peers and teacher, and the classroom environment. This research used is experimental research method with a cross-over design. The population in this research is class X students at SMA Negeri 2 Surakarta, total 359 students using a random sampling technique with lottery. The number of samples used in this research is 71 students. The data analysis technique used is SPSS version 25 and Anbuso 8.0, while the data collection techniques used in this research are observation techniques, questionnaires distributed used by Google Form, and tests. The results of the study concluded that there was a higher influence on the application of Think Pair and Share (TPS) than Share (S) on student participation and learning outcomes in Economics subjects at SMA Negeri 2 Surakarta, seen from the large percentage of indicators in the application of the Think Pair and Share (TPS) model compared to the Share (S) model and the average score also the number of students who have completeness scores in the Think Pair and Share (TPS) model are greater than the Share (S) model.

Keywords: Learning Model, Learning Outcomes, Student Participation, Think Pair and Share (TPS).

Introduction

Quality education will produce quality human resources to advance the nation and state. Quality resources for the development of this nation are realized by guidance, teaching, and training (Kasim et al., 2022). This guidance, teaching and practice will form a student's understanding. Strong student understanding is an important role in the education process (Kurniawati, 2022). This research is important because the involvement of student interaction in learning is very important to build student understanding and create high-level learning. Through the Think

Pair and Share (TPS) learning model can prove the influence on increasing student participation and learning outcomes. The purpose of the study was to compare the effect of Think Pair and Share (TPS) and Share (S) learning models on student participation and learning outcomes. The hypothesis in this study is that Think Pair and Share (TPS) can better increase student participation in Economics subjects at SMA Negeri 2 Surakarta compared to Share (S) (H1) and Think Pair and Share (TPS) can better improve student learning outcomes in Economics subjects at SMA Negeri 2 Surakarta compared to Share (S) (H2).

Quality resources for the development of this nation are realized by guidance, teaching, and training (Kasim et al., 2022). The existence of guidance, teaching, and practice will form a student's understanding. Strong student understanding is an important role in the education process (Kurniawati, 2022). In the learning process, the role of collaboration between teachers and students is needed. Learning is considered successful and of high quality if students can be active both physically, mentally and socially in the learning process (Suprihatin et al., 2023). Teachers have an important role in developing and increasing student participation. According to Mundelsee & Jurkowski (2021), student participation in class is very important for students and teachers, because involvement in answering questions, contributing to class discussions will affect student learning outcomes. However, in reality, there are still many students who are passive in learning and only certain people are active in question and answer. Students who do not participate tend to be due to a lack of courage and self-confidence so they only listen to explanations from the teacher and other friends. According to Skinner & Belmont in (Mundelsee & Jurkowski, 2021), Participation in class provides teachers with faster information about the progress of student learning outcomes, compared to cognitive and emotional engagement.

High student participation tends to train focus and improve student understanding of the material, so that it can affect the achievement of learning outcomes. Learning outcomes are closely related to the success of learning. Good learning outcomes are learning outcomes that have an increase in the process of learning activities, so that they can achieve the value of completeness. According to Widyastuti & Wijaya (2018), the definition of learning outcomes is a change in behavior obtained by students as a result of interaction with the environment after undergoing learning activities. A person is considered successful in his learning if there have been changes in terms of behavior, knowledge, attitudes and skills (Nuryani et al., 2022). Learning objectives are considered achieved if students obtain satisfactory learning outcomes. However, in reality there are still many students who have not reached the completion value for their learning outcomes. Therefore, an interesting and suitable cooperative learning method is needed for students, one of which is Think Pair and Share (TPS). Think Pair and Share (TPS) is one of the cooperative learning methods that can increase students' participation and learning outcomes, because

TPS allows students to think independently, communicate with their group mates, and actively participate in class discussions (Mundelsee & Jurkowski, 2021). TPS also enhances group cooperation as it allows time to overcome students' anxiety in expressing their point of view (Benjelloun, 2021).

Literature Review

The concept of forming student understanding by encouraging active participation which affects learning outcomes is considered in accordance with the theory of constructivism pioneered by Jean Piaget, which states that knowledge is formed through analysis of various things. The essence of constructivism theory is that students can play an active role in the learning process in building individual understanding, then comparing or aligning with previously obtained information to produce a new concept in their cognitive process (Mustafa & Roesdiyanto, 2021). In the TPS model, students are asked to think, analyze and then discuss with their groupmates to equalize perceptions of a matter and strengthen answers and express their opinions on questions that have been given by the teacher. This activity is in line with the theory of constructivism, namely by encouraging students to build individual understanding and then harmonize the information or experience that has been obtained with others to produce a definite answer to be presented in front of the class.

There are inconsistencies in research conducted by Mundelsee & Jurkowski (2021) in Germany, in some studies TPS can increase student participation in class, but TPS does not always increase student participation. In addition, there are also inconsistencies in research conducted by Tanujaya & Mumu (2019) in Indonesia in mathematics, it is stated that TPS is not effective when done with peers and will be more effective if done with friends who have the same level of knowledge, and TPS is not suitable for shy students and has a low level of knowledge. This study contributes to the literature by Mundelsee & Jurkowski (2021) who has conducted research on the think pair and share learning model on student participation.

The results of this study agree with research by Saraswati (2018), that the TPS technique cooperative learning method makes teaching and learning activities more enjoyable and improves student learning outcomes in economic subjects. The results of this study also agree with Lestari & Ningrum (2016), that there is a positive effect of the cooperative learning model of the Think Pair Share (TPS) type on the entrepreneurship learning outcomes of class X students of SMK Kartikatama 1 Metro.

Research Methodology

This study used an experimental approach with variables of student participation and learning outcomes. The study population was Class X students of SMA Negeri 2 Surakarta with a sample of class

X.E.3 totaling 36 students and class X.E.4 totaling 35 students. The instruments or procedures used are observation, questionnaires and tests. The research sample technique is random sampling by taking into account the equal ability level of students. Data analysis using SPSS Statistics 25 and AnBuso version 8.0.

Student participation questionnaire data was collected through a questionnaire distributed via google form, and learning outcome data was collected through a post-test instrument. The research instrument has gone through a validity test using Pearson Product Moment and reliability test using Cronbach's Alpha, difficulty level test and distractor effectiveness test using Anbuso version 8.0. The questionnaire instrument contains six indicators with 12 questions using a 5-category Likert scale, namely strongly agree (5), agree (4), neutral (3), disagree (2), strongly disagree (1).

The data analysis technique consists of prerequisite analysis and hypothesis testing. The analysis prerequisite test uses normality test and homogeneity test. While the hypothesis test uses an independent sample t-test or t-test. The hypotheses formulated in this study are as follows:

H1: Think Pair and Share (TPS) is more able to increase student participation in Economics subjects at SMA Negeri 2 Surakarta compared to Share (S).

H2: Think Pair and Share (TPS) is more able to improve student learning outcomes in Economics subjects at SMA Negeri 2 Surakarta compared to Share (S).

Results and Discussions

Analysis Prerequisite Test Results

The Kolmogorov-Smirnov normality test shows the results of the significance value of the experimental class 1 post-test instrument 0.057> 0.05 which indicates that the research data has normal residuals, student participation instruments 0.200> 0.05 which indicates that the research data has normal residuals, and in the experimental class 2 post-test instrument 0.058> 0.05 which indicates that the research data has normal residuals, student participation instruments 0.066> 0.05 which indicates that the research data has normal residuals. Levene's homogeneity test results show the results of the significance value of the post-test instrument 0.147> 0.05 and on the student participation instrument 0.542> 0.05 which indicates that the research data is homogeneous.

Table 1 shows the results of the student participation variable hypothesis test obtained tcount> ttable value, namely 2.499> 1.978 and Sig. (2-tailed) 0.014 <0.05, this indicates that the hypothesis (H1) is accepted so that it can be concluded that the TPS model is more influential than the S model on student participation. In addition, the results of the learning outcomes variable hypothesis test obtained the tcount> ttable value which is 2.272> 1.978 and the Sig value. (2-tailed) 0.025 <0.05, this indicates that the

hypothesis (H2) is accepted so it is concluded that the TPS model is more influential than the S model on student learning outcomes.

Table 1. Summary of T Test Results

Variable	tcount	T-test	
		df	Sig *(2-tailed)*
Participation	2,499	128	0,014
Learning Outcomes	2,272	128	0,025

Source: Data Processed, 2024

Result

The Effect of Think Pair and Share (TPS) on Student Participation

The results of data analysis show that the TPS model can increase student participation more than the S model, so this research is stated in line with the hypothesis that has been formulated. Based on this study, the student participation variable has six indicators including the following:

Table 2. Distribution Level of Student Participation Indicators

Indicator	Percentage	
	TPS	S
Shyness	24%	23%
State anxiety	9%	9%
Students who raise their hands	15%	8%
Students who don't raise their hands	15%	31%
Liking with peers and teacher	20%	21%
Classroom environment	8%	9%
TOTAL	**100%**	**100%**

Source: Data Processed, 2024

Based on the indicator of shyness in student participation, the TPS model has a greater percentage than the S model which means that students feel more confident when given the opportunity to discuss with their peers. In the TPS model, students are more active in discussing with their peers the questions given by the teacher. Whereas during the S model, many students chose to remain silent because they were embarrassed to answer or did not know the answer to the question given by the teacher which led to many students not raising their hands, so that students were less active in learning and student participation decreased.

Based on the indicator of state anxiety in student participation, TPS and S models have the same percentage, meaning that students in both models, namely TPS and S, still feel the same level of anxiety after the learning process in class. The feeling of anxiety felt by students here is caused by incomprehension of the material provided, student unpreparedness in facing learning, an unfavorable

learning climate, giving too many assignments, strict assessment and anxiety about test scores (Azwar et al., 2024). In TPS and S learning models, the level of anxiety felt by students tends to be the same. This can be caused because both learning required students to convey their opinions and make presentations in front of the class. This anxiety indicator has an influence with the previous indicator, namely shyness, students tend to have the same anxiety in expressing their opinions. However, when students have friends to discuss with and present together in front of the class, the feeling of shyness tends to be lower than having to be presented alone.

Based on the indicator of students raising their hands in student participation, the TPS model has a greater percentage than the S model, meaning that students are more confident to answer questions from the teacher when they first discuss with their friends than answering alone. According to Sharma & Saarsar (2018), TPS encourages a higher level of student response than using the reading method where a teacher asks a question and one student immediately responds. In the TPS model, during learning, students were more confident and many raised their hands to express their opinions in front of the class together with their groupmates. Whereas in the S model, many students did not dare to express their opinions in front of the class. This is because there is still shyness and anxiety is the answers they give are wrong or not in accordance with the opinions of other friends. Therefore, student participation is considered to decrease when the S model is applied during learning.

Based on the indicator of students who do not raise their hands in student participation, the S model has a greater percentage than the TPS model, meaning that when the S model is implemented there are still many students who do not raise their hands because they are not sure of their ideas and answers, because students still feel embarrassed and anxious if their opinions are not appropriate and cause negative responses from teachers and classmates. According to Jalil (2023) negative stimuli make students ashamed to speak in front of the class until they do not understand the subject matter, such as the teacher's ability to provide learning, difficult subject matter, learning methods that are not in accordance with student needs. The number of students who did not raise their hands in the S model indicates that students are still passive in learning and low student participation.

Based on the indicators of Liking with peers and teachers in student participation, the S model has a greater percentage than the TPS model, meaning that students feel comfortable with their peers and teachers are friendly to students during the learning process, especially during the implementation of the S model. The implementation of the S model does not require discussion with peers, while the TPS model requires a process of discussion and exchange of opinions with peers. The reason why the TPS model is lower than the S model is because the students' peers or group mates have different intelligence

abilities so that some students feel uncomfortable with their groups. Based on observations, students who have higher intelligence tend to be more active and able to collaborate with their peers and develop cooperation skills.

Based on the classroom environment indicator in student participation, the S model has a higher percentage than the TPS model, meaning that the student factor is more comfortable with the classroom environment when the S model is applied. Creating a competitive learning environment encourages students to compete to be the best. This was felt when the TPS and S learning models were applied, the S model obtained a higher percentage than the TPS model. Students feel more comfortable in participating in class discussions when they are paired with students who are also active and equally eager to share their perspectives. This encourages them to share ideas and creates an interesting learning environment. Based on the observation of the application of the TPS model, there were some students who seemed to be active only one of them and lacked cooperation. Therefore, the S model is superior to the TPS model in the classroom environment indicator.

This research is considered in accordance with the theory of student well-being developed by Fraillon (2004) from Ryff's opinion which explains that student well-being is defined as a positive condition for students to have an effective role in their school and there are no negative conditions such as anxiety, and difficulties. The reason for using this theory is because there are two dimensions of student well-being that are closely related to the indicators in this study, including having and loving. Having is a comfortable classroom environment, and feeling safe in the classroom which affects the level of participation and learning outcomes. Loving is the relationship or compatibility between teachers and students, the absence of bullying, relationships between peers or with peers, in this case it can affect students in the courage to express opinions and actively participate in class.

The results of this study agree with research by Sharma & Saarsar (2018) that Think Pair Share encourages higher class participation by encouraging student response rates, compared to using the basic reading method where a teacher asks a question and one student responds (Share). This method encourages students to be able to communicate their thoughts with each other which leads to increased student engagement and train to think critically while learning. The results also agree with research from Cahyani (2018) that the use of Think Pair Share strategy helps students have confidence so as to improve speaking skills and encourage student participation in the learning process.

The Effect of Think Pair and Share (TPS) on Student Learning Outcomes

Based on the results of data analysis, it shows that the learning outcomes when using the Think Pair Share (TPS) model are higher than when using the Share (S) model in class X economic subjects at

SMA Negeri 2 Surakarta, so that this research is stated in line with the hypothesis that has been formulated. The results of this study also showed a difference in learning outcomes between the Think Pair and Share (TPS) and Share (S) models, namely TPS getting an average score of 81.77 which is higher than S which is 76.75. In addition, the number of students who completed the TPS model was 41 out of 62 students or 66.12% and in the S model was 35 out of 68 students or 51.47%.

When applying the TPS model, more students raised their hands and were enthusiastic in answering questions from the teacher and then presenting the results of their discussion in front of the class with their classmates or groups, indicating that students understood the material provided by the teacher and could relate it to everyday life, students managed to understand the meaning of the material presented, and succeeded in working together in building a perspective on the material of banks and non-bank financial industries. On the other hand, during the application of the S model, many students chose not to raise their hands.

The results of this study agree with Lestari & Ningrum (2016), that there is a positive effect of the Think Pair Share (TPS) type cooperative learning model on the learning outcomes of entrepreneurship for class X students of SMK Kartikatama 1 Metro. Another research that agrees with this research is Saraswati (2018), that the TPS technique cooperative learning method makes teaching and learning activities more enjoyable and improve student learning outcomes in economic subjects. The other result of the research by Hastuti et al. (2019) concluded that by applying the Think Pair Share cooperative learning model can improve the economic learning achievements with the percentage of 83% at first cycle and an increase of 94% at second cycle in high schools.

Conclusion

There is an influence on the Think Pair and Share (TPS) model so that it can increase student participation more than the Share (S) model in economic subjects at SMA Negeri 2 Surakarta. The application of the Think Pair and Share (TPS) model is more effective in increasing student participation based on indicators of participation namely shyness, anxiety, students who raise their hands, students who do not raise their hands, compatibility with peers and teachers and the classroom environment. In the learning process using TPS students are more able to control shyness, thus helping in overcoming anxiety in teaching and learning activities. Students were also enthusiastic to raise their hands and answer questions given by the teacher related to the material and then present it in front of the class. However, for the indicator of compatibility with peers and teachers, the TPS model still has obstacles, namely related to intelligence equality with group mates. In addition, in the classroom environment indicator, the TPS

model also has shortcomings, namely group friends who are less able to work together and there are groups that interrupt other groups so that the class becomes less conducive.

There is an influence on the Think Pair and Share (TPS) model so that it can better improve student learning outcomes compared to the Share (S) model in economic subjects at SMA Negeri 2 Surakarta. The application of the Think Pair and Share (TPS) model is more effective in improving student learning outcomes based on the results of the post-test test with the average learning outcomes when applying TPS is higher than the learning outcomes when applying the S model, which means that the TPS model can improve student learning outcomes compared to the S model in economic subjects at SMA Negeri 2 Surakarta. The concept of forming students' understanding by encouraging active participation indicated by the number of students who raised their hands successfully influenced learning outcomes.

Suggestions related to the limitations in the comparison of the implementation of Think Pair and Share (TPS) and Share (S) learning models. It is expected that further research can develop indicators so that they can have a more significant effect on increasing student participation and testing the Think Pair and Share (TPS) learning model with other samples and variables and applying learning models to other subjects in different schools in order to expand the research.

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