



The Impact of Think Pair Share and Two Stay Two Stray Learning Model Towards Learning Outcomes and Cooperation Ability

Teriana Mardha Hidayat^{1✉}, Ali Muhson^{2✉}

DOI: 10.15294/dp.v13i1.15045

Universitas Negeri Yogyakarta, Yogyakarta, Indonesia

History Article

Received 27 January 2018
Approved 3 May 2018
Published 30 June 2018

Keywords

Cooperation Ability; Learning Outcome; Think Pair Share; Two Stay Two Stray

Abstract

This research aimed to find out the effectiveness of Think Pair Share (TPS) and Two Stay Two Stray (TSTS) methods in improving student learning outcomes and cooperation skills. The population in this research were all students of class X IPS SMA N 2 Banguntapan in the academic year 2016/2017 which consisted of 98 people, divided into four parallel classes. The sampling technique is cluster sampling to classify the students into three classes, divided in experiment class 1, experiment 2, and control class which determined randomly. The data collection methods used were documentation, test, and observation techniques. The research type is quasi experiment with pretest-posttest control group design. The analysis technique used was descriptive statistical analysis and Multivariate Analysis of Variances (MANOVA). The results showed that TPS and TSTS methods were proven to be more effective than conventional ones in improving students' learning outcomes. Students who were taught by TPS and TSTS methods were also proven to have better collaborative skills than students taught by conventional methods.

How to Cite

Hidayat, Teriana Mardha & Muhson, Ali. (2018). The Impact of Think Pair Share and Two Stay Two Stray Learning Model Towards Learning Outcomes and Cooperation Ability. *Dinamika Pendidikan*, 13(1), 119-129.

© 2018 Universitas Negeri Semarang

✉ Correspondence Author:

Jl. Colombo No.1, Karang Malang, Caturtunggal, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281

Email: ¹erryamh@gmail.com, ²alimuhson@uny.ac.id

p-ISSN 1907-3720

e-ISSN 2502-5074

INTRODUCTION

Education is one aspect that plays an important role and is seen as the right way in improving the quality of human resources. Through education, people gain knowledge, self-skills, and values of attitudes, so as to think systematically, rationally, and be critical of the problems being faced. Based on act no. 20 of 2003 Article 1 Paragraph 1 of the National Education System (Sisdiknas), education is a conscious and planned effort to create an atmosphere of learning and learning program so that students actively develop their potential to have spiritual spiritual power, self-control, personality, intelligence, noble character, as well as the skills required by themselves, society, nation, and country.

The quality of human resources in Indonesia is still not good enough. During the past 25 years, Indonesia's Human Development Index (HDI) does not show a significant increase. Indonesia's position is ranked on 110 out of 188 countries (Republika, 2016). This indicates the need for serious attention to improving the quality of education in Indonesia. Problems in the education sector can not be separated from the role of teachers as the spearhead of the learning process. Teachers are required to always create learning atmosphere that attracts students' interest and motivation by applying various teaching methods. Teachers' learning methods and strategies influence students' learning outcomes (Barker, 2012; Sumadji, 2015; Sutrisno, 2016: 117, Subagya & Susiati, 2017). Teachers who can provide varied learning methods in turn will make the students more excited and happy during the learning process because they experience a different atmosphere (Gull & Shehzad, 2015: 7).

In learning activities, teachers should be able to master the subject matter and taught it well, determine the learning objectives to be achieved, and choose the methods and strategies that can improve students' learning spirit. A teacher needs to have the ability to design and implement various learning strategies that

are considered suitable with the interests and talents and in accordance with the level of students' development including utilizing various sources and learning media to ensure the learning effectiveness. Without these abilities, teachers can not teach well and the process of teaching and learning activities can not run as expected so that the desired goals are not properly achieved.

This research aimed to improve the process of teaching and learning activities in the classroom so that it run optimally and students can understand the economic subjects in a correct and fun way. In this research, the role of teachers were only to direct the appropriate learning strategies that will be used, while the students did the teacher's direction. One of the learning strategy used in the learning process that will determine student learning outcomes is by using cooperative learning.

Cooperative learning is a learning model by grouping students heterogeneously in order to create an effective and enjoyable learning. Cooperative learning is a learning with emphasis on social aspects and using groups consisting of 4-6 equivalent but heterogeneous students (Slavin, 2009: 8). Cooperative learning can provide an opportunity for students to discuss a problem given by the teacher and communicate their opinion in front of other group members. There are five basic elements in cooperative learning, namely a positive sense of interdependence, interaction based on common goals, individual accountability, interpersonal attitude and social skills, and group processes (Tran, 2014: 131).

By implementing cooperative learning, learners will get the ease of learning because they are assisted by peers. Cooperative learning can also increase academic ability, improve critical thinking skills, increase self-esteem, improve mutual respect of other's opinions, improve the ability of cooperation and will indirectly improve student learning outcomes. Cooperative learning requires students to work together. Group discussions that take place require the cooperation of each member of the group for the achievement of

group goals. This cooperation is instrumental in improving the social skills of students in the classroom as well as in the community.

There are many cooperative learning methods that teachers can apply in teaching, such as the Think Pair Share (TPS) and Two Stay Two Stray (TS-TS) cooperative learning models. TPS is a teaching-learning technique which involves thinking-pairing-sharing (Lie, 2008: 57). This approach is designed to influence students' interaction patterns, as well as to increase academic achievement (Majid, 2013: 191). TPS can be an effective way to create variations in classroom atmosphere in assumption that all discussion activities are under the teacher's supervision (Alpusari and Putra, 2013: 280). The benefits of Think Pair Share (TPS) learning are increasing the time spent on tasks, improving attendance, decreasing school drop-out rates, decreasing apathy, increasing individuals' acceptance, deeper learning outcomes, and enhancing kindness, sensitivity and tolerance (Hamdayana, 2014: 203).

These advantages make some researchers have conducted studies on the application of TPS models in learning. Several studies have attempted to examine the impact of TPS implementation on learning achievements (Bamiro, 2015), ability to read narrative texts (Sugiarto & Sumarsono, 2014), self-confidence and student participation (Sampsel, 2013), and ability to calculate and draw demand functions (Mulyani & Sofiani, 2016). It all proves that the TPS method is quite effective to be applied in the learning process.

The next model of cooperative learning is the TSTS type which is a learning model that begins with making groups, then discussing to solve the problems given by the teacher and then exchanging the results of the discussion with other groups, after exchanging then reviewing and discussing again with the group to draw conclusions (Suprijono, 2015: 112). TSTS type cooperative model as a grouped learning system with the aim to be able to work together, responsible, help each other in solving problems, and encourage each other to

be excel and train students to socialize (Huda, 2014: 207). The advantage of TSTS model according to Agustina is a learning model that can be applied at all levels, the students' learning tendency to be more meaningful, more oriented on student activeness, and helps to increase the interest and learning achievement (Raga, 2014: 4).

The TSTS model has also been studied for its effectiveness, for example in improving learning outcomes (Ismawati & Hindarto, 2011), learning quality (Indriyani, 2011), and learning activities (Sudarmadi, 2012). The results also prove that the TSTS model is appropriate to be applied in the learning process as it is proven to be effective. Several studies that have tested the effectiveness of TPS models on economic subjects have also been conducted, for example its impact on learning outcomes (Oktarina, 2008), learning motivation (Kurniawan, Istiningrum, 2012), learning activities (Kusuma & Aisyah, 2012) critical thinking (Aprianti, 2013). Meanwhile, the application of TSTS model on economic subjects has also been done especially to see its impact on economic learning outcomes (Dewi, 2016, Sudarmini, 2013), learning motivation (Dewi, 2016). All of them proved that the two models of learning are effective to be used in economic learning.

Some of these research evidence suggests that these two cooperative learning models are also suitable for use in economic subjects. This happens because the use of this learning model can help students in discussions that can optimize students' participation, complete the worksheets provided and cooperate with others. The application of these two learning models can also make it easier for students to express their views because the dissent with thier friends is very minimal and students tend to be more confident in communicating their opinions. It is different when the students are in a large group. Students tend to be shy to speak and there's an enormous amount of lack in student participations. Based on these problems, this research attempts to test the effectiveness of the two learning models in imp-

roving students' economic learning outcomes and collaborative skills.

The hypothesis proposed in this research were (1) there are differences in learning outcomes and cooperation ability among students who were taught by using TPS, TSTS, and conventional model; (2) learning outcomes and students' cooperative ability taught by TPS model are better than students taught by conventional model; and (3) students' learning outcomes and students' cooperation ability taught by TSTS model are better than students taught by conventional model.

METHODS

This research is a quasi experimental research that aimed to see the impact of TPS and TSTS models on students' learning outcomes and cooperation ability. The research design is pretest-posttest control group design. In this case, the research divided the students into three groups, namely experimental group 1, experiment 2 and control. The experimental group 1 was taught with a TPS learning model, the experimental group 2 with the TSTS model and the experimental group with the conventional model. All three groups were given pre-test and post-test to measure student learning outcomes (see Table 1).

Table 1. Research Design

Class	Pretest	Treatment	Posttest
E1	T1	X1	T2
E2	T1	X2	T2
K	T1	-	T2

Source: Processed Data (2017)

Information:

- E1 : Experiment class 1
- E2 : Experiment class 2
- K : Control class
- T1 : Experiment 1, 2, and control class pretest results
- X1 : TPS method application
- X2 : TSTS method application

T2 : Experiment 1, 2, and control class posttest results

This research was conducted in SMA Negeri 2 Banguntapan with all students of class X IPS SMA N 2 Banguntapan academic year 2016/2017 as the population. The number of students is 98 people divided into four parallel classes. Because this research requires three classes then sampling is done by cluster sampling. After three classes were taken, then each class was specified as experiment class 1, experiment 2 and control class which the determination is also done randomly. The data collection used in this research were documentation, test, and observation technique. Documentation techniques are used to find out information about the number of students, lesson schedules, and syllabus. The test technique is used to measure students' academics. There are two kinds of tests that are given: pretest to find out the initial learning outcomes of students and posttest to know the final student learning outcomes. Meanwhile, the observation is used to measure the students' cooperation during the learning process.

Instrument validation was performed through expert validation and the validity of the content was measured using Aiken's V. From the validity test results, it was obtained 17 valid items with Aiken's score of 0.83 to 0.94. While the amount of invalid questions was 3 questions with Aiken's resulting score of 0.72 to 0.77. As for the invalid items, improvements were made to make the instrument more assertive in measuring the tested material. Reliability test in this research was done by using cronbach's alpha and it obtained a value equal to 0,949. Because the value is more than 0.7 then the instrument can be said reliable.

Data analysis is also done on the data of student learning outcomes and the results of students' cooperation ability. Analytical techniques used were descriptive statistics and Multivariate Analysis of Variances (MANOVA). Descriptive analysis is used to take a picture of the learning outcomes and ability

Table 2. Students' Learning Outcomes

	Experiment 1 (TPS)		Experiment 2 (TSTS)		Control (Conventional)	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Highest score	70	95	75	95	70	90
Lowest score	30	65	35	70	30	60
Mean	58,96	82,08	60,42	84,37	54,81	76,15
Median	65	82,5	60	85	57,5	75
SD	11,226	8,459	10,623	7,270	12,286	10,421

Source: Processed Secondary Data (2017)

of student cooperation. While the MANOVA analysis is used to see the comparison of pre test, post test, achievement improvement and students' cooperation ability for the three student's groups. Meanwhile, to compare the results of each experimental group with the control group, Dunnet test was employed. The level of significance used in this research was 5%.

RESULT AND DISCUSSION

Based on the data processing result in the Table 2, it was found that the lowest score in the TPS group is 30 and the highest score is 70, it shows that the range of student learning outcomes is still quite wide. The average size of this group is smaller compared to the TSTS group but higher than the control group, which is 58.96. In the TSTS group, the average score obtained was the highest compared to the two other groups, which was 60.42. While the range of values is not much different from the TPS group, with the lowest score was 35 and the highest score was 75. While for the control group, the average value of pre-test learning results obtained was 54.81. The value is smallest compared to the two experimental groups. While the lowest value and the highest value was equal to the TPS group.

In table 2, it can be seen the results of post-test learning for the three groups. The TPS group has an average of 82.08 with the highest score of 95 and the lowest score of 65, this means that the achieved score range was not too wide compared to the pre-test

range. While the standard deviation obtained by the TPS group is 8.459. The average value obtained by the TSTS group was the highest, which was 84.37 with the highest score of 95 and the lowest score of 70. Although the highest score was the same as the TPS group, but for the lowest score, TSTS group was better than the TPS group. The range of values and the amount of standard deviations in the TSTS group is also smaller when compared to the other two groups, meaning that the distribution of values in the TSTS group is better and representative. As for the control group, the average value obtained was the smallest, amounted to only 76.15. The highest score is 90 and the lowest score is only 60. This means that there is a significant difference between the average of the control group and the two experimental groups.

The result of students' cooperation ability is obtained through observation during the learning process. The overall data on students' cooperative ability in all three groups can be seen in Table 3. The average scores for the three groups tend not to differ significantly. The TSTS group had the highest average of 36.13, the average TPS group of 34.13, and 29.92 for the control group. The highest score was also almost the same, the TSTS group got the highest score of 48, had a gap for only 3 points with the TPS group, while 39 for the control group. However, for the lowest value, there was a significant difference between the control group and the two experimental groups.

Table 3. Students' Cooperative Ability Data

	Experi- ment 1 (TPS)	Experi- ment 2 (TSTS)	Control (Conven- tional)
Highest Score	45	48	39
Lowest Score	23	28	18
<i>Mean</i>	34,13	36,91	29,92
<i>Median</i>	35,5	37,5	29,5
SD	7,158	5,476	6,716

Source: Processed Primary Data (2017)

For analysis of learning outcomes and cooperative ability, it needs a test on requirement analysis before executing anova test. There are two conditions in the prerequisite test that is normality test and homogeneity test. The normality test is used to determine whether the sample is from a normally distributed population. Normality test was done by kolmogorov smirnov test. In summary, the normality test is presented in Table 4. In the table, it is found that all significance values for each section exceed 0.05 so that it can be said that the data in each section are normally distributed.

Table 4. Normality Test Result

Variable	Group	Sig	Information
Pre-Test	TPS	0,108	Normal
	TSTS	0,335	Normal
	Konven- sional	0,489	Normal
Post-Test	TPS	0,463	Normal
	TSTS	0,577	Normal
	Konven- sional	0,617	Normal
Kerja- sama	TPS	0,757	Normal
	TSTS	0,946	Normal
	Konven- sional	0,362	Normal

Source: Processed Primary Data (2017)

A homogeneity test was performed to test whether all three data groups have the same variance or not. This homogeneity test uses Levene test. Homogeneity test results are summarized in Table 5. The results show that all F significance values exceed 0.05 so it can be said that the variance is homogeneous.

Tabel 5. Covariance Variance Homogeneity Test Result

Variable	F	Sig.	Information
Pre-test	0,751	0,476	Homogeneous
Post-test	2,041	0,137	Homogeneous
Kerjasama	1,684	0,193	Homogeneous

Source: Processed Primary and Secondary Data (2017)

Another requirement that must be met is that the resulting covariant matrix must also be homogeneous. The test was done using Box's M and the result showed that the F value found was 1.672 with a significance of 0.066. Since the significance value is more than 0.05 it can be concluded that its covariance matrix is homogeneous. Thus all the requirements have been met to further test the hypothesis with MANOVA. MANOVA analysis results found Wilks Lambda value of 0.851 with F 2.531 and significance of 0.024. This indicates that overall there are significant differences between the three groups. Thus the first hypothesis tested in this study was proven.

For the test of each variable as shown in Table 6, it was found that for pretest values there was no difference for the three groups, whereas for posttest and work ability, there were significant differences among the three groups. This indicates that the initial condition of the students in the three groups is homogeneous so that the test of posttest value can be done.

To test whether the learning outcomes and the students' co-operative skills taught by the TPS model are better than the conventional model, a Dunnett test is done. Learning result difference test between TPS and conventional

Table 6. ANOVA and Dunnet test result

Variable	F	Sig.	Variable	T	Sig.
Pre-test	1,636	0,202	-	-	-
Post-test	5,775	0,005	TPS vs Conventional	2,364	0,039
			TSTS vs Conventional	3,277	0,003
Kerjasama	7,369	0,001	TPS vs Conventional	2,285	0,047
			TSTS vs Conventional	3,803	0,001

Source: Processed Secondary and Primary Data (2017)

model, it was found t value equal to 2,364 with significance of 0,039, while testing difference of cooperation ability between model of TPS with conventional, it was found t value equal to 2,285 with significance of 0,047. Because the two significance values produced were less than 0.05, it can be concluded that the students who were taught with TPS model were proved to have better learning outcomes and collaborative abilities than students taught by conventional models. Thus the second hypothesis in this study was proved.

The results of this study strengthen a research by Ratri (2013: 102) and Kristiyanti, Rasmiwetti, & Susilawati (2015: 2) who found that Think Pair Share as a learning method proved effective in improving students' learning outcomes. In addition, a research conducted by Siarukin (2008: 2) concluded that the TPS learning method is successful in improving student's achievement on social science learning. Not only social science alone, TPS also has a positive effect on other subjects such as in Indrayati's (2011: 6) which found that TPS is effective in improving students' motivation and learning outcomes in biology subjects. The TPS learning model not only affects the students' learning outcomes, but also increases student activity in the classroom and improves students' ability to solve problems (Rochmad & Sugiharti, 2015: 1).

The results of this study are in line with a research by Alpusari & Putra (2013) which states that the TPS application of cooperative learning model can improve students' science process skill overalls. Learning by using TPS provides more time for students to think and

discuss issues with other students. Students can also learn from each other, so as to improve students' understanding so that the learning outcomes become more optimal. Majid (2013: 191) suggests a model of learning with Think Pair Share approach, emphasizes the use of certain structures to influence student interaction patterns, as well as to increase academic value. In addition, according to Hamdayama (2014: 203) application of Think Pair Share learning model can provide more in-depth learning results. The use of Think Pair Share learning method is able to gradually identify the learning result, so that the learning result obtained by the students is more optimal.

The test on impact of the TSTS learning model on learning outcomes and students' collaborative skills is also taken through Dunnett test. Difference test of learning result between TSTS and conventional model found t value equal to 3,277 with a significance of 0,003, while difference test of cooperation ability between TSTS model with conventional found t value equal to 3,803 with a significance of 0,001. Since both values of significance resulted less than 0.05 it can be concluded that students taught by TSTS model have proven to have better learning outcomes and collaborative skills than students taught by conventional models. Thus the third hypothesis in this study was proved.

These results reinforce research that has been done by Masrohatin (2013: 98) students' learning outcomes using Two Stay Two Stray learning model is higher than students using conventional methods. Further research by Sulisworo and Suryani (2014: 2) found that

the learning strategy in the form of Two Stay Two Stray is very effective to improve learning outcomes. Similar results were found in a research by Listianah et al (2013: 2), which stated that the Two Stay Two Stray learning model can improve students' economic learning outcomes.

The results of this study are also in accordance with the theory put forward by Jarolimek and Parker in Isjoni (2009: 65) which stated that the division of groups in learning by using the Two Stay Two Stray model puts attention to the academic ability of students who ultimately have an impact on learning outcomes. Another opinion delivered by Dikici (2006: 6), cooperative learning gives a good impact because it can improve student learning outcomes and teacher management skills. In addition, Agustina in Raga (2014: 4) stated TSTS cooperative learning model can help students in improving learning interest and learning achievement.

Aspects of students' cooperation skills are examined, including positive interdependence, individual responsibility, and interpersonal relationships. Based on the result of research, the students' cooperation ability of the experimental group is higher than the control group. The average cooperation ability of TPS class students is 34.13 and belongs to high category. As for the average for TSTS class was 36.91 and included in the high category. The high cooperation ability of TPS group is caused by the application of Think Pair Share learning model which requires students to cooperate in pairs. Hamdayama (2013: 2013) argues that the application of TPS requires students to work together, so that indirectly generate a sense of empathy from within students and learn to accept the opinions of others. While the high ability of TSTS group cooperation because students are required to work together in groups and other groups to seek information and solve problems.

One of the objectives of cooperative learning is the development of attitudes in which there is an element of cooperation. One of the goals of cooperative learning is the

development of social skills in which it contains a cooperative attitude. Think Pair Share and Two Stay Two Stray is a cooperative learning model that can help students create cooperative attitude. The results of this study strengthen a research conducted by Nurnawati, Yulianti, & Susanto (2012: 5) after applied cooperative learning model TPS showed student cooperation increased with average overall of 76.85 and an average increase of 0.67 with medium category. The average value is greater than the value obtained by the control group which is only 65.29 and the average increase of 0.27 with low category. Another research conducted by Rustiana (2017: 112), the application of TSTS learning method has a positive effect towards social skills in which includes the value of cooperation with the test data result of 0.527 and included in the medium category.

The results of this research was also in accordance with the opinion put forward by Trianto (2007: 61) TPS learning is one model of cooperative learning that allows students to help each other and work with each other. Through this learning model, students are more eager in learning, so as to improve the achievement of learning outcomes and optimal cooperation ability. In addition, according to Huda (2014: 207) TSTS cooperative learning model as a group learning system is applied with the aim that students are able to work together and encourage each other to have better achievements.

CONCLUSION

This Research found that there were significant differences in economic learning outcomes and cooperation skills among students taught by TPS, TSTS and conventional models. TPS and TSTS methods have proven to have a positive impact on economic learning outcomes and student cooperation skills. This suggests that students taught by TPS and TSTS methods have better learning outcomes and collaborative skills than students taught by conventional models. The findings indi-

cate that the use of conventional methods in the learning process should begin to be reduced. The use of cooperative learning methods such as TPS and TSTS for economic subjects should be prioritized because it can increase student participation and cooperation ability and can improve students' understanding of the taught materials.

REFERENCES

- Alpusari, M. & Putra, R. A. (2013). The Application of Cooperative Learning Think Pair Share (TPS) Model to Increase the Process Science Skill In Class IV Elementary School Number 81 Pekanbaru City. *International Journal of Science and Research (IJSR)*, 4(4), 2805-2808.
- Aprianti, V. (2013). Pengaruh Penerapan Model Cooperative Learning Tipe Think Pair Share (TPS) Terhadap Kemampuan Berpikir Kritis Siswa pada Pembelajaran Ekonomi. *Thesis*, Bandung: Universitas Pendidikan Indonesia.
- Bamiro, A.O. (2015). Effects of Guided Discovery and Think-Pair-Share Strategies on Secondary School Students' Achievement in Chemistry. *Sage Open*. 5(1), 1-7.
- Barker, J.G. (2012), *Effect of instructional methodologies on student achievement modeling instruction vs. traditional instruction*. LSU Master's Thesis. 503
- Dewi, O.K. (2016). Penerapan Metode Pembelajaran Two Stay Two Stray (TSTS) untuk Meningkatkan Motivasi dan Prestasi Belajar Ekonomi Siswa Kelas X SMAN 2 Wonosari. *Jurnal Pendidikan dan Ekonomi*, 5(1), 60-67
- Dikici, A. (2006). The Effects of Cooperative Learning on The Abilities of Preservice Art Teacher Candidates to Lesson Planning in Turkey. *Latin American Journal of Physics Education*, 2: 96-108.
- Gull, F. & Shehzad, S. (2015). Effects of Cooperative Learning On Students Academic Achievement. *Journal of Education and Learning*, 9(3), 246-255.
- Hamdayama, J. (2014). *Model dan Metode Pembelajaran Kreatif dan Berkarakter*. Jakarta: Ghalia Indonesia.
- Huda, M. (2014). *Cooperative Learning Metode, Teknik, Struktur, dan Model Penerapan*. Yogyakarta: Pustaka Pelajar.
- Indriyani, C. (2011). Peningkatan Kualitas Pembelajaran IPS dengan Model Pembelajaran Kooperatif Teknik Two Stay-Two Stray Pada Siswa Kelas IV SD Tambakaji 05 Kecamatan Ngaliyan Kota Semarang. *Kreatif: Jurnal Kependidikan Dasar*. 1(2), 180-193.
- Isjoni, T. R. (2009). Memicu Perbaikan Pendidikan Melalui Kurikulum dalam Kerangka Pikir Desentralisasi. *Makalah Seminar tema "Qou Vadis Pendidikan Indonesia"*. Yogyakarta: Kanisius.
- Ismawati, N. & Hindarto, N. (2011). Penerapan Model Pembelajaran Kooperatif dengan Pendekatan Struktural Two Stay Two Stray untuk Meningkatkan Hasil Belajar Siswa Kelas X SMA. *Jurnal Pendidikan Fisika Indonesia*, 7, 38-41.
- Kristiyanti, F., Rasmiwetti, & Susilawati. (2015). Studi Komparasi Model Pembelajaran Kooperatif TPS dan TGT untuk Meningkatkan Prestasi Belajar Siswa pada Pokok Bahasan Hidrokarbon di Kelas X SMA Negeri 1 Rambah Rokan Hulu. *Jurnal Online Mahasiswa (JOM) Bidang Keguruan dan Ilmu Pengetahuan*, 3(1), .
- Kurniawan, H. & Istiningrum, A.A. (2012). Penerapan Metode Pembelajaran Kooperatif Teknik Think Pair Share untuk Meningkatkan Motivasi Belajar Akuntansi Kompetensi Dasar Menghitung Mutasi Dana Kas Kecil Siswa Kelas X Akuntansi 2 SMK Negeri 7 Yogyakarta Tahun Ajaran 2011/2012. *Jurnal Pendidikan Akuntansi Indonesia*. 10(1), 114-134.
- Kusuma, F.W., & Aisyah, M.N. (2012). Implementasi Model Pembelajaran Kooperatif Tipe Think Pair Share untuk Meningkatkan Aktivitas Belajar Akuntansi Siswa Kelas XI IPS 1 SMA Negeri 2 Wonosari Tahun Ajaran 2011/2012. *Jurnal Pendidikan Akuntansi Indonesia*, 10(2), 43-63.
- Lie, A. (2008). *Cooperative Learning: Mempraktikkan Cooperative Learning di Ruang-Ruang Kelas*.

- Jakarta: PT Gramedia Widiasarana Indonesia.
- Listianah, H., & Hadi, S. (2013). Meningkatkan Hasil Belajar Mata Pelajaran Ekonomi Melalui Perpaduan Metode Ceramah dan Metode Two Stay Two Stray pada Kelas X Ap SMK Hidayah Semarang. *Economic Education Analysis Journal*, 2(1), 24-28.
- Majid, A. (2013). Strategi Pembelajaran. Bandung: Remaja Rosdakarya.
- Masrohatin, K. (2013). Pengaruh Model Pembelajaran Kooperatif Tipe TSTS (Two Stay Two Stray) Terhadap Peningkatan Motivasi dan Prestasi Belajar Pendidikan Kewarganegaraan di SMP N 3 Ngaglik Tahun Ajaran 2012/2013. *Final Project*. Yogyakarta: Fakultas Ilmu Sosial UNY.
- Mulyani, S., & Sofiani, A. (2016). Improving the Skills of Demand Function Counting and Demand Curve Drawing Using Drill Method and Think Pair Share (TPS). *Dinamika Pendidikan*, 11(2), 108-116.
- Nurnawati, E., Yulianti, D., & Susanto, H. (2012). Peningkatan Kerjasama Siswa SMP Melalui Penerapan Pembelajaran Kooperatif Pendekatan Think Pair Share. *Unnes Physics Education Journal* 1 (1).
- Oktarina, N. (2008). Meningkatkan Pemahaman Mahasiswa Terhadap Konsep Dasar Pengantar Ilmu Ekonomi Melalui Metode Pembelajaran Kooperatif Tipe Think-pair-share. *Dinamika Pendidikan*, 3(1), 109-122.
- Raga, G. (2014). Pengaruh Model Pembelajaran TS-TS Terhadap Hasil Belajar IPA Siswa Kelas V SD di Desa Kaliadem Kecamatan Banjar Kabupaten Buleleng. *Final Project*. Universitas Pendidikan Ganesha.
- Ratri, T. D. W. (2013). Keefektifan Model Pembelajaran Kooperatif dengan Teknik Think Pair Share (TPS) dalam Meningkatkan Keaktifan dan Hasil Belajar Ekonomi Siswa Kelas X SMA Negeri 1 Prambanan Kabupaten Sleman. *Final Project*. Universitas Negeri Yogyakarta.
- Republika. (2016). *Indonesia Perlu Tingkatkan Kualitas Sumber Daya Manusia*. Republika Online. 7 Januari 2016. <http://republika.co.id/berita/nasional/umum/16/01/07/>. Accessed on January 30th 2016.
- Rochmad & Sugiharti, E. (2015). TPS Application Based On Mouse Mischief Improving The Ability To Solve Mathematics Problem For Senior High School Students In Temanggung-Indonesia. *International Journal of Education and Research*, Vol. 3 No. 3.
- Rustiana, S. (2017). Pengaruh Model Pembelajaran Two Stay Two Stray dan Model Broken Traingle terhadap Peningkatan Keterampilan Sosial Peserta Didik pada Mata Pelajaran Fiqih di MTS Safinatun Najah Tunjungan Blora Tahun Pelajaran 2016/2017. *Final Project*. Sekolah Tinggi Agama Islam Negeri Kudus.
- Sampsel, A. (2013). *Finding the Effects of Think-Pair-Share on Student Confidence and Participation*. Honors Projects. 28
- Siarukin, R. Y. (2011). Penerapan Model Pembelajaran Think-Pair-Share untuk Meningkatkan Hasil Belajar Siswa Kelas V Mata Pelajaran IPS di SDN Klojen Kota Malang. *Thesis*. Universitas Negeri Malang.
- Slavin, E. R. (2009). *Cooperative Learning Teori, Riset dan Praktik*. Bandung: Nusamedia.
- Subagya & Susiati. (2017). Application of Accounting Scaffolding Learning Using Fingertips to Increase Learning Result. *Dinamika Pendidikan*, 12(1), 1-12.
- Sudarmadi, Y. (2012). *Efektivitas Model pembelajaran Kooperatif Tipe Two Stay Two Tray (TSTS) dan Learning Together (LT) Ditinjau dari Aktivitas Belajar Matematika*. Thesis. Surakarta: Program Pasca Sarjana UNS.
- Sudarmini. (2013). Penerapan Metode Pembelajaran Two Stay Two Stray (TSTS) untuk Meningkatkan Motivasi dan Prestasi Belajar Ekonomi Siswa Kelas X SMAN 2 Wonosari. *Equilibrium*, 1(2), 126-136.
- Sugiarto, D. & Sumarsono, P. (2014). The Implementation of Think-Pair-Share Model to Improve Students' Ability in Reading Narrative Texts. *International Journal of English and Education*, 3(3), 206-215.
- Sulisworo, D. & Suryani, F. (2014). The Effect of Cooperative Learning, Motivation and Information Technology Literacy to Achievement. *International Journal of Learning and*

Development, 4(2), 58-64.

- Sumadji. (2015). Pengaruh Model Pembelajaran Terhadap Hasil Belajar Mahasiswa. *Jurnal Inspirasi Pendidikan* Volum 5 Nomor 2.
- Suprijono, A. (2015). *Cooperative Learning Teori dan Aplikasi PAIKEM (revisi)*. Yogyakarta: Pustaka Pelajar.
- Sutrisno, V. L. P. & Siswanto, B. T. (2016). Faktor-Faktor yang Mempengaruhi Hasil Belajar Siswa pada Mata Pelajaran Praktik Kelistrikan Otomotif SMK di Kota Yogyakarta. *Jurnal Pendidikan Vokasi*. 6(1), 111-120.
- Tran, V. D. (2014). The Effects of Cooperative Learning on The Academic Achievement And Knowledge Retention. *International Journal of Higher Education*, 3(2). Vietnam: An Giang University.
- Trianto. (2007). *Model-Model Pembelajaran Inovatif Berorientasi Konstruktivistik*. Jakarta: Prestasi Pustaka.