

APPLICATION OF COOPERATIVE LEARNING MODEL TEAM GAMES TURNAMENT (TGT) TYPE USING MONOPOLY GAME MEDIA IN SOLAR TATA MATERIALS TO IMPROVE GEOGRAPHY LEARNING OUTCOMES CLASS X STUDENTS OF HIGH SCHOOLS

Gregorius Agung Malik

ARTICLES INFORMATION

Article status:

Received: June, 12th 2020

Accepted: July, 20th 2020

Published online: August, 28th 2020

Keywords:

team games tournament, monopoly games, learning outcomes

Kata kunci:

team games tournament, permainan monopoli, hasil belajar

Correspondent affiliation:

SMA Negeri 1 Tasifeto Barat
Kecamatan Tasifeto Provinsi Nusa Tenggara Timur.

Correspondent email:

gregoriusmalik@gmail.com

ABSTRACT

The aimed of this study is to determine the differences between the students' learning outcomes in geography taught through the Team Games Tournament (TGT) cooperative learning model using monopoly game media and students taught through the Student Teams-Achievement Division (STAD) cooperative learning model on the subject matter of hydrocarbon compounds class X high school students. Data collection was carried out for two (2) months, namely from 20 October 2019 to 25 November 2019. The research method used was quasi-experimental research. The study population was all grade X high school students. Samples were randomly selected and obtained class X5 as an experimental class totaling 35 students and class X6 as a control class totaling 30 students. Student learning outcomes data obtained using written tests. Measurements are based on scores obtained by students based on written test results. Data were analyzed using descriptive and inferential statistical techniques with t-test. T-test results obtained are $-t_{tabel} = -1,669 < t_{hitung} = 3,39 > t_{tabel} = 1,6720$ with a significance level of 0.05. The conclusion from the research results that there is a significant difference between the learning outcomes of students taught through the cooperative learning model Team Games Tournament (TGT) using monopoly game media with student learning outcomes taught through the Student Teams-Achievement Division (STAD) cooperative learning model in the STAD class X high school students. 2017/2018 school year. N-Gain shows that the increase in learning outcomes in the experimental class and the control class are in the medium category that is 0.57 and 0.40. Student learning outcomes taught through the Team Games Tournament (TGT) type of cooperative learning model using monopoly game media are higher than student learning outcomes taught through the Student Teams-Achievement Division (STAD) cooperative learning model.

Penelitian ini bertujuan untuk mengetahui perbedaan antara hasil belajar geografi siswa yang diajar melalui model pembelajaran kooperatif tipe Team Games Tournament (TGT) menggunakan media permainan monopoli dengan siswa yang diajar melalui model pembelajaran kooperatif tipe Student Teams-Achievement Division (STAD) pada materi pokok senyawa hidrokarbon siswa kelas X SMA. Pengumpulan data dilakukan selama dua (2) bulan, yaitu dari tanggal 20 Oktober 2019 sampai dengan tanggal 25 November 2019. Metode penelitian yang digunakan adalah penelitian eksperimen semu. Populasi penelitian adalah semua siswa kelas X SMA. Sampel dipilih secara acak dan diperoleh kelas X5 sebagai kelas eksperimen berjumlah 35 siswa dan kelas X6 sebagai kelas kontrol berjumlah 30 siswa. Data hasil belajar siswa diperoleh dengan menggunakan tes tertulis. Pengukuran didasarkan pada skor yang diperoleh siswa berdasarkan hasil tes tertulis. Data dianalisis dengan menggunakan teknik statistik deskriptif dan inferensial dengan uji-t. Diperoleh hasil uji-t yaitu $-t_{tabel} = -1,669 < t_{hitung} = 3,39 > t_{tabel} = 1,6720$ dengan taraf signifikansi sebesar 0,05. Kesimpulan dari hasil penelitian bahwa terdapat perbedaan yang signifikan antara hasil belajar siswa yang diajar melalui model pembelajaran kooperatif tipe Team Games Tournament (TGT) menggunakan

media permainan monopoli dengan hasil belajar siswa yang diajar melalui model pembelajaran kooperatif tipe Student Teams-Achievement Division (STAD) pada siswa kelas X SMA. tahun ajaran 2017/2018. N-Gain menunjukkan bahwa peningkatan hasil belajar pada kelas eksperimen dan kelas kontrol berada pada kategori sedang yaitu 0,57 dan 0,40. Hasil belajar siswa yang diajar melalui model pembelajaran kooperatif tipe Team Games Tournament (TGT) menggunakan media permainan monopoli lebih tinggi dari hasil belajar siswa yang diajar melalui model pembelajaran kooperatif tipe Student Teams-Achievement Division (STAD).

Copyright © 2020 | *geography-UNILA*
This open access article is distributed under a
Creative Commons Attribution (CC-BY) 4.0 International license

Introduction

Teams Games Tournament (TGT) learning model is one type or model of cooperative learning that is easy to implement, involves the activities of all students without having differences in status, involves the role of students as peer tutors and contains elements of play and reinforcement. Learning activities with games that are designed in the cooperative learning model of the Teams Games Tournament (TGT) enable students to learn to relax more in addition to fostering responsibility, honesty, cooperation, healthy competition and learning involvement. Teams Games Tournament (TGT) was originally developed by David Devries and Keith Edward, this is the first learning method from Johns Hopkins. In this model the class is divided into small groups of 3 to 5 students with different levels of ability, gender, and ethnic background, then students will work together in small groups. Learning in the Teams Games Tournament (TGT) is almost the same as STAD in every case except one, instead of quizzes and individual improvement score systems, TGT uses academic game tournaments. In the tournament students compete to represent their team with other team members who are equal in their past academic performance. According to Slavin (2008), there are three main characteristics of cooperative learning: 1 Group appreciation, 2 Individual responsibility, 3 Equal opportunity to achieve success.

Learning activities with games designed in the cooperative learning model of the TGT allow students to learn to relax more in addition to fostering responsibility, cooperation, fair competition and learning involvement, and easy to apply to all concepts. According to Sudarti (2015) the results of his research showed that learning by using cooperative learning strategies of team games tournament types: (1) In cooperative learning the types of team games tournaments are quite capable of motivating students to be actively involved in learning. (2) The use of team games tournament type cooperative learning methods can increase learning motivation in social studies in Class V students of Semester II SDN 1 Gemaharjo in 2013/2014.

While Sumarmi (2012:63) argues that Teams Games Tournament (TGT) has several weaknesses and strengths. The advantages namely; student involvement in learning is high, students become enthusiastic in learning, knowledge that is obtained by students is not solely from the teacher but through their own construction by students, and can foster positive attitudes in students such as cooperation, tolerance, can accept the opinions of others, and etc. The weaknesses are; for beginner instructors this model requires a lot of time, requires adequate facilities and infrastructure, can cause a noisy atmosphere in the classroom, and students are accustomed to learning with prizes. Related to the conditions of geography learning, Muslikin (2005) argues that in teaching and learning activities geography teachers apply conventional strategies, stuck in the routine because of too much academic and administrative burdens. The teacher lacks developing learning materials, lacks innovation in learning strategies, and is less eager to complete and optimize visuals in learning.

The STAD cooperative learning model is cooperative learning not only superior in helping students understand difficult concepts but is also very useful in generating activities and interactions between students and teachers and between students and students, as well as being able to improve other learning achievements such as increasing cooperation, creativity, think critically and encourage student progress in helping friends and also the STAD type of cooperative learning model was chosen because this cooperative strategy is the simplest and is very suitable for use by teachers who are just starting to use cooperative strategies. The syntax in the STAD learning model makes students the center of learning activities (Student Centered). Such learning will increase the intensity of active student involvement in the learning process.

This active process of asking and arguing gives students the opportunity to express themselves and foster critical thinking in students. Students as a center in the learning process allows students to produce new solutions to a problem given by the teacher. Self-expression, critical thinking and discoveries made by students will certainly foster creativity in students. This will have a positive effect on a pleasant learning atmosphere because there is no emphasis on students.

Learning outcomes become important for teachers and students because they become a reference for their success in learning. In addition, learning outcomes also become a reference for assessing school quality as revealed by Mendezabal (2013). Student's academic performance occupies a very important place in education as well as in the learning process. It is considered as a key criterion to judge one's total potentialities and capacities which are frequently measured by the examination results. It is used to pass judgment on the quality of education offered by academic institutions. Of course, the expected results are optimal and high learning outcomes because everyone wants high achievements. However, students differ from one another in the achievement of learning outcomes. There are students who are able to achieve high achievement, but there are also students who have low learning achievement. The variety of learning outcomes obtained by students at school is determined by various factors that influence it. In general, the factors that influence learning outcomes can be classified into two factors, namely internal and external.

According to Dimiyati and Mudjiono (2010) internal factors formed from within students themselves include spiritual physical health, attitudes, intelligence and talents, interests, motivation, learning habits, etc., while external factors originating from outside students themselves including family environment, school environment, teachers, the community and the surrounding environment. Furthermore, Suwardi (2012) explains the contribution of each of these factors to learning outcomes. He found factors that influence learning outcomes, namely (1) Psychological factors of students (27.54%), (2) Community environmental factors (10.18%), (3) School environment factors (8.70%), (4) Learning support factors (6.98%), (5) Family environment factors (6.50%), and (6) School time factors (6.23%). Based on Suwardi's research (2012), the biggest factor influencing learning outcomes is psychological factors of 27.54%. Therefore, it can be concluded that psychological factors contribute greatly to the success of student learning. News report (2013) shows that: (1) there is a difference in social studies learning achievement between students who take the STAD cooperative learning model and students who follow the conventional learning model, (2) there is an interaction effect between the STAD cooperative learning models and the academic self-concept students towards social studies learning achievement, (3) there are differences in social studies learning achievement between students who take the STAD type cooperative learning model and students who follow conventional learning models in students who have high academic self-concepts, and (4) there are differences in social studies learning achievement between students who follow the STAD type cooperative learning model and students who follow the conventional learning model in students who have low academic self-concepts. Based on the above findings it can be concluded that there is an influence of the STAD type cooperative learning model on social studies learning achievement in terms of the academic self-concept of class VIII students of SMPN 3 Sukawati.

The results of Gusniawati's study (2015) found that after the implementation of the cooperative learning model TGT technique showed students were more eager to follow the learning process and increased student learning outcomes in mathematics. This can be seen from the more solid understanding of students towards the material delivered by the mastery learning mastery of the cycle I, II, and II, respectively 73.33%, 80%, and 100%. So that the application of the TGT cooperative learning model plays an important role in improving student learning outcomes. Rosdiani (2014) The results showed that there was an increase in student learning outcomes in the XI-IPA2 classroom respiration system material at SMA Negeri I Sigli through the application of the TGT type cooperative learning model. Improved student learning outcomes from the basic score to cycle I and cycle II also experienced changes. Average learning outcomes increased from 54 to 70.50 and 82.66. The number of students who meet the KKM Minimum completeness criteria) increased from 3 students (10%) to 19 students (63.33%) and 26 students (90%). Achievement of classical learning outcomes has exceeded 85% in the second cycle. This condition shows the results of student learning have been categorized high. Achievement of classical learning outcomes has exceeded 85% in the second cycle. Abdullah (2013) with the results of his research showed that teacher activity has increased with an average score of 62.5% in the first cycle, 78.12% in the second cycle and 93.75% in the third cycle. Student activities during the learning process with an average score in the first cycle of 70.22%, the second cycle of 78.19% and the third cycle of 92.72%. Student learning outcomes data in the first cycle 47.61%, 76.19% in the second cycle and 90.47% in the third cycle. From these results it can be concluded that the

cooperative learning model of the Teams Games Tournament (TGT) can improve the social learning outcomes of fourth grade students of SDN Klantingsari 1 Tarik Sidoarjo.

The difficulty of learning geography experienced by students in SMA Negeri 1 Tasifeto Barat is caused by the low interest in learning geography and the lack of active students in the learning process. Only students who have more ability and have interest are always active in the learning process while other students get bored quickly so that not all students have satisfying learning outcomes. The application of simple learning models that often causes students to be less active and learning becomes less attractive. Therefore, the existence of the TGT learning model can make learning conditions fun for students with the presence of monopoly game elements in it.

The learning model commonly used by geography teachers in SMA Negeri 1 Tasifeto Barat for the subject of the solar system is STAD so that this model will be used as a comparison. It is expected that by applying the TGT learning model with a monopoly game, students will be able to master the solar system, have a high interest in learning geography and be active in the learning process so that it has high learning outcomes in geography. So, on this basis the researcher will conduct research on the application of the Team Group Tournament (TGT) cooperative learning model with monopoly game media on the subject matter of the solar system to improve the learning outcomes of students in class X in SMA Negeri 1 Tasifeto Barat in the academic year 2019/2020.

Method

The study was conducted at SMA Negeri 1 Tasifeto Barat Academic Year 2019/2020. The study lasted for two months from October to November 2019. The population in this study were grade X students of SMA Negeri 1 Tasifeto Barat with 4 classes. The sample of this study was selected by two students who had the same academic abilities and characteristics. Of the two classes, one class is designated as an experimental class and one class is determined as a control class by random sampling. The instruments used in this study were test validity of questions, test reliability of questions, distinguishing features, and level of difficulty. Data analysis techniques used in this study were morality test, homogeneity test, initial sample ability test, normalized gain (N-Gain), and research hypothesis test.

Result and Discussion

The results of the initial test data analysis were conducted to show that between the experimental class and the control class had the same initial ability, meaning that the ability did not differ significantly. The data used are pre-test scores of geography subjects on the subject matter of the solar system. The results of data processing of the initial test scores obtained that both classes have the same maximum and minimum values of 52 and 24. The average score of the experimental class consisting of 35 students is 39.43 with a standard deviation (S_1) = 7.84. Whereas in the control class, the average score obtained was 39.67 with a standard deviation (S_2) = 8.5. There are two data analyzes used, namely the initial data description and the flow data description. Analysis of the data used is the normality test, and the homogeneity test and the student's initial ability test.

a. Normality Test

The population is said to have a normal distribution if the coefficients obtained through calculations are smaller than the coefficient that has been set where $\chi^2_{hitung} < \chi^2_{tabel}$. From the results of the calculation of the initial test the ability of students who were taught using the TGT cooperative learning model using monopoly game media (experimental class) obtained $\chi^2_{hitung} = 7,368 < \chi^2_{tabel} = 7,815$ so it can be concluded that the sample (experimental class) came from a normally distributed population. Likewise with the class being taught using the STAD learning model, the results of $\chi^2_{hitung} = 5,017 < \chi^2_{tabel} = 7,815$ indicate that the control class is also normally distributed. After analyzing the data, the results of the normality of the initial test data can be seen in Table 1.

Table 1. Results of Normality Test Analysis
Preliminary Test Data

| Class | χ^2_{hitung} | dk | χ^2_{tabel} | The level of Significant | Category |
|------------------|-------------------|----|------------------|--------------------------|----------|
| Experiment Class | 7,367 | 3 | 7,815 | 5% | Normal |
| Control Class | 5,017 | 3 | 7,815 | 5% | Normal |

b. Homogeneity Variance Test

After knowing that the sample comes from a normally distributed population, the next step is to do a homogeneity test. After data analysis, the results of the variance homogeneity test of the two sample classes can be seen in Table 2.

Table 2. Homogeneity Test Data Analysis Results Preliminary Test Data
Using the F-Test

| F_{hitung} | Dk | F_{tabel} | The level of Significant | Category |
|--------------|------------------------------------|-------------|--------------------------|----------|
| 1,18 | dkpembilang =34 dkpenyebut = 29 | 1,85 | 5% | Homogen |

The population is said to be homogeneous if the coefficients obtained through calculations are smaller than the coefficients that have been set. Homogeneity test calculation results using the F-test on the initial ability test data obtained results $F_{hitung} = 1,18 < F_{tabel} = 1,85$. This means that the population in this study has a homogeneous variance.

c. Initial Ability Test

It is known that the sample has fulfilled the analysis requirements of normal distribution and homogeneous sample variance so to get the final conclusions can be used t-test. Data from the results of the analysis of the initial ability of the two classes can be seen in Table 1.3.

Table 3. Results of Initial Capability Analysis
Using the t-Test

| Kelas | \bar{X} | S | S^2 | A | N | dk= n_1+n_2-2 | t_{hitung} | t_{tabel} |
|-------------------|-----------|------|-------|----|----|--------------------|--------------|-------------|
| Exsperiment Class | 39,43 | 7,84 | 61,43 | 5% | 35 | 63 | -0,64 | 1.6694 |
| Control Class | 39,67 | 8,5 | 72,30 | | 30 | | | |

Based on the analysis results obtained $t_{count} = -0.64$. List of t distributions with degrees of freedom (dk) = $(n_1 + n_2 - 2) = 35 + 30 - 2 = 63$ dan taraf nyata $\alpha = 0,05$ is obtained $t_{tabel} = 1,6694$. Karena $-t_{tabel} = -1,6694 < t_{hitung} = -0,64 < t_{tabel} = 1,6694$, it can be concluded that there is no difference in initial abilities between students taught through the Team Group Tournament (TGT) cooperative learning model using monopoly game media with students taught through the Student Teams-Achievement Division (STAD) cooperative learning model. So the initial ability between the experimental class and the control class is the same.

The final test is given to the experimental class and the control class to find out how the students' final abilities are after being treated. The final data of student learning test results will also be analyzed using parametric statistics which must have analysis prerequisites that are normally distributed and homogeneous. The results of processing the experimental class data have a maximum value of 90 and a minimum value of 48 with an average value of 73.8 and a standard deviation of 12.7. While the control class has a maximum value of 79 and a minimum value of 45 with an average value of 64.1 and a standard deviation of 9.67.

a. Normality test

After getting the final test scores that show the learning outcomes of the two samples, the data is tested for normality before further analysis. Data from the results of the final test normality test analysis can be seen in Table 4.

Table 4. Results of Normality Test Analysis
Final Test Data

| Class | χ^2_{hitung} | dk | χ^2_{tabel} | The level of significant | Category |
|--------------------|-------------------|----|------------------|--------------------------|----------|
| Experimental Class | 3,780 | 4 | 9,488 | 5% | Normal |
| Control Class | 6,037 | 3 | 7,815 | 5% | Normal |

The population is said to have a normal distribution if the coefficient χ^2_{hitung} obtained through calculations is smaller than the coefficient that has been determined where $\chi^2_{hitung} < \chi^2_{tabel}$. The results of the calculation of the final test of the ability of students taught using the cooperative learning model TGT (Team Group Tournament) using monopoly game media (experimental class) obtained $\chi^2_{hitung} = 3,780 < \chi^2_{tabel} = 7,815$ so that it can be concluded that the samples in the experimental class come from normally distributed populations. Similarly, the control class taught through the cooperative learning model Student Teams-Achievement Division (STAD) obtained $\chi^2_{hitung} = 6,037 < \chi^2_{tabel} = 7,815$ shows that the control class is also normally distributed.

b. Variant Homogeneity Test

After knowing that the sample comes from a normally distributed population, the next step is to do a homogeneity test. After analyzing the data, the results of the variance homogeneity test from the two sample classes can be seen in Table 5.

Table 5. Results of Homogeneity Test Analysis of Final Test Data
Using the F-Test

| F_{hitung} | Dk | F_{tabel} | The level of Significant | Category |
|--------------|---------------------------------------|-------------|--------------------------|----------|
| 1,18 | dk pembilang = 34 dk penyebut = 29 | 1,85 | 5% | Homogen |

The population is said to be homogeneous if the coefficients obtained through calculations are smaller than the coefficients that have been set. Homogeneity test calculation results using the F-test on the final ability test data obtained results $F_{hitung} = 1,18 < F_{tabel} = 1,85$. This means that the population in this study has a homogeneous variance.

c. Hypothesis testing

After the final data of the two samples meets the requirements of hypothesis analysis that is normally distributed and comes from a population that has a homogeneous variance, the research hypothesis can be tested using the t-test. Data from the t-test analysis can be seen in Table 6.

Table 6. Results of Final Capability Analysis Analysis Using the t-Test

| Class | \bar{X} | S | S^2 | α | N | dk = $\frac{n_1 + n_2 - 2}{2}$ | t_{hitung} | t_{tabel} |
|------------------|-----------|-----------|--------|----------|----|-----------------------------------|--------------|-------------|
| Experiment Class | 73,8 | 12, 74 | 162,40 | 5% | 35 | 63 | 3,39 | 1.6694 |
| Control Class | 64,1 | 9,6 7 | 93,58 | | 30 | | | |

Based on the analysis results obtained $t_{count} = 3.39$. List of t distributions with degrees of freedom (dk) $= (n_1 + n_2 - 2) = 35 + 30 - 2 = 63$ and the real level $\alpha = 0.05$ is obtained $t_{table} = 1.6694$. Because $t_{hitung} (3,39) > t_{tabel} (1,6694)$, the conclusion is that H_0 is rejected and H_1 is accepted. This means that the learning outcomes of class X students of SMA Negeri 1 Tasifeto Barat in the teaching and learning process by applying the cooperative learning model Team Group Tournament (TGT) using monopoly game media is

higher than the learning outcomes of students taught by applying Student type cooperative learning models Teams Achievement Divisions (STAD) on the material of the solar system.

Based on the results of the analysis shows that there are differences in the average value of the experimental class and the control class, where the experimental class is higher than the control class. Therefore it can be concluded that the application of the Team Group Tournament (TGT) type of cooperative learning model using monopoly games in the experimental class is more effective than the application of the Student Teams Achievement Divisions (STAD) cooperative learning model in the control class for solar system material. To reinforce the results of the hypothesis test used normalized Gain analysis (N-Gain). The results of the N-Gain analysis can be seen in Table 7.

Table 7. N-Gain Analysis Results Experimentation Class and Control Class

| Class | N | S _{pre} | S _{post} | S _{max} | N-Gain Score | Category |
|------------------|----|------------------|-------------------|------------------|--------------|----------|
| Experiment Class | 35 | 39,43 | 73,80 | 100 | 0,58 | Avarage |
| Control Class | 30 | 39,67 | 64,10 | | 0.40 | Avarage |

Based on Table 7. it can be concluded that both classes have increased learning outcomes in the same category that is the medium category. The difference in learning outcomes is in the N-Gain calculation where the experimental class has a value of 0.58 while the control class has a value of 0.40. It can be concluded that the geography learning outcomes of grade X students of SMA Negeri 1 Tasifeto Barat in the teaching and learning process by applying cooperative learning models Team Group Tournament (TGT) using monopoly game media is higher than the learning outcomes of students taught by applying cooperative learning models Type Student Teams Achievement Divisions (STAD) on the material of the solar system.

Conclusion

Based on the results of the research and discussion, it can be summarized that: (1) there are differences in the learning outcomes of students who are taught through the cooperative learning model Team Group Tournament (TGT) using monopoly game media with students taught through the cooperative learning model Student Teams-Achievement Division (STAD). (2) the geography learning outcomes of students taught through the Team Group Tournament (TGT) cooperative learning model using monopoly game media are higher than those taught through the Student Teams-Achievement Division (STAD) cooperative learning model with the average learning outcomes students taught through the Team Group Tournament (TGT) learning model use a monopoly game media of 73.8 and the average learning outcomes of students taught using the Student Teams-Achievement Division (STAD) learning model of 64.1.

Acknowledgement

We would like to thank the students SMA Negeri 1 Tasifeto Barat for helping the writers to collect the data.

Bibliography

- Abdullah Hasni M. (2013). Penerapan Model Pembelajaran Kooperatif Tipe Teams Games Tournament (TGT) Untuk Meningkatkan Hasil Belajar IPS Siswa Sekolah Dasar, Volume: 1, Number: 2, Pages: 1-11.
- Dimiyati, and Mudjiono. (2010). Belajar dan Pembelajaran. Jakarta: PT. Rineka Cipta
- Mendezabal, Marie Jean N. (2013). Study Habits and Attitudes: The Road to Academic Success. *International Journal of Applied Research and Studies (iJARS) Volume 2, Issue 4 (April-2013) ISSN: 2278-9480*, (online), ([http://ijars.in/iJARS% 20309.pdf](http://ijars.in/iJARS%20309.pdf)) accessed December 4, 2017.
- Muslikin, S. (2005). Pengaruh Pemanfaatan Laboratorium Alam, Kerja Sama Penugasan dan Evaluasi Berkelanjutan Terhadap Pencapaian Hasil Belajar Ilmu Geografi di Sekolah Menengah Atas (SMA): *UNY Postgraduate Program*.
- Rosdiani. (2015). Penerapan Model Pembelajaran Kooperatif Tipe Team Games Tournament TGT Terhadap Peningkatan Hasil Belajar Siswa Kelas XI-IPA A2 Pada Materi Sistem Pernapasan di SMA Negeri 1 Sigli. *Journal of Educational Biology, Volume: 6, Number: 1, Pages: 28-33*

- S Gusniawati Tadris, Edi Prio Baskoro. (2015). Penerapan Model Pembelajaran Kooperatif Teknik Team Games Tournament dalam Upaya Meningkatkan Hasil Belajar Siswa Pada Mata Pelajaran Matematika Sub Materi Pokok Bilangan Bulat. *EduMa Journal*, Volume: 4, Number: 1, Pages: 113-124.
- Slavin, R.E. (2008). Cooperative Learning Teori, Riset dan Praktik. Nusa Media, Bandung.
- Sudarti. (2015). Peningkatan Prestasi Belajar IPS Melalui Team Games Tournament (TGT) di Kelas V SD Negeri 1 Gemarhajo Kecamatan Watulimo Kabupaten Trenggalek. *Journal of Professional Education*, Volume: 4, Number: 2, Pages: 178-189.
- Sumarmi. 2012. Model-Model Pembelajaran Geografi. Malang: Aditya Media Publishing
- Suwardi, Dana Ratifi. (2012). Faktor-Faktor Yang Mempengaruhi Hasil Belajar Siswa Kompetensi Dasar Ayat Jurnal Penyesuaian Mata Pelajaran Akuntansi Kelas XI IPS di SMA Negeri 1 Bae Kudus. *Economic Education Analysis Journal* 1 (2) (2012), (online), (<http://lib.unnes.ac.id/15332/>) accessed December 12, 2017.
- Warta W I, Yudana N Natajaya. (2013). Pengaruh Model Pembelajaran Kooperatif Tipe STAD Terhadap Prestasi Belajar IPS Ditinjau dari Konsep Diri Akademik Siswa Kelas VIII SMPN 3 Sukawati. *e-Journal of Ganesha University Education Postgraduate Program*, Volume: 4, Pages: 1-11.