COMPARATIVE STUDY BETWEEN JIGSAW AND TEAM GAME TOURNAMENT STRATEGIES TOWARDS STUDENTS' ACHIEVEMENT ON FOURTH GRADE STUDENTS AT SDN KLECO 1 SURAKARTA

Ika Candra Sayekti[1] and Wiji Sri Muryani[2]

[1,2] PGSD FKIP Universitas Muhammadiyah Surakarta
1ika.c.sayekti@ums.ac.id

Abstract

The objectives of the research were to know: (1) the different impact of learning strategy by using Jigsaw and Tournament TGT Team Game towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta, (2) the effectiveness between Jigsaw and Team Game Tournament (TGT) strategy towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta. Related to the objectives of the research, the writer used quasi experimental method. The research conducted at SDN Kleco 1 Surakarta. The population was all of the fourth grade students. The population was also used as sample. The sample was two groups, IV.1 as experiment I taught by Jigsaw strategy and IV.2 as experiment II taught by Team Game Tournament (TGT) strategy. In collecting data, the writer used test and documentation techniques. As a requirement for analysis, firstly the data had to be tested using kolmogorov-smirnov through lilliefors formula in order to test the normality and levene formula in order to test the homogeneity. The data analysis was t-test. The result of the research showed that: (1) there was different impact of learning strategy by using Jigsaw and Team Game Tournament (TGT)towards students'achievement on fourth grade students at SDN Kleco 1 Surakarta, (2) Team Game Tournament (TGT) strategy was more effective than Jigsaw towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta.

Keywords: jigsaw, Team Game Tournament (TGT), strategy, students' achievement

Introduction

According to UU RI Number 14, 2005 about Teachers and Lecturers Chapter 10, that is: "Kompetensi guru meliputi kompetensi pedagogik, kompetensi kepribadian, kompetensi social, dan kompetensi professional yang diperoleh melalui pendidikan profesi". Based on that rule, it explained that paedagogy competence is a capability to manage learning process; personality competence is capability of personality, morality, wisdom and authority as well as being an example of learners; professional competence is the ability to master subject material broadly and deeply; social competence is the teachers' ability to communicate and interact effectively and efficiently with students, teachers, parents of learners, and surrounding community. The four competencies should be integrated into a complete insight when teachers teach in the classroom. Based on the description, teachers become the determinant of learning process success.

The main task of a teacher is to facilitate the activities of learners, not just deliver material to learner. Therefore teachers should focus on student center learning models and required to arrange innovative learning process. But, there are some teacher who haven't conducted innovative strategy in learning process.

Based on the observation done in SD Negeri Kleco 1 Surakarta, the learning process is considered to be less fun and interesting for students. This is due to the interest of students who are less and the lack of application of innovative models and strategies developed by teachers. Whereas, teachers must use varieties of strategies, not only monotonous lecturing method but also others method.

Besides, there are some students who have low achievement. Students' achievement consists of cognitive, affective, and psychomotor domain. Students' achievement can be influenced by two factors, that are; external and internal factors. Internal factor is factor derived from students, for examples gender, study habits, peer influence, attitude toward science. Family factors (educational attainment of parents, occupation of parents, family income, and parent's learning support) and school factors (physical facilities and library service) are examples of external factors (Noemu Mangaoang, 2013). The usage of uninnovative learning strategies that are unappropriate with material and media is also external factor. So, it is important to select appropriate learning strategies that are able to improve students' interest in learning process so they can also improve their achievement.

According to Sanjaya (2008: 186), "Learning strategy means planning which contain a series

activities designed to get certain goal of education." Learning strategy is also a term of learning activities that are essentially intended to achieve the learning objectives effectively and efficiently. This is similar to the Gamze Weinsen and Mayer , et al , (2013:155) defines learning strategies as behaviors and thoughts that is used by the learners to process information during learning process.

According to Wardani in Surtikanti (2008:41) factors that influence in the selection of learning strategies, consists of materials, media, the ability of teachers, the learning system, learning climate, and competence of learners. Therefore, the learning strategies selected must be oriented to the learning objectives achieved, kind of material, the characteristics of learners, as well as the circumstances at the school where the learning takes place. As we know there are many learning strategies used by teachers, but not all can be effective and efficient in sporting learning objectives.

There are many innovative strategies can be used in learning process, that are: picture and picture, examples non examples, numbered heads together, jigsaw, snowballing, team quiz, giving question & getting answer, role playing, Teams Games Tournaments (TGT), Student Teams Achievement Division (STAD), talking stick, cooperative integrated reading and composition (CIRC), contextual teaching learning, etc. in this research we choose jigsaw dan Teams Games Tournaments (TGT).

According to Isjoni (2011:77), a jigsaw is able to encourage students' activity and help each other in mastering the subject material to get maximum achievement. According to Hull (2013: 65), a jigsaw strategy is a cooperative learning technique that is suitable for students in grade 3 to grade 12. According to Kamulyan and Risminawati (2012: 59), there are some steps in the jigsaw strategy that can be summarized as follows: (1) the teacher explains competence that will be achieved; (2) The classes are divided into five groups of cooperative; (3) The teacher divides the five topics to each group; (4) The division of tasks in groups; (5) members paired with different friends topic to exchange ideas and record the results; (6) the conversion into a group of experts; (7) making the report by the expert group; (8) a group of experts back to the origin of the cooperative group bringing results; (9) cooperative group make report of the expert group; (10) presentation of the work of each group, other groups criticized; (11) the teacher provides assessment.

Strategy of TGT uses academic tournament and using quizzes and progress of individual scoring system in which students compete as representatives of a team with other team members with same prior achievement. There are several components in TGT summarized by Slavin (2008:

166), namely: (1) Class presentation, is a hands-on learning as teacher leads discussions, (2) Team, students work in small groups to prepare members to represent the group well. Students are placed in groups consisting of 5 to 6 people who have different ability, gender, and race, (3) Games, consisted of questions designed to test the student's knowledge gained from the implementation of team work, (4) Tournament, the structure in which the game takes place, (5) Recognition of the team, the team will be awarded when the average score reaches certain criteria.

Lasley in Olarewaju (2012), TGT is useful when teachers require students to focus on the skills and content of material which clearly defined related to the questions that have obvious answers. TGT has the power to improve student achievement.

The objectives of the research were to know: (1) the different impact of learning strategy by using Jigsaw and Team Game Tournament (TGT) towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta, (2) the effectiveness between Jigsaw and Team Game Tournament (TGT) strategy towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta

Research Method

Related to the objective of the research, the writer used quasi experimental method. The research conducted at SDN Kleco 01 Surakarta. The population was all of the fourth grade students. The population was also used as sample. The sample was two group, IV.1 as experiment I taught by Jigsaw strategy and IV.2 as experiment II taught by *Team Game Tournament (TGT)* strategy. In collecting data, the writer used test and documentation techniques. As a requirement for analysis, firstly the data had to be tested using kolmogorov-smirnov through lilliefors formula in order to test the normality and levene formula in order to test the homogeneity. The data analysis was t-test.

Result and Discussion

In completing the analysis, it was used independent sample t test with SPSS version 18, which previously analyzed through normality test and homogeneity test. Based on the analysis of test data normality using the Kolmogorov - Sminov through SPSS version 18 was known that the significance value > 0.05 . This indicates that the data came from a normal distributed population. Based on the analysis of homogeneity test, it was known that the significance value > 0.05, so it can be concluded that the data have homogeneous in variance. The results of the analysis can be seen in Table 1 below:

Table 1 t-Test Result

		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Students' Acievement	Equal variances assumed	-4.5	66	.0	-11.3	2.5
	Equal variances not assumed	-4.5	57.9	.0	-11.3	2.5

Because of p-value = 0.000 less than α = 0.005 then Ho is rejected or of output obtained t value -4.5, while t table in the statistical tables at significant 0.05: 2 = 0.025 (two-sided test) with degrees of freedom 62, the results obtained for the t table of -1.998. Because t count <t table, then Ho is rejected. It can be concluded that there are no differences impact in students' achievement by using strategy jigsaw and *Team Game Tournament (TGT)* on students grade fourth SDN Kleco 1 Surakarta.

Based on the average value, it can be seen that the average of class of experiment I is lower than the average of class of experiment II, i.e. 77.17 <88.47. Therefore, it can be concluded that students' achievement through the implementation of strategies Team Games Tournament (TGT) was better than the Jigsaw strategy. This is in line with research by Olarewaju, et al (2012), states that the use of cooperative learning through TGT and STAD obtain` higher learning outcomes in mathematics at a junior high school student.

The statement is also in line with research conducted by Erni Yunika Putri (2011) on "Application of Cooperative Learning Model TGT (Team Games Tournament) To Improve Problem Solving Ability in Fractions In Grade IV Elementary School 1 Lompakan II District Tuntang the in Academic Year 2010/2011". Based on the research, it can be concluded that the application of cooperative learning type Team Games Tournament (TGT) may improve the ability to solve word problems fraction at Elementary School fourth grade students Lompakan III, with the percentage as follows: 39% before the action, the first cycle of 50 %, the second cycle of 94% and a third cycle of 100%.

Learning process by using Team Games Tournament (TGT) is able to foster the activity of the participation of students and to foster cooperation among students so it will create an innovative learning process. According to Amri, Sofan and Iif Khoiru Ahmadi (2010: 17)

"innovative learning process always involves students into variety activities that develop understanding and their ability". The implementation of the Team Games Tournament (TGT), students share knowledge about the material being learned with a friend through a group discussion. During the process of learning activities through this strategy will enable students to be exited to follow along the process. The teacher's role in learning proves by using this strategy is as a facilitator to assist in reviving process of discussion and help to answer questions if there is material that has not been understood.

The research has been done seriously by controlling the variables which can influence the results. However, in this study the results obtained are not all as expected. This happens because some limitations of the research, among others: (1) Data are limited on the learning outcomes cognitive data; (2) Data used to obtained cognitive domain were prepared using a multiple-choice form that has the disadvantage of giving an opportunity to students to guess answers when having trouble; (3) The existence of internal and external factors that affect student learning outcomes that may affect students during the learning process are not observed and controlled by the teacher.

Conclusion and Suggestion

The result of the research showed that: (1) there was different impact of learning strategy by using Jigsaw and Team Game Tournament (TGT) towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta, (2) Team Game Tournament (TGT) strategy was more effective than jigsaw towards students' achievement on fourth grade students at SDN Kleco 1 Surakarta.

Based on the limitations, there are many suggestions as follows: (1) Teachers can more often taught by using innovative learning strategies and cooperative in order to establish good cooperation with the students; (2) For further researcher is expected to do the research by comparing other strategies. For compiling cognitive achievement not only compile multiple-choice form that can distinguish ability. Researchers are also expected to consider the internal and external factors that may affect student learning outcomes of students during the learning process.

REFERENCES

[1] Amri, Sofan dan Iif Khoiru Ahmadi, Proses Pembelajaran Kreatif dan Inovatif dalam Kelas. Jakarta : Prestasi Pustaka, 2010.

[2] Ari Suryawan, "Studi komparasi ceramah dengan metode Cooperative tipe Jigsaw terhadap prestasi belajar IPS pada siswa kelas IV SD Muhammadiyah 16 Surakarta Tahun Pelajaran 2011/2012", 2011.

[3] Gamze, et al., "A Comparison of Achievement in Problem-Based, Strategic an Traditional Learning Classes in Physics", International Journal on New Trends   in Education and Their Implications, January Vol. 4 ISSN:1309-6249, 2013, pp 154-164

[4] Hull, Adams Francis. 2013. Using Jigsaw Technique As An Effective Way Of Promoting Co-Operative Learning Among Primary Six Pupils In Fijai: International Journal of Educaton and Pratice,, 2013, pp.64-74.

[5] Isjoni,. Pembelajaran Koopertif Meningkatkan Kecerdasan Komunikasi antar Peserta Didik. Yogyakarta: Pustaka Pelajar, 2013.

[6] Kamulyan, Mulyadi Sri dan Risminawati, Model-model Pembelajaran Inovatif di Sekolah Dasar: Surakarta, 2011.

[7] Noemi Mangaoang-Boado, "Factors Influencing TheAcademic Performance in Physics of DMMMSU-MLUC Laboratory High School Fourth Year Students". E-International Scientific Research Journal Volume-V, Issue-2 ISSN: 209-1749. S.Y. 2011-2012, 2013.

[8] Olarewaju, et al., "Achievement in Cooperative versus Individualistic Goal-Structured Junior Secondary School Mathematics Classrooms in Nigeria". International Journal of Mathematics Trends and Technology- Volume3 Issue1- ISSN: 2231-5373, 2012.

[9] Putri Erni Yunika, "Penerapan Model Pembelajaran Kooperatif Tipe TGT (Team Game Tournament) Untuk Meningkatkan Kemampuan Menyelesaikan Soal Cerita Pecahan Pada Siswa Kelas IV SD Negeri 1 Lompakan III Kecamatan Tuntang Tahun Ajaran 2010/2011". Surakarta, 2011.

[10] Sanjaya, Wina. Perencanaan dan desain Sistem Pembelajaran. Jakarta: Kencana Prenada Media Group, 2008.

[11] Samino dan Saring Marsudi, Layanan Bimbingan Belajar. Surakarta: Fairuz Media, 2012.

[12] Slavin, Cooperative Learning: Teori, Riset dan Praktik. Diterjemahkan oleh Nurulita. Bandung: Nusa Media, 2008.

[13] Sudjana, Nana, Penilaian Hasil Proses Belajar Mengajar. Bandung: PT Remaja Rosdakarya, 2009.

[14] Sugiyono, Statistika untuk Penelitian. Bandung: Alfabeta, 2010.

[15] Surtikanti dkk., Strategi Belajar Mengajar. Surakarta: BP-FKIP UMS, 2008.

[16] UU RI No. 14 Tahun 2005 tentang Guru dan Dosen.

[17] Uyanto S. Stanislaus, Pedoman Analisis Data dengan SPSS. Yogyakarta: Graha Ilmu, 2009.