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The use of teams games tournament learning to increase students' learning outcomes in classification of living things

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Abstract: This research aims to improve student learning outcomes through the use of teams games tournament (TGT) learning. This classroom action research was carried out in class VII B of SMP Negeri 10 Manokwari. The research subjects were 18 students. The cycle was carried out as much as and and a test to measure student learning outcomes. The results of the study show that the use of TGT learning can improve student learning outcomes. It is proven by the percentage of the average classical completeness score of students' learning outcomes in the first cycle of 77.8% and increased in the second cycle to 88.9%. The findings indicate that student learning outcomes has met the 75% classical standard. Student activity has also increased. Based on the results of the research that has been done, it can be concluded that the application of TGT can improve student learning outcomes.

Keywords: Biology learning, science achievement, teams games tournament learning

Abstrak: Riset ini bertujuan meningkatkan hasil belajar siswa melalui penggunaan teams games tournament (TGT) learning. Penelitian tindakan kelas ini telah dilaksanakan di kelas VII B SMP Negeri 10 Manokwari. Subjek penelitian adalah 18 siswa. Siklus dilaksanakan sebanyak dan dan sebuah tes untuk mengukur hasil belajar siswa. Hasil penelitian menunjukkan bahwa penggunaan pembelajaran TGT dapat meningkatkan hasil belajar sisw. Terbukti pada persentase nilai rata-rata ketuntasan klasikal hasil belajar siswa pada siklus I sebesar 77,8% dan meningkat pada siklus II menjadi 88,9%. Temuan mengindikasikan bahwa capaian siswa telah memenuhi standar kaslikal sebesar 75%. Aktivitas siswa juga mengalami peningkatan. Berdasarkan hasil penelitian yang telah dilakukan dapat disimpulkan bahwa dengan penerapan TGT dapat meningkatkan hasil belajar siswa.

Kata kunci: Pembelajaran biologi, prestasi IPA, pembelajaran team games tournament

INTRODUCTION

Learning is carried out aiming to improve the learning process between students and teachers who are wrong. Mistakes that occur continuously have caused student learning outcomes to decrease. To improve student learning outcomes, learning models are needed that increase student learning interest, motivation, and skills (Beluan et al., 2018; Thenu et al., 2023; Damopolii et al., 2018; Kurniawan et al., 2021; Lelasari et al., 2021; Nusantari et al., 2020). Researchers have made observations in class VII SMP Negeri 10 Manokwari. It is suspected that the science scores of students at school are still low. This can be seen from the value of the final evaluation conducted by the teacher which is still low. The lack of enthusiasm of students in the learning process can affect their understanding of the material

being studied. In particular, the material for the classification of living things turned out to have low students where the highest score was <50. There were no students who scored above it, so this indicated that 100% of students did not pass because no one met the minimum standard criteria for science lessons (the minimum standard for science learning was 65). Therefore the teacher needs a fun learning model so as to increase the enthusiasm of students.

One of the materials that students find difficult is the material for classifying living things. This material uses scientific language that is so complicated. Many students do not master the classification of living things (Diah et al., 2023; Idris et al., 2018; Mecita et al., 2019; Rohwati, 2012; Selvi & Öztürk Çoşan, 2018; Surya, 2019; Yunita, 2016). As many as 60% of students find it difficult to understand this material due to the lack of use of learning resources and teacher teaching strategies that are not optimal (Istiani & Retnoningsih, 2015). Research that has been conducted by Purnamasari et al. (2012)have revealed that the reason students do not understand this material is the use of minimal learning resources, no media, and no variation in teaching. In addition, this researcher revealed that students only saw, recorded and heard the teacher's explanation which indicated that the learning process was dominated by the teacher. Ndia et al. (2021) in his research revealed that the dominance of memorizing Latin names has caused students' understanding of classification material to be not optimal. Sofian et al. (2022) have identified that the problems that occur related to teaching classification materials are the activities and student learning outcomes are not good, students are not enthusiastic about learning, students have discussions outside of teaching topics, and do not do assignments.

Learning must improve student performance, skills, motivation and activity (Damopolii et al., 2019; Mandasari et al., 2021; Samara et al., 2018; Yurida et al., 2021). TGT (teams games tournament) learning is one of the learning methods that can solve learning problems. TGT can enhance learning achievement and student interest compared to other learning (Damanik et al., 2023). Conventional learning has caused problems for students, but that can be corrected by learning TGT (Antika & Yono, 2023). The large number of students who do not complete learning can be overcome by using TGT learning (Armidi, 2022). In TGT learning it has made students interested, able to analyze, able to do assignments and listen well to learning (Armadani et al., 2022). Hasibuan et al. (2022) has conducted a review on the use of TGT learning in science learning related to the topic of biology. They revealed that TGT as a learning alternative, can help students who are low in activity and low in interest to get good performance. TGT learning has been proven to improve students' science learning outcomes (Novritasari et al., 2022). Thus, the purpose of this study is to enhance student learning outcomes through applying TGT learning.

METHOD

This research is a type of classroom action research accomplished at SMP Negeri 10 Manokwari. In this study, 1 class was used, namely class VIIB with the number of students

as a sample, namely 18 students. In the research process TGT learning was applied in 2 cycles.

The learning tools that have been prepared are in the form of lesson plans, student worksheets, observation sheets and learning achievement tests. Learning tools have been validated by experts and declared valid. Implementation of learning for two cycles with the learning used is TGT. Observations were made to determine the process of implementing learning in class related to teacher and student activities. Events that arise during the implementation of learning in class will be evaluated and problems that arise are used as material for reflection. In reflection, the researcher analyzed the results of the observations and then used them as material for reflection to improve the next cycle. Reflection was carried out twice, namely in cycle I and II.

The indicator of success is that students pass when they get a score of ≤ 65. On scores below that, students do not pass. classical pass is 75%.

RESULTS AND DISCUSSION

This research is a classroom action research accomplished at SMP Negeri 10 Manokwari, where the class that was used as the object of this research was class VIIB with 18 students. The material being taught is the classification of living things. The results of this research are presented in Figure 1 (learning activities) and 2 (learning outcomes).

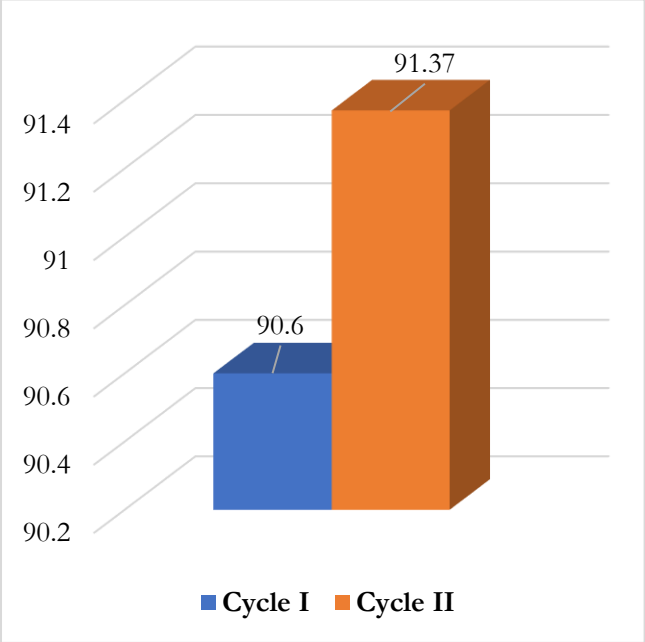

Figure 1. Student activity in TGT learning

In the first cycle of the TGT application, the average percentage of student activity reached 90.60 percent, placing it in the "very good" category. This is because when implementing the TGT learning students are very enthusiastic in carrying out learning

activities, especially when playing games and tournaments. In cycle I, the activity values of students were included in the very good category, so it was continued in cycle II to see if there was an increase in some aspects that were still in the sufficient category.

In cycle II, however, student activity increased slightly, with the average percentage reaching 91.37 percent. The aspects that experienced an increase were that students paid more attention to the delivery of material, some students began to actively ask questions, and students received scores obtained after games and tournaments. Based on the achievement of this score, it is known that the activity of students is considered optimal. From the average percentage of student activity values 91.37% are included in the very good category.

Based on the results of the analysis of observations on the observation of student activities and student learning outcomes with the utilization of the TGT learning, there are still deficiencies in the learning process so that the results obtained are not optimal, as follows:

1. Student activities at meetings in cycle I are still lacking in aspects where students are still difficult to participate in asking questions.
2. Student learning outcomes obtained by using a formative test of 15 multiple choice questions, there are still 4 students with a percentage of completeness criteria of 22.2% who have not met the minimum completeness score. This is due to students' lack of understanding of the material being taught. It is hoped that at the next meeting the weaknesses in cycle I can be corrected.

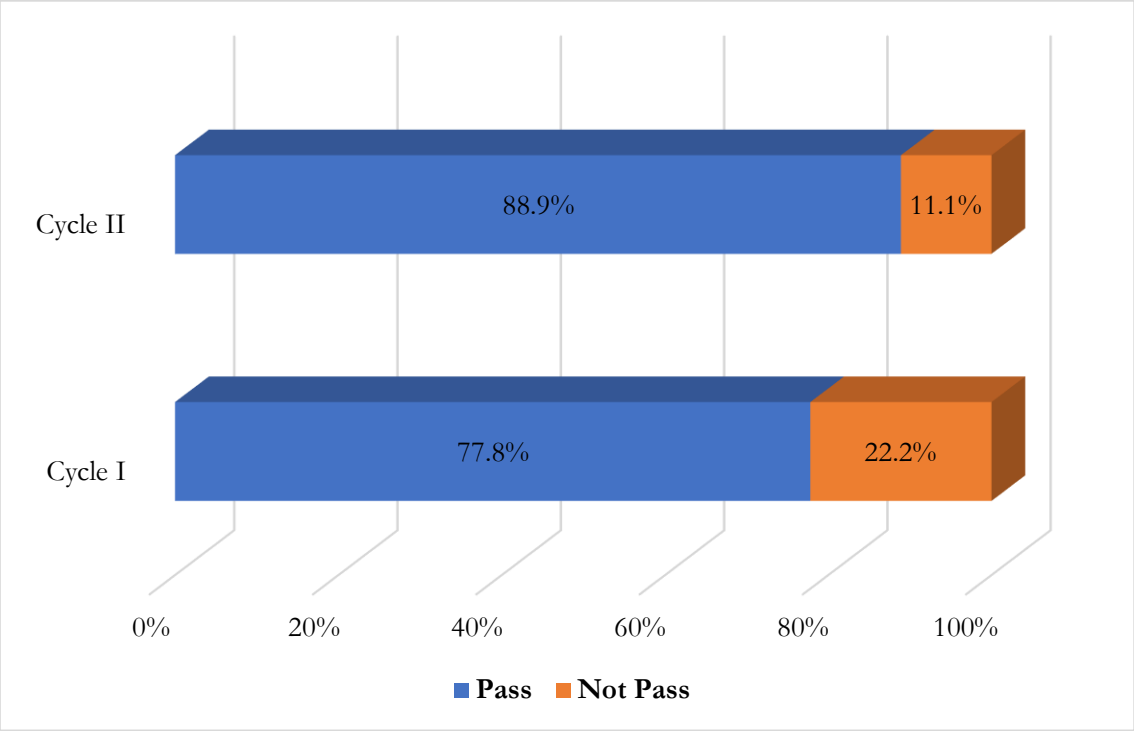

Figure 2. Student learning outcomes in TGT learning

The completion percentage of students' learning outcomes can be determined through the pass category. The students' learning outcomes in cycle I who passed were 77.8% and students who did not pass were 22.2%, while in cycle II students who passed were 88.9% and those who did not passed were 11.1%.

Based on the results of the implementation of learning in cycle II using the TGT learning is better than cycle I. This can be seen from the results of the analysis that has been carried out on student activity and learning outcomes. On the activity observation sheet, students experienced an increase of 0.77%. The success in cycle II was also seen from the evaluation of student learning outcomes, which increased by 11.1%, this was seen in the number of students who did not complete in cycle I as many as 4 students and decreased in cycle II by 2. student person. Cycle II learning outcomes with an average value of 81.02 with classical completeness achieved at 88.9%. This has reached the classical completeness indicator so that the researcher does not continue in the next cycle.

Research has succeeded in improving student learning activities and outcomes. TGT has been able to elevate student learning activities and outcomes. these findings are in line with previous research that TGT can elevate student learning outcomes (Arga et al., 2022; Novritasari et al., 2022; Samrin et al., 2021) and student activity (Asniwati et al., 2018). Student activity increased because TGT invited students to play games and tournaments with other group members. Students in their groups must try to solve the problems given by the teacher so that they can win compared to other groups. In the TGT that has been applied students are not passive, but they are active in discussions and looking for answers. The increase in this activity shows that they continue to understand the material provided. The impact of high student activity in TGT is increasing their understanding of the material. Measurements at the end of the cycle have indicated that student learning outcomes have increased. Thus TGT is the right solution to be used to improve student learning activities and outcomes, especially material on the classification of living things.

CONCLUSION

On the basis of the research data and discussion, it is possible to conclude that the application of TGT learning may increase the learning outcomes of class VIIB students of SMP Negeri 10 Manokwari, as evidenced by the criteria of completeness of student learning outcomes in cycle I (77.8%) and cycle II (88.9%). The rate of growth reached 11%.

REFERENCES

Antika, T. L., & Yono, R. R. (2023). Pengaruh penerapan model pembelajaran tipe teams games tournament pada peningkatan hasil belajar siswa kelas VII SMP Bhakti Praja Margadana, Kota Tegal. *Era Lingua: Jurnal Penelitian Bahasa Indonesia Dan Humaniora*, *1*(1), 7–16. https://jurnal.eraliterasi.com/index.php/eralingua/article/view/37

Arga, H. N., Nugraha, A. C., Sudira, P., & Daryono, R. W. (2022). The effectiveness of blended learning combined the team game tournament on the learning outcomes of

electrical engineering students. *JPI (Jurnal Pendidikan Indonesia)*, *11*(2), 240–251. https://doi.org/10.23887/jpiundiksha.v11i2.41572

Armadani, N., Wijayanti, R. . R., & Aini, N. (2022). Efektivitas penggunaan model TGT (Teams Games Tournament) dan media e-komika ditinjau dari minat dan hasil belajar siswa. *EDUKATIF : JURNAL ILMU PENDIDIKAN*, *4*(3), 4533–4539. https://doi.org/10.31004/edukatif.v4i3.2747

Armidi, N. L. S. (2022). Penerapan model pembelajaran kooperatif tipe teams games tournament untuk meningkatkan hasil belajar IPS siswa kelas VI SD. *Journal of Education Action Research*, *6*(2), 214–220. https://doi.org/10.23887/jear.v6i2.45825

Asniwati, D., Fauzi, Z. A., & Fikri, H. (2018). Improving learning activities using a combination of mind mapping model, think pair share and teams game tournament. *Proceedings of the 1st International Conference on Creativity, Innovation and Technology in Education (IC-CITE 2018)*, 318–322. https://doi.org/10.2991/iccite-18.2018.67

Beluan, C. S., Nebore, I. D. Y., & Jeni, J. (2018). Project-based learning to create effective biology teaching. *Inornatus: Biology Education Journal*, *1*(2), 81–88. https://doi.org/10.30862/inornatus.v1i2.253

Damanik, I. A., Yahfizham, & Siregar, T. J. (2023). Differences in interest and student learning outcomes with role playing and teams games tournament learning models. *Mahir : Jurnal Ilmu Pendidikan Dan Pembelajaran*, *2*(1), 69–74. https://doi.org/10.58432/mahir.v2i1.838

Damopolii, I., Botutihe, V. T., & Nunaki, J. H. (2019). The contribution of science process skill towards students cognitive achievement through guided inquiry-based learning. *Journal of Physics: Conference Series*, *1317*, 012184. https://doi.org/10.1088/1742-6596/1317/1/012184

Damopolii, I., Lefaan, P. T., & Manga, M. (2018). Hubungan motivasi belajar dengan hasil belajar biologi siswa di SMP 21 Rendani Manokwari. *Prosiding Seminar Nasional Pendidikan Biologi*, *1*(1), 427–430.

Diah, I., Mahanal, S., Zubaidah, S., & Setiawan, D. (2023). The effect of RICOSRE via online platform on tenth-graders' analytical thinking skills in classification of living things. *AIP Conference Proceedings*, 020011. https://doi.org/10.1063/5.0112380

Hasibuan, H., Lingga, J. P. S. B., Nurbaya, S., Thania, O. E., Ramadhani, N. A., & Nainggolan, W. A. (2022). A meta-analysis of the effect teams games tournament (TGT) in biology learning toward student learning outcomes. *Journal of Biology Learning*, *4*(2), 68–76. https://doi.org/10.32585/jbl.v4i2.2628

Idris, A. T., Shamsuddin, I. M., Arome, A. T., & Aminu, I. (2018). Use of audio-visual materials in teaching and learning of classification of living things among secondary school students in Sabon Gari LGA of Kaduna State. *Plant*, *6*(2), 33–37. https://doi.org/10.11648/j.plant.20180602.12

Istiani, R. M., & Retnoningsih, A. (2015). Pemanfaatan lingkungan sekolah sebagai sumber belajar menggunakan metode post to post pada materi klasifikasi makhluk hidup. *Journal of Biology Education*, *4*(1), 70–80. https://doi.org/10.15294/jbe.v4i1.5237

Kurniawan, R. P., Damopolii, I., & Sirait, S. H. K. (2021). The correlation between biology teacher learning strategies during the Covid-19 pandemic on student motivation. In *AECON* (pp. 299–305).

Lelasari, T., Yohanita, A. M., & Damopolii, I. (2021). Effect of inquiry science learning on students' metacognitive skill. *Journal of Research in Instructional*, *1*(1), 53–60. https://doi.org/10.30862/jri.v1i1.12

Mandasari, F., Iwan, I., & Damopolii, I. (2021). The relationship between science process skills and biology learning outcome. *Journal of Research in Instructional*, *1*(1), 23–32. https://doi.org/10.30862/jri.v1i1.9

Mecita, V., Yogica, R., Ristiono, R., & Fifendy, M. (2019). The development of handout images and map of concept in material classification of living things for student of class VII Junior High School 23 Padang. *Jurnal Atrium Pendidikan Biologi*, *4*(1), 8–20. https://doi.org/10.24036/apb.v4i1.4727

Ndia, F. X., Mago, O. Y. T., & Bare, Y. (2021). Pengembangan lembar kerja peserta didik (LKPD) koopertif tipe jigsaw materi klasifikasi makhluk hidup kelas VII SMP. *Quagga: Jurnal Pendidikan Dan Biologi*, *13*(2), 24–30. https://doi.org/10.25134/quagga.v13i2.4011

Novritasari, B., Setiawan, B., & Mahdiannur, M. A. (2022). Implementation of cooperative learning model teams games tournament to improve student science learning outcome of junior high school. *Jurnal Pijar Mipa*, *17*(5), 650–656. https://doi.org/10.29303/jpm.v17i5.3716

Nusantari, E., Utina, R., Katili, A. S., Tamu, Y., & Damopolii, I. (2020). Effectiveness of environmentally-based science learning towards environmentally-friendly character of students in coastal area. *International Journal of Instruction*, *13*(3), 233–246. https://doi.org/10.29333/iji.2020.13316a

Purnamasari, H., Rahayuningsih, M., & Chasnah, C. (2012). Kunci determinasi dan flashcard sebagai media pembelajaran inkuiri klasifikasi makhluk hidup SMP. *Journal of Biology Education*, *1*(3), 228–235. https://doi.org/10.15294/jbe.v1i3.1497

Rohwati, M. (2012). Penggunaan education game untuk meningkatkan hasil belajar IPA biologi konsep klasifikasi makhluk hidup. *Jurnal Pendidikan IPA Indonesia*, *1*(1), 75–81. https://doi.org/10.15294/jpii.v1i1.2017

Samara, N., Yohanita, A. M., & Iwan, I. (2018). Application of problem-solving learning models to improve the activity and students' learning outcomes of SMA Kristen YABT Manokwari. *Inornatus: Biology Education Journal*, *1*(1), 30–41. https://doi.org/10.30862/inornatus.v1i1.38

Samrin, S., Rijal, M., & Syamsuddin, S. (2021). Use of cooperative learning model with team games tournament (TGT) to increase students' learning achievement in islamic education at SMAN 6 Wangi-Wangi of Wakatobi. *Edukasi Islami: Jurnal Pendidikan Islam*, *10*(2), 677–692. https://doi.org/10.30868/ei.v10i02.1551

Selvi, M., & Öztürk Çoşan, A. (2018). The effect of using educational games in teaching kingdoms of living things. *Universal Journal of Educational Research*, *6*(9), 2019–2028. https://doi.org/10.13189/ujer.2018.060921

Sofian, S. R. A., Subchan, W., & Sudarti, S. (2022). Penerapan model discovery learning berbantuan google lens untuk meningkatkan aktivitas dan hasil belajar siswa pada materi klasifikasi makhluk hidup. *Jurnal Teknologi Pendidikan*, *11*(2), 176–189. https://doi.org/10.32832/tek.pend.v11i2.5972

Surya, B. J. (2019). Pengaruh metode blended learning berbasis web dan motivasi terhadap hasil belajar biologi pada pokok bahasan klasifikasi makhluk hidup di kelas X SMA Negeri 1 Secanggang Langkat. *JURNAL BIOLOKUS*, *2*(1), 171–174. https://doi.org/10.30821/biolokus.v2i1.444

Thenu, D. M., Wambrauw, H. L., Budirianto, H. J., & Damopolii, I. (2023). Improving student learning outcomes through the use of Jigsaw learning. *Inornatus: Biology Education Journal*, *3*(1), 24–31. https://doi.org/10.30862/inornatus.v3i1.410

Yunita, E. (2016). Pengembangan perangkat pembelajaran menggunakan model inkuiri terbimbing topik klasifikasi makhluk hidup di SMP. *JINoP (Jurnal Inovasi Pembelajaran)*, *2*(1), 282–292. https://doi.org/10.22219/jinop.v2i1.3280

Yurida, Y., Damopolii, I., & Erari, S. S. (2021). Hubungan antara kreativitas guru dengan motivasi belajar sains siswa selama pandemic COVID-19. *Prosiding SNPBS (Seminar Nasional Pendidikan Biologi Dan Saintek)*, 146–152.