IMPLEMENTATION OF TEAMS GAMES TOURNAMENT COOPERATIVE LEARNING MODEL USING VIDEO MEDIA TO IMPROVE LEARNING OUTCOME IN THEME 9 "OBJECTS AROUND US" FOR V GRADE OF SD NEGERI KEMBARAN

Kusniatun[1*], Karma Iswasta Eka[2]

[1,2] Elementary School Teacher Education Study Program, Faculty of Teacher Training and Education, University Muhammadiyah Purwokerto

[1,2]Jl. KH. Ahmad Dahlan, Dusun III, Dukuhwaluh, Kec. Kembaran, Kabupaten Banyumas, Jawa Tengah 53182

kusniatun99@gmail.com[1*]

Abstract: *The research conducted at SD Negeri Kembaran, Kembaran District, Banyumas Regency aimed to assess and improve the scientific knowledge of fifth-grade students using the cooperative learning methodology called Teams Games Tournament. This Classroom Action Research (CAR) was conducted in two cycles with two learning sessions held during each cycle (with a total of four sessions). Data collection techniques and instruments such as tests were used to gather information. The improvement from the average score of Cycle I in the science subject, which was 70.47 with a percentage of 76.78%, to the average score of Cycle II, which was 89.47 with a percentage of 98.21%, serves as evidence that the application of the cooperative learning model, specifically the Teams Games Tournament, led to an improvement in learning outcomes. The results of each meeting depended on the activities of the teacher and the students, as determined by the language of the cooperative learning model, Teams Games Tournament.*

Keywords: Learning outcomes, cooperative TGT, CAR (Classroom Action Research)

INTRODUCTION

According to the Presidential Decree (2017), on page 2, education is "a serious and planned effort to create a learning environment and teaching process that involves students actively developing their potential in order to gain spiritual strength, personal maturity, intellectual sharpness, moral honesty, responsibility social responsibility, civic engagement, and job competence necessary to participate effectively in a democratic society."

As societal expectations evolve in response to advances in science and technology, it's important to rethink the way we teach. In this sense, education is about preparing students for the present and the future. Longevity education refers to the importance of continuing one's education throughout one's lifespan. (Puspita & Paksi, 2023, on page 1)

To produce output in the form of harmony between cognitive, affective, and psychomotor elements, learning that is directed at student activity can be considered as a learning technique that ideally prioritizes student activity. Current educational practice must shift from a focus on the instructor to one on the student.

Due to their direct interaction with students, teachers serve as a measure of educational success. Teachers play an important role in the education system as builders and planners. The development of the teaching model must be determined by the teacher according to the characteristics of the material being taught. (Haryanto & Wiyanto, 2016, on page 47)

Topics included in Theme 9, especially those related to science education at the elementary school level, are the basis of the Indonesian curriculum, as stated by Danis and Lestari (2022) on page 14. Theme 9 is expected to provide (cognitive) knowledge and understanding for students. about life in the universe. Theme 9 Development is a must follows a learning approach in which students are actively involved in exploring or implementing their own ideas.

Cooperation as a means to gain knowledge is one approach that might be used. According to (Sulisto & Haryanti, 2022, on page 38), students in a cooperative learning environment are able to actively participate in the learning process through various Team Game Tournaments (TGT). Students will have additional opportunities for collaborative learning and friendly competition in this lesson.

According to (Muslim, 2020), there are many steps involved in studying TGT. In the first phase, students work in groups using the curriculum created by previous educators. The next step is a learning competition where students can win prizes as a team. Tournaments are designed to be entertaining, not boring, by adopting a game format.

TGT is a style of education in which teams compete against other teams of similar skill to receive points based on their overall performance; students will appreciate the tournament atmosphere and find it more fair than conventional forms of competition in education. TGT differs from previous cooperative groups in that teams are formed according to the individual skills of students.

Science learning in class V SD Negeri Kembaran still shows signs of difficulty, according to data collected through class observations and interviews with instructors. Student learning outcomes are still not good, according to Mid Semester Assessment (MSA) data for odd scientific courses; only 11 out of a total of 28 students met the KKM set by the institution, namely 70. This exemplifies the problem of poor student performance at lower levels of the cognitive spectrum. The average score on the tests given each semester is 60. The emotional and psychomotor consequences of learning have an average score of 65.

Because the learning process has not been able to function properly, students experience difficulties in the emotive domain of science learning. Teachers continue to rely on tried and true approaches such as lectures despite evidence to the contrary. Educators have not used the new pedagogical approach. In addition, students are less engaged because they rarely give feedback or ask questions while

they are studying. Education is still largely instructor-focused, with students acting primarily as passive consumers of subject matter. Students tend not to be actively involved in critical thinking about the content being taught. Another weakness of the chosen class is that it does not provide opportunities for students to show off their work.

Based on these results, it seems that fifth grade students at SD Negeri Kembaran find Theme 9 a challenging topic. Based on my discussions with my child's fifth grade teacher, I concluded that the students' lackluster performance was due to their lack of interest and passivity in the topic. Students are less actively involved with information because the learning process is still controlled by the instructor and tends to be monotonous. Teachers have difficulty communicating their ideas and students struggle to understand complex topics due to the limited quality and variety of accessible media for education. With this justification, appropriate learning models need to be applied to maximize understanding of material concepts in order to improve learning outcomes, and teachers are able to design learning that is effective, efficient, and interesting for students.

In an effort to improve the performance of children who are not doing well at school, researchers at SD Negeri Kembaran use the cooperative learning method with the Teams Games Tournament method for fifth grade students. This teaching method encourages learning in a more relaxed atmosphere by inviting students to think, speak, then write. certain topics" (Sulisto & Haryanti, 2022). Conversation gathering and idea development further aided. Nurhayati (2022) "Application of the TGT type of cooperative learning model in learning SD IPA" is one of the studies that shows the effectiveness of the TGT type of cooperative model. In the Teams Games Tournament (TGT) educational style, students are motivated to work together and bond as a unit by engaging in healthy competition. Mutual respect and instilling active, creative, effective, and fun learning are the main goals of this paradigm.

Cooperative learning through events such as "Team Game Tournaments" is made more interesting and productive by the use of media. This study chose to use

video media because it combines visual and auditory elements (Saskia et al., 2018, on page 18). Video-based instruction has been shown to increase students' motivation to learn and depth of understanding of the material covered. Students' attention can be captured and learning outcomes improved through the use of video media.

RESEARCH METHODS

In order to improve the performance of students who are not doing well in science classes, educators choose to conduct classroom action research (CAR). The fifth grade teacher participated in an action research project implementing a two-cycle version of the cooperative learning model based on "Team Game Tournaments", and the project was deemed successful due to organized teacher and researcher discussions to overcome problems and obstacles. Data collection tools include tests, observations, and notes. Observation and assessment data were processed using a class action research design. The following formula describes how a data analysis approach can improve student learning in the cognitive, emotive, and psychomotor domains:

1. Quantitative Analysis

a. **The formula for calculating the average value according to** (Maemunah, 2018, on page 40)

$$X = \frac{\sum x}{n}$$

Information:

X =Average score

∑x =Sum of all values

N =Number of students

b. **Formulas to Find Percentages**

$P = \frac{\sum \times}{n}$ x 100%

Information:

P =Percentage

$\sum x$ =Sum of all values

N =Number of data

2. Qualitative Analysis

(Maemunah, 2018, on page 40) states that the following formula is used to calculate the percentage of student learning:

$P = \frac{F}{n} x 100\%$

Information:

P =Percentage number

F =Number of active students

N =Total amount

At this point, student analyst the data they collect through assessment and observation. The following are specifics on how to evaluate the data for each component of student learning and instructor observations:

1.) Learning outcomes of students' cognitive aspects in the form of written tests by comparing the assessments of cycles I and II, we were able to analyst students' cognitive data. The researcher calculated the group average in such a way that each student received a final grade. The average or median score can be calculated by dividing the entire value of the data set by the total number of responses, as explained by Sudjana (2013: 109).

a. Student value

$NA = \frac{\sum X}{N}$ X 100

Information:

∑x = Total score obtained

N = Total maximum score

NA = Final Value

In this study, we used the following rubric and point system to evaluate students' performance in science classes:

Table 3. 1

Scoring and evaluation criteria

Score	Criteria
3	Answers are correct, complete, clear and with the right reasons
2	Answer is correct but lacking
1	Answering is incomplete but there is truth
0	Not answering

b. The class average value uses the formula

$$\overline{x} = \frac{\sum \times}{n}$$

Information:

$\overline{x}$ = Average value *(mean)*

∑x= Sum of all scores

N = Number of subjects

(Utami Widya, Fauzi, 2022, on page 11)

c. Mastery learning students

$$P = \frac{F}{N} x100\%$$

Information:

P = Percentage of learning completeness

F = Number of students who have finished studying

N = Total number of students

(Maqbullah et al., 2018, on page 109)

Table 3. 2

Assessment criteria with percent

Mastery Level	Weight	Criteria
86-100%	4	Very good
76-85%	3	Good
60-75%	2	Enough

55-59%	1	Less
≤ 54%	0	Not at all

(Arifah, 2014, on page 6)

2.) The results of learning affective and psychomotor aspects

Emotional evaluation sheets are used to evaluate student progress in terms of affective and psychomotor learning objectives. The overall group effort of the class is what the evaluation form counts for. The average is calculated using the formula:

$$= \frac{\sum x}{N}$$

Information:

$\bar{x}$ = Average value *(mean)*

∑x = Sum off all scores

N = Number of subjects

(Mariana, 2023, on page 6)

The classification of the average value range is as follows:

1 ≤ average ≤ 1,75 =Very poor

1,75 < average ≤ 2.5 =Poor

2,5 < average ≤ 3,25 =Good

3,25 < average ≤ 4 =Very good

3.) The results of observations of teachers and students

a. Data from observations of teacher activity

The following formula is used to check the average value of the student observation sheet after each learning activity.

The formula for calculating the average:

$$= \frac{\sum x}{N}$$

Information:

$\bar{x}$ =Average value

∑x =Sum of all scores

N =Number of subjects

(Rofek et al., 2020, on page 331)

Guidelines for assessing the average teacher activity as follows:

1 ≤ average ≤ 1,75 =Very poor

1,75 < average ≤ 2,5 =Less

2,25 < average ≤ 3,25 =Good

3,25 < average ≤ 4 =Very good

The following are the criteria and rating scale that will be used to assess the Teacher Activity Observation Sheet.

b. Observation results of student activity

The following formula uses the average scores from the student observation sheets completed after each learning session to draw conclusions:

The formula for finding the average value:

$\bar{x} = \frac{\sum \times}{N}$

Information:

$\bar{x}$ =Average value

∑x =Sum of all scores

N =Number of subjects

(Sudjana, 2013:109)

Guidelines for assessing the average student activity as follows:

1 ≤ average ≤ 1,75 =Very poor

1,75 < average ≤ 2,5 =Less

2,5 < average ≤ 3,25 =Good

3,25 < average ≤ 4 =Very good

RESULTS AND DISCUSSION

A. Cycle I Data

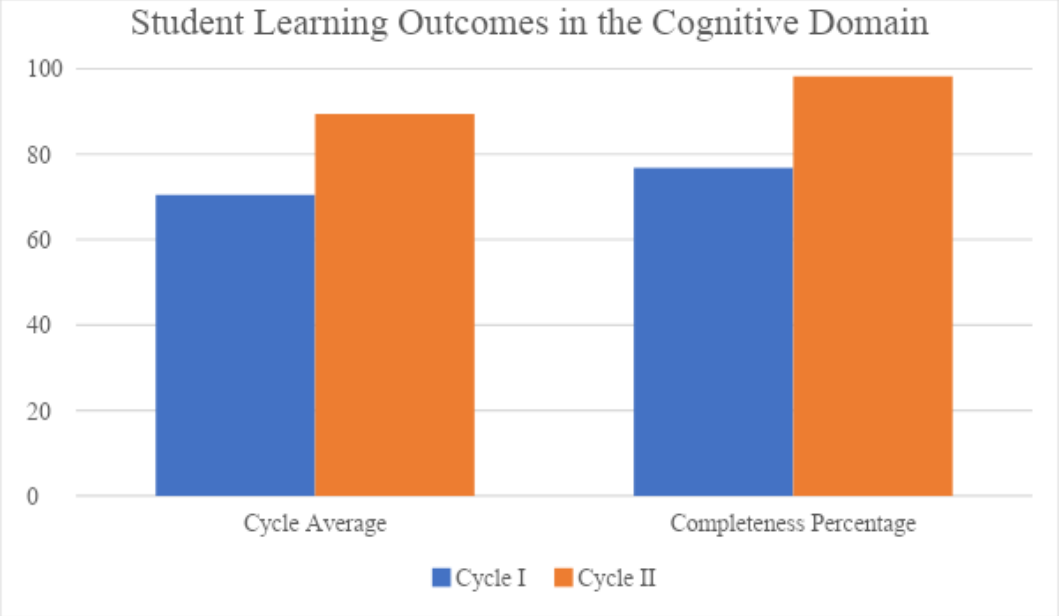
1. Student Learning Outcomes in the Cognitive Domain

Data analysis showed a tendency to increase the answers to assessment questions at the end of each meeting in each cycle (see Table 1).

TABLE 1. Student Cognitive Domain Learning Outcomes Cycle

No.	Indicator	Cycle I	Cycle II
1.	Average value	70,47	89,47
2.	Completeness percentage	76,78%	98,21%

In Table 1 it can be seen that the proportion of students who have achieved learning objectives and the average score of student learning outcomes increased from Cycle I 70.47 to Cycle II 89.47 with respect to students' cognitive development. Cycle two experienced an increase from cycle one 76.78% to cycle two 98.21%. This information can be displayed as a histogram if desired:



PICTURE 1. Histogram of Increasing Learning Outcomes of Students in the Cognitive Domain of Class V SD Negeri Kembaran

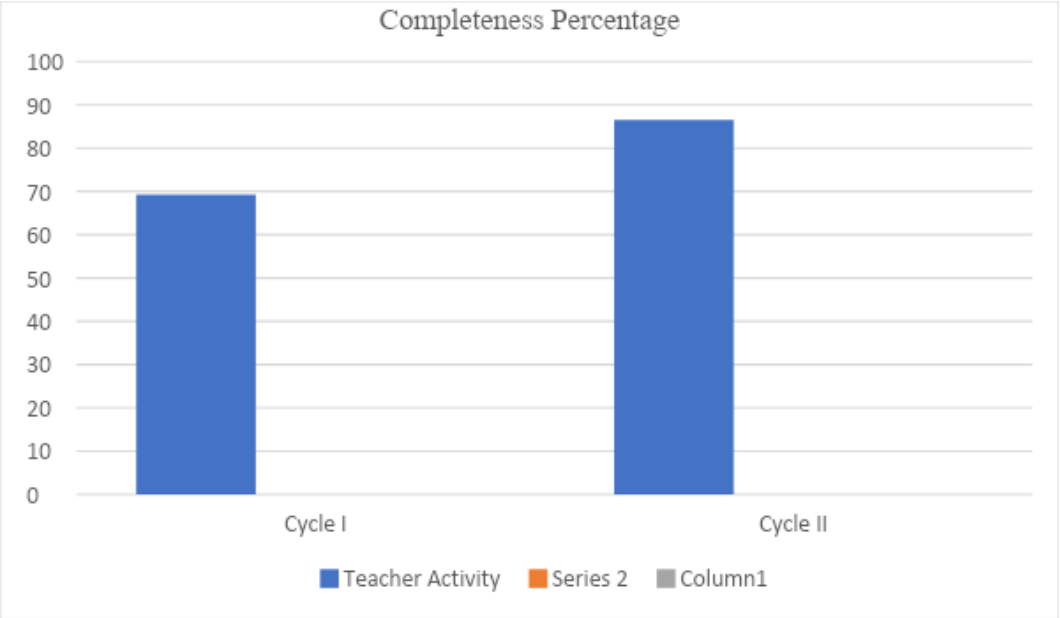
Tournament-style cooperative learning has been shown to increase students' knowledge, ability to solve problems, and general intellectual growth. (Saskia et al., 2018, on page 8)

2. **Observation of Teacher and Student Activities**

Table 2 and Figure 2 show how an active classroom environment contributes to increasing student knowledge. Teachers become more active and more innovative in conducting learning.

TABLE 2. Results of Recaptulation of Teacher Activity Observations

No	Cycle	Completeness Percentage
1.	I	69,25%
2.	II	86,535%



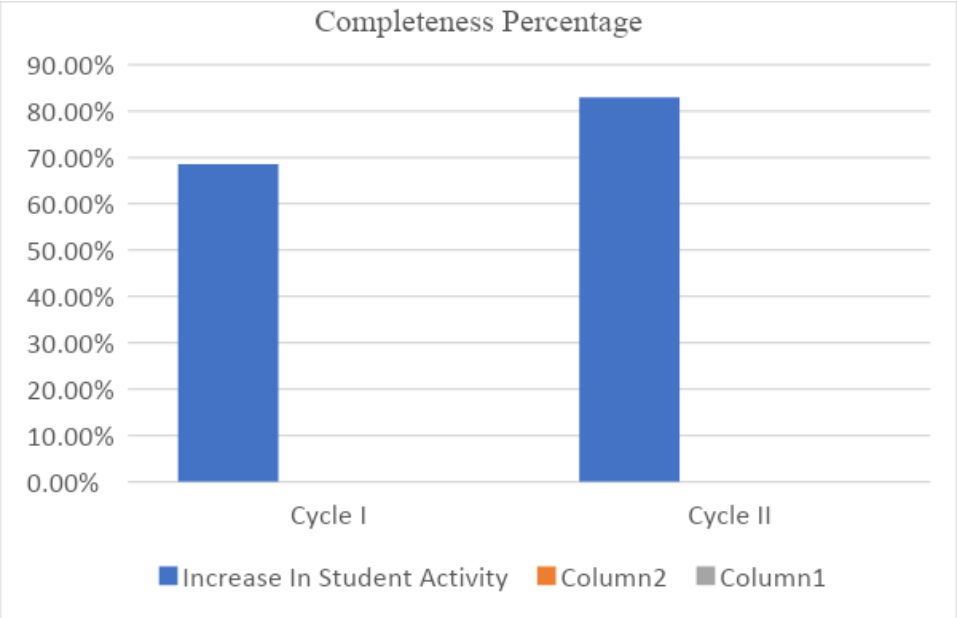
PICTURE 2. Histogram of Teacher Activity Improvement

Picture 2 shows the results of observing teacher performance for two cycles, with 69.25% of the observations producing good ratings in cycle I and 86.535% in cycle II. These findings indicate that the cooperative learning model of the Teams Games Tournament type is used to implement teacher-designed learning.

Teaching and learning activities are facilitated by various learning media, including but not limited to visual aids such as projectors and practical materials such as plastic cups, tools, water, salt, granulated sugar, syrup, coffee, and oils found in all classes. Because teacher behavior has an impact on student behavior, the data in Table 3 is obtained from observing student behavior.

TABLE 3. Results of Observation Recapitulation of Student Activity Class V

No	Cycle	Completeness Percentage
1.	I	68,55%
2.	II	82,975%



PICTURE 3. Increased Student Activity

Picture 3 shows that as the activity progressed, fifth grade students increasingly relied on Team Game Tournaments as a means of collaborative learning. The pace of expansion accelerates with each successive encounter. In cycle I, 68.55 percent of students took part in extracurricular activities; in cycle II the figure increased to 82.975 percent.

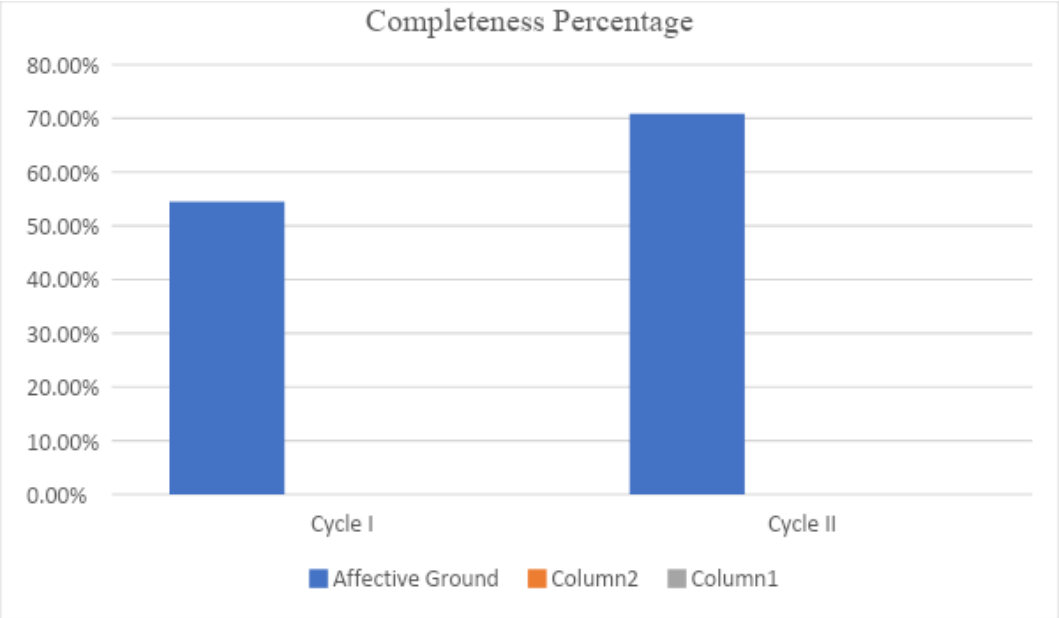
Classroom observation findings suggest that even students who have the most difficulty getting used to the TGT cooperative learning approach improve over time.

3. Student Learning Outcomes in the Affective Domain

The students' emotional learning outcomes increased between cycles I and II, according to the findings. Table 4.24 shows the median mastery level of student learning on emotional material at SD Negeri Kembaran, fifth grade students.

TABLE 4 Student Affective Domain Learning Outcomes

No	Cycle	Persentase of Average Value
1.	I	54,485%
2.	II	70,845%



PICTURE 4. Histogram of Learning Outcomes in the Affective Domain of Students

Picture 4 exemplifies a clear increase in learning outcomes in the affective domain. Improving learning outcomes in the emotional field. There is an average increase in cycle II success indicators of 70.845%.

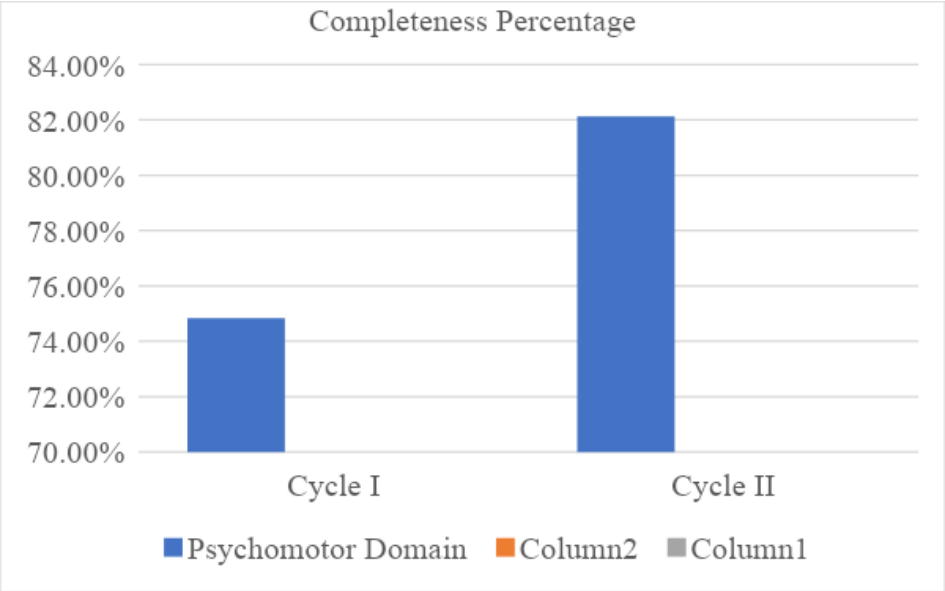
Team-Based Learning Through Play When students are more disciplined and pay attention to the teacher's explanation, it is clear that tournaments may have a positive effect on their emotional domain.

4. Student Learning Outcomes in the Psychomotor Domain

Students' psychomotor learning outcomes increased between cycles, as shown by the findings. The proportion of the average score of psychomotor learning outcomes at SD Negeri Kembaran grade V is shown in Table 5 and Picture 5.

TABLE 5. Improved Learning Outcomes in the Psychomotor Domain of Students

No	Cycle	Percentage of Average Score
1.	I	74,84%
2.	II	82,1285%



PICTURE 5. Histogram of Increasing Student Learning Outcomes in the Psychomotor Domain

Each cycle saw an increase in the proportion of students whose science learning outcomes were included in the psychomotor realm as shown in table 5 and picture 5. Cycle II, which averaged 82.1285% success by size, showed improvement.

The development of students' psychomotor skills is assisted by the cooperative learning paradigm in the style of Teams Games Tournament. Students collaborate and help each other get answers.

CONCLUSION

The results of the cooperative learning model based on team competition show that efforts to improve science learning on the 9th theme in our environment give tangible results in each session. The feedback forms that students fill out at the end of each class demonstrate this improvement.

There was a significant increase in scores between cycles I and II. A very good predicate will increase the level of completeness in the first cycle of students by 76.78% to a level of completeness in the second cycle of 98.21%.

ACKNOWLEDGMENTS

The researcher would like to thank the following parties for their contributions to the success of this study: Dr. Jebul Suroso, S.Kp., M.Kep., Chancellor of Muhammadiyah University in Purwokerto; Drs. Eko Suroso, M.Pd., Dean of the Faculty of Teaching and Education, University of Muhammadiyah Purwokerto; Dedy Irawan, M.Pd., Head of the Elementary School Teacher Education Study Program.

REFERENCES

Arifah. (2014). Penerapan Model Pembelajaran Kooperatif Tipe Jigsaw Dalam Mata Pelajaran Ipa Untuk Meningkatkan Hasil Belajar Siswa Pada Kelas V Sdn Kutisari. *Jpgsd*, *2*, 1–16.

Danis, A., & Lestari, D. (2022). Upaya Meningkatkan Hasil Belajar Ipa Melalui Model Pembelajaran Team Games Tournament Pada Siswa Kelas Iv Mis Mt Az–Zaky …. *Bina Gogik: Jurnal Ilmiah Pendidikan …*, *9*(1), 14–18. https://ejournal.stkipbbm.ac.id/index.php/pgsd/article/view/807

Dr. Nana Sudjana (2013). Penilaian Hasil Proses Belajar Mengajar. Bandung: PT. Remaja Rosdakarya.Arifah. (2014). Penerapan Model Pembelajaran Kooperatif Tipe Jigsaw Dalam Mata Pelajaran Ipa Untukmeningkatkan Hasil Belajar Siswa Pada Kelas V Sdn Kutisari. *Jpgsd*, *2*, 1–16.

Danis, A., & Lestari, D. (2022). Upaya Meningkatkan Hasil Belajar Ipa Melalui Model Pembelajaran Team Games Tournament Pada Siswa Kelas Iv Mis Mt Az–Zaky …. *Bina Gogik: Jurnal Ilmiah Pendidikan …*, *9*(1), 14–18. https://ejournal.stkipbbm.ac.id/index.php/pgsd/article/view/807

Haryanto, B., & Wiyanto, T. (2016). Penerapan Model Pembelajaran Kooperatif Tipe Teams Games Tournament (TGT) untuk Meningkatkan Hasil Belajar Siswa kelas X SMK Taman Siswa. *Pendiidkan Teknik Mesin*, *04*(1), 28–33.

Kepres. (2017). Sistem Pendidikan Nasional. *Ekombis Sains: Jurnal Ekonomi, Keuangan dan Bisnis*, *2*(1), 39–45. https://doi.org/10.24967/ekombis.v2i1.48

Maemunah, S. (2018). *Upaya Meningkatkan hasil Belajar IPA Kelas V Melalui Pembelajaran Kooperatif Tipe Picture and Picture di MI Miftahul Ulum Braja Selebah Kec. Braja Selebah Kabupaten Lampung Timur Tahun Pelajaran 2017/2018*.

Maqbullah, S., Sumiati, T., & Muqodas, I. (2018). Penerapan Model Problem Based Learning (Pbl) Untuk Meningkatkan Kemampuan Berpikir Kritis Siswa Pada Pembelajaran Ipa Di Sekolah Dasar. *Metodik Didaktik*, *13*(2), 106–112. https://doi.org/10.17509/md.v13i2.9500

Mariana, M. (2023). Penerapan Model Problem Based Learning Pada Materi Berani Membela Kebenaran Untuk Meningkatkan Keaktifan Dan Hasil Belajar Siswa Kelas Xi Sman 3 Buntok. *Prosiding Pendidikan Profesi Guru Agama Islam (PPGAI)*, *3*(1), 1279–1288.

Muslim, A. (2020). The effect of cooperative learning Type Teams-Games-Tournaments (TGT) on mathematical connection and communication ability in elementary schools. *Journal of Physics: Conference Series*, *1469*(1). https://doi.org/10.1088/1742-6596/1469/1/012170

Puspita, R. D., & Paksi, H. P. (2023). *Penerapan Pembelajaran Berdiferensiasi (Gaya Belajar) untuk Meningkatkan Hasil Belajar Muatan IPAS Materi Sistem Pernapasan Manusia Kelas V SDN Sukowati Kapas Bojonegoro*. *06*(01), 871–885.

Rofek, A., Abdurachman, U., & Situbondo, S. (2020). *JURNAL IKA : IKATAN ALUMNI PGSD UNARS Vol. 8 No. 1, Juni 2020*. *8*(1), 156–164.

Saskia, S., Mahendra, A., & Samini, N. (2018). Implementasi Model Cooperative Learning Metode TGT Melalui Media Audiovisual Dalam Pembelajaran Aktivitas Ritmik Lompat Tali Di Sekolah Dasar. *TEGAR: Journal of Teaching Physical Education in Elementary School*, *2*(1), 15. https://doi.org/10.17509/tegar.v2i1.13776

Sulisto, A., & Haryanti, N. (2022). Model Pembelajaran Kooperatif (Cooperative Learning Model). *Eureka Media Aksara*, 1–23.

Utami Widya, Fauzi, A. (2022). Meningkatkan Hasil Belajar Siswa Melalui Model Project Based Learning Pada Materi Jaring-Jaring. *Elementary Education Research*, *8*(1), 9–15.