## *IMPROVING COOPERATION AMONG STUDENTS AND COGNITIVE LEARNING* OUTCOMES WITH OUTDOOR STUDY METHOD

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## *Abstract*

*This study was aimed to improve the cooperation and the cognitive learning outcomes of gradeIV science subjects of 1 Pengasih Elementary School in Pengasih districts in the 2018/2019 school yearwithanoutdoorstudymethod.ThetypeofresearchconductedisClassroomActionResearch. Thesubjectsofthisstudywerefourthgradestudentsof1PengasihElementarySchool.Thedesign of the research used was using the Kemmis and McTaggart models, there were three stages (1) Planning (2) Implementation and observation (3) Reflection. In the first action cycle, the number ofstudentswhoscoredwiththecategoryofGood orVeryGoodnumbered 8studentsor47%,and after being given the action of cycle II it increased to 16 students, or 94% of students scored with thecategoryofgoodorverygoodandtheaverageachievementofindicatorcooperationwas69% and after being given the second action cycle the average achievement of the collaboration of indicators improved to 80%. Cognitive learning outcomes of science subjects in the action of the first cycle, 59% of students in the class who can achieve KKM, after being given the second cycle of action, 82% of students reached theKKM.*

*Key words: Collaboration, cognitive learning outcomes, outdoor study*

# INTRODUCTION

Regulation of National Education Ministry number 22 of 2006 concerning the standard content for primary and secondary education units, stated that Natural Science deals with how to figure the nature out systematicallysothatNaturalSciencesubject is not only mastering various knowledges in the form of facts, concepts, or principles but is a process of discovery. Ahmadi (2008: 6) argued “Natural Science is a science which covers the nature including all the contents”. The learning process can use strategies tailored to the materials and the stages of children’s development. The stages of primary school students’ cognitive development which according to Piaget (Susanto 2013: 170), is still in concrete operational stage which means children are better to learn using real objects not abstract. Realobjectsinlearningnaturalsciencecanbe done by inviting them directly to nature. According to Patta Bundu (2006: 11) there are three essences of science, science as products, science as process, and science as scientific attitude. Among those three, one of the components which must be owned by the studentsinlearningNaturalScienceishaving a scientificattitude.

One aspect of scientific attitude in learning Natural Science is the attitude of cooperation, this accordance with the opinion of Wyene Bloom (Darmodjo, 1991:7). According to Bloom (Trianto 2012: 142) stated that the aim of the Natural Science learning is to give the cognitive knowledge as the base of the principle and the functional concept for daily life, to give a psychomotor skill, skills of scientific attitude (affective), comprehension, behavior, and appreciation. Based on the researcher’s observation done when doing PLT during two months counted from September 10th until November 10th of 2018, on Natural Science learning in fourth grade of SDN 1 Pengasih haven’t reach optimal status. The learning process is not in accordance with the stages of children's cognitive development where the teacher is still too abstract in delivering the material, does not present concrete objects to students, as a resultstudent lack of understanding of the materialdelivered by the teacher and students have difficulty working on the evaluationquestions.

Learning outcomes of science subjects

are still relatively low, as evidenced by the recap results of the last semester’s test scores from the cognitive learning outcomes of three mandatory subjects and which are used as national exams namely Indonesian Language, Mathematics, and Natural Sciences,

natural science subjects have the lowest grades either in terms of average or in the number of students who meet the minimum completeness criteria. Only 2 out of 17 students who meet the minimum completeness criteria on Natural Science subject.

Learning that is still conventional and does not actively involve students results in students having an attitude of individualism and having low cooperative abilities. Collaboration is one component of scientific attitudes in learning natural science that students must have. When givenassignments in groups, students should work together to solve problems or work together to answer the questionsgiven.

By working together students can exchange ideas, and optimally explore the material, so students will get better grades.

However, based on observations conducted, the learning process of Natural Sciences of fourth grade in SD N 1 Pengasih have a low level of cooperation.

The researcher gave a questionnaire to determine the level of students’collaboration with the peer assessment system. Questionnaire results shows only 3 out of17 gradeIVstudentsgotthevalueofcooperation in the "good" category, it shows the lowlevel of students’ cooperation in the learning process.

Learning objectives can be achieved with approaches, models, and methods that are appropriate, interesting and canmotivate the students. Based on the science learning problems above, the teacher can use the Outdoor Studymethod.

According to (Vera 2012: 16) Outdoor study is a teaching and learning activitybetweenteachersandstudents,butit is not conducted in the classroom, butis done outside, as the student learning activities.

Learning with outdoor study methods can also improve children's cognitive learning outcomes, because this learning invites students with concrete objects that exist in nature, where concrete learning is in accordance with the stages of children's cognitive development according to Piaget (in Susanto 2013: 170).

Besides being able to improve cognitive learning outcomes, the outdoor study method can also improve student cooperation, this is in accordance withVera's opinion (2012: 29) that learning with the outdoorstudymethodcanencouragestudents to master social skills includingcooperation.

Research conducted by Isy Maghfirotur Rohmatillah Dillah in her thesis entitled "Keefektifan Metode *Outdoor study*Terhadap Aktivitas dan Hasil Belajar Cuaca Kelas IV Msi 14 dan 15 Medono Kota Pekalongan", shows that students learning outcomesin

Natural Sciences after applying the Outdoor Study method have better results than before the outdoor study method was applied. Research conducted by Suyadi in 2016 with the title “Upaya Peningkatan Kerjasama, Motivasi, dan Hasil Belajar IPS Melalui Model Pembelajaran *Outdoor Learning Process* dalam Kegiatan *Lesson Study* Siswa Kelas V SD Wonolelo Pleret Bantul Tahun Pelajaran 2014/2015” also increased the cooperation of the students.

# RESEARCH METHOD

**Research Design**

This research is a Classroom Action Research (CAR) in the form ofcollaborative, where the research needs to collaborate with teachers in achieving their objectives. This classroom action research was carried out in fourth grade of SD N 1 Pengasih in Kulon Progo school years2018/2019.

This classroom action research is designed gradually, each cycle is held twice as it is adjusted to the meeting for natural science subjects in each sub-theme in the 2013curriculum,itrequirestwomeetingsout of 6, the first and the secondmeeting.

Each cycle was observed on the activities of the teachers and the students to give the necessary improvements to the next cycle. The cycle will be stopped if the research has reached the objectives.

This study uses the Kemmis and Mc.Taggart models. The Kemmis and Mc. Taggart which consists of three steps or stages in conducting classroom action research, namely: planning, action- observation, and reflection.

# Time of The Research

This class action research was conducted in the even semester and took 4 months, January-April 2019.

# The Research’s Site

This class action research was conducted in fourth grade students of SD N1 Pengasih in Pengasih. SD N 1 Pengasih is located in Pengasih, Kulon Progo, Yogyakarta.

# The Subject of The Research

Research subjects in this class action research were fourth grade students of SD N 1 Pengasih in Kulon Progo. There were 17 students consisted of 8 males and 9 females. **Action Scenarios**

1. Planning.
   1. Make a thematic lesson plan using outdoor study learning methods and the indicators of collaboration with the teachers
   2. Prepare the source and the instructional media, and documentationmedia.
   3. Prepare observation sheets in the form of instruments and evaluation questions to observe the cooperative activities and cognitive learning outcomes onstudents
   4. Documenting
2. Implementation of theactions

Stage of implementation of the action is the realization of a plan that has been designed previously contained in the lesson plan that has been arranged the steps and the test questions. The action taken in the first cycle consisted of two meetings, it is:

1. FirstmeetingwithK13lessonplantheme 6, subtheme 1, and firstlearning
2. Second meeting with the second learning lesson plan that has beenmade
3. Provision of evaluation questions and cooperation questionnaires at the endof thecycle
4. Observation

Observations were done using observation sheets. Which has been made, which consists of observation sheets. The populations are the teacher and student. Observations were made during the learning processinordertomakeimprovementstothe next cycle learningprocess.

1. Reflection
   1. Study the implementation of thefirst cyclelearning
   2. Evaluating the process and theoutcomes of the first cyclelearning
   3. Make a list of the issues occurred in the firstcycle
   4. Arrange plans for the further do forthe nextcycle

# Data Retrieval Method

* + 1. Observation

Observations in this study were conducted to observe the learning process of thestudentsandtheteachersinimplementing outdoor study using observation sheets that have been made by theresearcher.

* + 1. Questionnaire

Questionnaires are given at the end of the learning. This questionnaire is used for measuring the cooperative abilities of the students. The questionnaires are filled out by the students in a peer assessment

* + 1. Exam

The test is held at the end of the learning by giving questions to students. This test is used to measure the increase in cognitive abilities in students. Test questions havebeen made by researchers and have been adjusted to thematerial.

* + 1. Documenting

Documenting is a data retrievaltechnique that is not directly aimed at the research subject. Data obtained through documents in the form of photos of learningactivities.

# Data Analysis Technieque

(Arikunto, 2017: 227-228) said thatin classroom action research there are twotypes of data that researchers can collect, namely qualitative and quantitative data. This study used both types of the data analysis above. Qualitative analysis is used to analyze cooperation data, and quantitative data to analyze cognitive learning testresults

# Success Criteria

The research can be considered successful if there is an increase in cooperation and cognitive learning outcomes of the students. Cooperation can be considered successful if, ≥75% of fourth grade students or 13 out of 17 students in fourth grade achieved the criteria of "Good" or "Very Good" and the average percentage of indicators was at least 75%.

Then for the success criteria of cognitive learning outcomes in natural science subjects if it hits 75% or 13 of 17 fourth grade students get grades above the criteria or 75.00. Individually students are considered succees in cooperative skills if students get grades with the criteria of "Good" or "Very Good" and are considered succees in cognitive knowledge if students get a minimum score of 75 or meet the minimum criteria.

# RESULT AND DISCUSSION

Outdoor study learning methods can improve students' cognitive learning outcomes in natural science subjects. This is because learning with the outdoor study method seeks to present concrete things related to the material about to be taught.

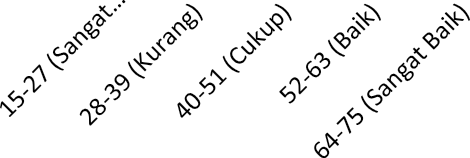
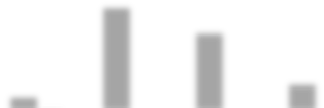
The action in each cycle consists of two meetings. Evaluation is done at the end of each cycle. After completing the cycle,the researcher conducts a reflection to improve the learning process if the next cycle if it is needed.

The results of classroom action research conducted during these two cycles experienced an increase. In the action cycle IandIIallstudents,amountedto17students can follow the learning process. In the second cycle of action all studentsamounted to 17 students can follow the learning process.

The results of the cooperation assessment, out of 17 students, there were 8 students who scored in the Very Good category, 8 students received grades in the Good category, 1 student received a scorein the Fair category, and none of the students scored with the category of Less and Very less. The total score obtained in this first cycle action is 1022, with an average of 60. The highest score is 69 and the lowest score is 45, with maximum score by75.

The number of students who scored with the criteria''Good''and''VeryGood''amounted to 16 students or 94% of all students in the class. The data above shows an increase in the number of students who score with "good" and "very good" criteria to reach the criteriaofsuccess.Thecriteriaofsuccessfor cooperation skills is 75% of all students in the class or at least 13 students have grades with the criteria of 'good' or 'verygood'.

The following diagram shows an increase in cooperation from cycle I to cycle II:



Siklus I

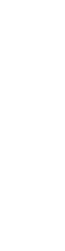
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**CRITERIA OF STUDENTS’ COOPERATION LEVEL**

Picture 1. Diagram cooperation increase cycle I to cycle II

TheactionsofcycleIIalsoincreasethe average achievement of cooperation indicators, as in the diagrambelow:.

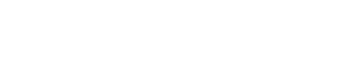
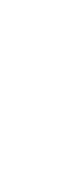
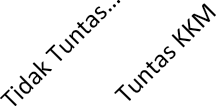
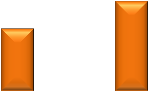
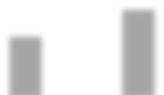


Siklus ISiklus II

0%

Picture 3. Diagram cooperation increase in each indicators

Cognitive learning outcomes of students in natural science subjects have increased after being given action cycle II to reach the criteria of success of the research, as in the diagram below:



**Criteria evaluation of the**

**cognitive learning outcomes**

0%

41%

18%

75%

82%

59%

**Jumlah siswa**

Picture 2. Comparison Diagram of the Cognitive Learning Outcomes in Cycle I and Cycle II

The diagram above shows the cognitive learning outcomes in the science subjects of fourth Grade of SD N 1 Pengasih students which are higher than the success criteria determined in the study.

The reflections taken from the actions of the first cycle to provide improvementstothesecondcycleactions,as follows:

1. The teacher learns and masters the learning objects in the garden before used.
2. Students line up neatly ingroups before leaving theclass
3. The teacher orders the students to stick up with their groupmates when the activities are outside theclassroom
4. Students share the assignments with theirgroupmates
5. Students take note of something new they found outside theclass
6. The teacher accompanies the students and explains things that students found outside the classroom and relates them to the material

# CONCLUSION AND SUGGGESTION

**Conclusion**

Basedontheresultsofthisstudy,itcan be concluded that outdoor study learning method during the second cycle can improve the cooperation awareness and cognitive learning outcomes of science subjects in fourth grade students of SD N 1 Pengasih in Kulon Progo in the 2018/2019 schoolyear.

Improvements on the cycle I to cycle II are (1) The teacher learns and masters learning objects that are in the garden before learningisused,(2)Studentslineupneatlyin groups before leaving class, (3) The teacher ordersthestudentstosticktogetherwiththeir groupmates when activities are outside the classroom, (4) Students share assignments with classmates, (5) Students record new things that are found outside class, (6) The teacher accompanies students andexplains things that students find outside the class and relates them to thematerial.

# Suggestion

Based on the conclusions from the results of the analysis above, it will be much better for the teachers if the outdoor study method is more often used in learning the appropriate material, because the outdoor study method is very appropriate to the stage of children's cognitive development, called concrete operations.

When implementing the outdoor study method the teacher must master first the objects in the field so that later during the learning process the teacher can utilize the objects as a media to improve students' understanding of the material.

# REFFERENCES

Ahmadi & Supatmo. (2008). *Ilmu Alamiah Dasar.* Jakarta: Rineka Cipta

Susanto, A. (2013). *Teori Belajar dan Pembelajaran.* Jakarta: Kencana Prenadamedia Group

Bundu, P. (2006). *Penilaian Keterampilan Proses dan Sikap Ilmiah dalam Pembelajaran Sains di SD*.Jakarta: Depdiknas

Trianto. (2012). *Model Pembelajaran Terpadu.* Jakarta: PT Bumi Aksara

Darmodjo, dkk. (1991). *Pendidikan IPS II*. Jakarta: Depertemen Pendidikan dan Kebudayaan

Vera, A. (2012). *Metode Mengajar Anak di Luar Kelas (Outdoor Study).* Yogyakarta: Diva Press

Susanto, A. (2013). *Teori Belajar dan Pembelajaran.* Jakarta: Kencana Prenadamedia Group