EFFORTS TO IMPROVE STUDENT LEARNING OUTCOMES WITH CONTEXTUAL TEACHING AND LEARNING (CTL) METHOD IN SCIENCE SUBJECT CLASS IV MI MIFTAHUL ATHFAL LESSON YEAR 2016/2017

Upi Rahmawati
Sekolah Guru Indonesia Students
Upirahmawati610@gmail.com

Abstract

The purpose of Classroom Action Research that lasted 3rd cycles is to know the improvement of student learning outcomes through Contexual Teaching and Learning (CTL) method and how the influence for student activeness. The object of this research is fourth grade students MI Miftahul Athfal Kec. Kemang Lesson 2016/2017. The instruments used are test, student activity observation sheet, and teacher teaching observation sheet. Data is processed and presented in the form of descriptive-qualitative. From the analysis results obtained that the student learning outcomes have increased percentage mastery. Thus it can be concluded that learning by CTL method can improve student learning outcomes.

Keywords: Contextual Teaching and Learning Method (CTL) and student learning outcomes.

Preliminary

The success of a teaching and learning process in schools is influenced by several factors, including students, curriculum, educators, costs, facilities and infrastructure as well as environmental factors. If these factors can be met well, so the learning process can run well and effectively. However, these factors often get problems, especially from within the students themselves.

Motivation, interest, talent and liveliness are often found to be an obstacle in every learning process. That's what happened in science lesson at Madrasah Ibtidaiyah Miftahul Athfal Kemang. The teaching and learning atmosphere seems quiet and do not intesert for students, because they have not been actively involved in the learning process. Class IV with a student population of twenty-three people with a variety of characters is enough to make the sound and energy drained for the teacher.

Overall learning is less conducive because most students are noisy, rowdy and busy with their respective activities during the exchange of information from teachers in front of the class. Besides the internal factors, media and props are also a problem of lack of student motivation. Procurement of media in science lessons is still considered to be so poor, so that their interest in learning science is still weak. In other side, the absence of supporting facilities and infrastructure such as labarorium and library become factors that influence student's interest and learning outcomes.

To overcome the problems, so need a useful learning strategy to generate interest and motivation of students. The learning approach used is Contextual Teaching Learning (CTL). This approach leads students to link the content of the material learned to the context of everyday life, so that learning will live and be meaningful.

According to Elane Johnson (2006: 90) "when students can associate the content of academic subjects such as mathematics, science or history with their own experience, then they will find meaning and meaning will give them a reason to learn."

The surrounding nature becomes a lively observatory for students, so that the students' immediate experience can be obtained. According Rahayu (2012: 5) IPA is essentially directed to seeking and doing something so can help students to gain a deeper understanding of the natural surroundings. With this strategy, students are expected to understand the lessons based on what they get from direct experience, not from memorization or one-way communication between teachers and students. The learning with CTL strategy is suitable to be applied in grade IV MI Miftahul Athfal, looking at the environment around which many plants and gardens will grow.

The CTL approach involves seven major components of effective learning, namely constructivism, inquiry, questioning, modeling, reflection, and actual assessment (Lutfri, 2010: 62-63). Thus, through CTL approach, students are expected to have an interest in learning science so that in obtaining optimal learning outcomes. Based on the above explanation, the researcher conducted a research entitled "Efforts to Improve Student

Learning Results With Contextual Teaching And Learning (CTL) Method In Science Class IV Subject MI Miftahul Athfal Lesson Year 2016/2017".

Literature Review

1. Meaning of science
   Natural Science (IPA) is part of Science. Sains itself comes from the English language Science, the origin of the word from Latin that is scientia which means I know. Science is a process that produces knowledge that depends on the process of careful observation of the phenomenon and theories of the findings to interpret the results of these observations (Rustaman, 2011: 1).
   Science is the study of the universe and everything about it. IPA is concerned with how to seek the truth of a natural phenomenon systematically and coherently through the process of discovery by scientific method.
   The functions and objectives of Science based on competency-based curriculum according to Depdiknas are as follows:
   1. Inculcating belief in God Almighty
   2. Develop skills, attitudes and scientific values
   3. Preparing students to become citizens who are aware of science and technology
   4. Mastering the concept of science that is useful for his life. (Trianto, 2012: 138).
   5. The function and purpose of science shows that the purpose of learning science is not only to demand the scientific dimension, but from various aspects of life
2. Contextual Teaching and Learning (CTL) approach
   a. Understanding CTL
      CTL is a different educational approach, doing something more than just guiding students in combining academic subjects with the context of their own circumstances. The linkage that leads to meaning is the heart of contextual teaching and learning (Johnson, 2006: 90). When learners can associate the contents of academic lessons such as math, science, history and others with their own experience, they will discover meaning, and meaning will provide a reason for learning. The learning process should not position the learners as listeners, while the teacher actively preaches like an empty bottle filled with science. Learners should be empowered to be willing and able to work to enrich their learning experience by increasing the interaction with the environment, so it can membangan own understanding and knowledge about the world around (Harsanto, 2007: 18).
   b. Principles of CTL
      Understanding the principles and the way CTL implements means understanding why contextual learning and teaching give way to academic excellence that can follow by all students. The principles are:
      1) The principle of interdependence
         This principle invites educators to recognize their interrelationship with other educators, with students, society and with the earth. The principle of mutual support supports the existence of a cooperation. Working together will helps students find the problem and solve it.
      2) The Principles of differentiation
         This principle contributes to the wonderful creativity that beats throughout the universe. If the differentiation is lost, then our thoughts and feelings will be the same. Music will be one tone, the artists will paint the same object. The similarity will make life flat and arid. Since each student is not the same, the CTL system gives them a longer, concentrated individual attention.
      3) The principle of self-regulation
         This principle encourages educators to encourage learners to expend their full potential. When students connect the material to the context of their personal circumstances they engage in activities that contain the principles of self-regulation. (Johnson, 2006: 72-83).
3. Learning outcomes
   A person can be said to have succeeded in learning if they able to show a change in them. Can be a change of thinking, skills and attitudes toward an object. Learners can be said to succeed in learning if in themselves there has been a change from at least one of the upward aspect. In the assessment, the cognitive, affective and psychomotor must be assessed thoroughly because the student's learning achievement should describe the overall change as a result of student learning.
   Each level in each domain demands different abilities of each learner. More higher the level demanded, so more higher the complexity of the required answer. Sothat then a teacher must understand the lower level tested, the lower the weight of the given score, and also the contrary(Wahidmurni, 2010: 18).

Research Methods

This study uses learning model with CTL approach (Contextual Teaching and Learning) by making nature as media. The study involved 23 students consisting of 14 female students and 9 male students.

The data that taken in this research are the result of learning test, student activity and interaction between teacher and student in learning process. This study was conducted in three cycles based on the subject. Each cycle of the procedure will consist of four main activities components: planning, action, obeservation and reflection

Analysis

Cycle I

1. Planning
   a. Create a learning scenario I by applying CTL and using observation, discussion, question and answer methods.
   b. Preparing Student Discussion Sheet
   c. Designing an observation tool to see student learning outcomes.
2. Action
   a. Teacher prepares lesson plan I.
   b. The teacher gives a preliminary explanation of the learning materials with lecture and question and answer methods
   c. The teacher conditions the students in the form of learning community where students are divided into several groups.
   d. Teachers implement learning with CTL approach in accordance with the step of lesson plan I.
   e. Teachers evaluate through test post I.
   f. The teacher holds a reflection at the end of the lesson.
3. Observation
   a. Observer prepared observation sheet of student and teacher activity in learning
   b. Observer collects observation data.
4. Reflection
   Data obtained will analyzed and taken conclusions how student learning outcomes, student learning activities and teacher learning outcomes.

Cycle II

1. Planning
2. Action
   a. Setting up lesson plan corresponds to cycle one with multiple revisions
   b. Setting up Student disccusion sheet
   c. Prepare assessment and observation instruments of teachers and students
3. Action
   a. Implementing based on the lesson plan was made
   b. Reflection at the end of learning
4. Observation
   a. Fill out the observation sheet of student and teacher activity in the learning process
   b. Observer collects observation data
5. Reflection
   Analyze the data that has been obtained, in the form of learning outcomes and student activity observation sheets to decide whether to continue into cycle 3 or not.

Cycle III

1. Planning
   a. Setting up the lesson plan corresponds to second cycle with multiple revisions
   b. Setting up student discussion sheet
   c. Prepare assessment and observation instruments of teachers and students
2. Action
   a. Implementing based on the lesson plan that was made
   b. Reflection at the end of learning
3. Observation
   a. Fill out the observation sheet of student and teacher activity in the learning process
   b. Observer collects observation data

Results And Discussion

Research about the application of learning with CTL method is designed to improve student learning outcomes and increase the level of student activeness learning in the classroom. The results showed that there was an increase in learning outcomes as well as students' activity from the first, second and third cycles. The details of the research results of each cycle are described as follows.

Cycle I

Learning by using CTL has its own challenges for researchers. CTL is an approach in which there are several methods that must be applied in it. So that the habituation factor becomes a very helpful thing implementation of learning process. In the first cycle, learning is carried out in accordance with the pre-planned RPP. The teacher also prepares the student discussion sheet to guide the course of class discussions.

During the learning process takes place, students look very enthusiastic especially when will do the observation outside the classroom. The process of observation took place in the field around the school environment. The time given is limited, so students race one each other to find the desired plant. The skills that arise during this process is a questioning skill. During the observation took place the students asked each other both to the teacher and to a friend of his group. With this skill is expected to appear more curiosity about the material being studied.

After observation, students bring the object of findings to the class to discuss together. By using sheet that has prepare by teacher, students in the guide to discuss resolving the available questions

using the objects that have been found. The skills that appear here is the ability critical thingking.

Students compare carefully how the characteristics of root fibers and riring root based on the characteristics that have been given previously. After the discussion is over, the students present the results of the discussion in front of the class. From this presentation, students are invited to have confidence and courage. Activities go according to plan, although during class discussions and presentations can not be controlled within a few moments because some people make noise so the whole class gets contaminated.

At the end of the lesson in the teacher's evaluation phase the colabotor notes that when the teacher's lesson conveys the material too quickly, students tend to be confused to understand the material presented. Learning outcomes obtained are 58, can not reach the KKM is 60. While the criteria mastery has not reached 75%.

Therefore it is necessary to hold cycle II. To observe the activity of teachers have achieved very good criteria, because most of the points in the learning exercised. While student activity indicate good criterion with value 53%.

Cycle II

In the second cycle, researchers conducted learning in accordance with lesson plan in the first cycle with the optimization of each step on the CTL approach. Student activity that is developed again is the distribution of rewards to increase student activeness.

With learning evaluation done with no haste and more relaxed but deep. The result of learning obtained is the average value increased that reaches KKM. However, the success of students in the learning process has not reached 70%, that is 52.94%. For the observation of teacher learning observation got very good criteria, with value 85. Activity of student have improvement that is with value 64.

Table I. Science score 1st dan 2nd cylcle.

Cycle	Rpp	Present of Student	Complate student	Average	Percentage
1	RPP-1	19	9	58	47,36
2	RPP-2	17	9	61	53

The meeting begins with greetings, student presences and asks for news. After that the teacher gives apersepsion to students. The lesson begins with a question for the material last week with the intention of recalling the material already taught. After getting a satisfactory answer, the teacher begins to enter the science time with a question about the phenomenon of many variety of roots.

Then to better understand the students, the teacher brings a sample of the stem so that learners do not much fantasize about the stem. The next stage is cooperative learning, by dividing them into 4 groups. Then with teacher monitoring, students were asked to find out what kind of stems they found around the school. Each group was asked to identify the type of bar found within the group. In this case there are some children skills that are obtained. First, observation skills. Second, the skill of asking. Third, the skill of discussion. Fourth, high-level thinking skills. The fourth is obtained because in the group there is a scientific dialogue between participants. All students look active, whether it's asking the teacher, or even asking colleagues. After discussion session, invite to present the result of discussion in front of class in group by bringing the found plant. There are even groups that carry more than the number of plants in order.

In presenting this, the skill in conveying opinions is obtained, in addition to skills in listening to the opinions of others. At the end of the lesson the teacher re-affirmed anything that is still considered in doubt by the students.

After the learning ends the teacher does not forget to evaluate by giving the test to the students. The test is an essay test with a short answer. This test is different from the previous test of multiple choice. Because after the evaluation it turns out students are still confused by the many questions.

Table 2. Results of Student and Teacher Activity During the Learning Process Takes place

Cycle	Teacher obeservation Result	Criteria	Student Activity	Criteria
1	92	Sangat baik	53	Baik

Cycle III

Third Cycles implemented on the consideration of not achieving the expected minimum completeness criteria of 75%. In this third cycle, the teacher emphasizes and clarifies the material taught by the demonstration method. Teaching material that is delivered is about the other plant parts of the leaves. In this case the teacher brings the example of banana leaves into the class.

Learning begins with salm and prayer. Ask for news and ice breaking. Master enters the classroom with a large banana leaf. Then by using the media teachers began to tell you everything about leaves. Especially on the leaves, teacher more emphasized by letting students forward one by one show the banana leaf parts that have been described.

This method has not been used in the previous cycle. This is necessary because, just lecturing or singing does not make the students understand enough what the teacher means. By showing the parts directly by looking and feeling the object directly expected the students can be longer in remembering it.

The next step the teacher keeps dividing the students into groups. Each group is given time to find various types of leaves to be able to identify types of types and parts. One thing teachers always find in this session. Students are always enthusiastic and eager to observe outside the classroom. Search, find, ask, identify and conclude. So many academic events that occur when they are invited out of the room to find and identify the plants either roots, stems or leaves. According to some experts, learning that involves direct experience and involves many senses, will be longer remembered by learners. So hopefully with this method, the material that has been presented in the class will be memoras and long to remember.

Guided by LKS, the students discussed with enthusiasm. In each group there is a tough interaction and questioning. Both to teachers and to fellow students. This will certainly spur the group's friends to be active and learn together.

At the end of the lesson, students present the results of the discussion in front of the class, assisted by the teacher to reassert answers and questions that arise. Then the learning is concluded together by repeating the initial material that is by using banana leaf. For evaluation, teachers use structured essays with short and clear answers. There are four problem items with varying degrees of difficulty.

Table 3. Comparison of Values Per Cycle

Siklus	Jumlah siswa hadir	Nilai rata-rata	Persentase ketuntasan
I	19	58	47,36
II	17	61	53
III	19	75	79

Table 4. Teacher Activity Results

Siklus	Nilai Pengamatan Guru	Kriteria
I	92	Very good
II	85	Very good
III	83,3	Verygod

Table 5. Results of student activities

Siklus	Nilai Aktivitas Siswa	Kriteria
I	53	Good
II	64	Good
III	100	Very good

Conclusion

Based on the results of data analysis and discussion of research results, it can be concluded that the application of Contextual Teaching and Learning (CTL) approach can improve the learning outcomes of fourth grade students in science subjects in MI Miftahul Athfal. In cycle one obtained the average value of class 58, cycles II 61 and cycles III 75. While the percentage of completeness of the minimum jug has increased from 47.36% to 53% and in cycle 3 to 79%.

The existence of several modifications there is this learning approach in each cycle, making an increase in both the value and student activity in class. By using the CTL method students look enthusiastic in doing every instruction given by the teacher. The student becomes actively asking both the teacher and the friend. There are also many skills of process saisns gained from this method. Among them are observation skills, questioning skills, discussion, opinion and answer questions.

Suggestion

Based on the conclusion of the research, the authors convey the following suggestions:

1. Science teachers in subjects are expected to be able to create various creative ideas and bring new things that can spur the spirit of students in learning
2. The use of this CTL method is worth considering the state of the school environment, because remembering the place

used should be close to the source of learning that will be in use, ie plants.

3. Teachers / other researchers can make the results of this study as a reference of relevant follow-up research.

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Author Biography

Upi Rahmawati, M.Pd.Kelahiran S.Penuh, 06 oktober 1994. Penulis menamatkan pendidikan S1 di Universitas Negeri padang pada tahun 2016, sedangkan pendidikan s2 di UIN syarif Hidayatullah Jakarta. Sampai saat ini masih aktif di Sekolah Guru Indonesia bergerak dibidang pendidikan dan sosial kemasyarakatan.