The use of reading material based contextual approach to improve environmental concern attitude of elementary school students

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Abstract. This research objective was to improve the environmental concern attitude of grade 4 students by using reading materials. This research is a classroom action research. The research was conducted in two cycles with each cycle consisting of planning, action, observation, and reflection. The subject of this study was the grade 4 students of SDN 5 Panjer which amounted to 24 students. The data sources used in this research were students, teachers, and observers. Data analysis using quantitative and qualitative techniques, including data reduction, data presentation, and drawing conclusions. The results of this research indicate that students environmental concern attitude improved from pre-cycles, cycle 1 and cycle 2. The results of this research indicate that students environmental concern attitude improved from pre-cycles 25%, cycle 1, 48% to cycles 2, 82%. In learning, the teacher uses a reading material based contextual approach with steps: (a) constructivism, (b) inquiry, (c) questioning, (d) learning community, (e) modeling, (f) reflection, (g) authentic assessment. The conclusion of this study is the use of reading materials based contextual approach can improve environmental concern attitude of grade 4 elementary school students.

1. Introduction
An environment is a place where the living creature lives. Environmental hygiene is everyone's responsibility [1]. Environmental concerns are expected not only to appear in adults but also in children and teenagers. Efforts to develop an environmentally responsible attitude is supported by the government with issuing The Regulation of the Minister of Environment No. 05 the Year 2013 about the Implementation Guidelines for Adiwiyata Program. Teachers can support the Adiwiyata Program by developing teaching materials that utilize an environment is a contextual approach.  

The contextual approach takes advantage of the everyday problems of the students and relates them to the learning materials as well as the student's real-world [2]. The contextual approach is a system that evokes patterns that embody meaning [3]. Teaching materials are materials compiled by the teacher systematically to help teachers implement the learning process so as to produce an environment that allows learners to learn [4]. The use of teaching materials can help the success of the learning process. One way to improve learning is to use appropriate teaching materials [5]. Reading is a type of receptive language ability because reading will get information, science, and new experience [6].
Based on observations and interviews with fourth grade teacher of SDN 5 Panjer, the teacher said that there was not of teaching materials used to support learning. Teachers only use government-issued books and exercise books issued by publishers.

Students will put the trash in the trash can if they have told by the teacher. The student's bathrooms are always cleaned by the school attendants. Students have not been involved in cleaning up the places they normally use such as bathrooms. Students only clean up the class if there is a picket schedule. Student awareness to plant and care for plants needs to be improved.

This showed that lessons have been unable to develop a student's environmental concerns attitude. Someone who cares environment will try to prevent the natural environment and repair the damage [7]. Each lesson should be able to contribute behavioral skills that can initially be initiated through the student's environmental attitudes. Until finally produce students who are not only proficient in terms of knowledge but also skilled in behaving. Students build their knowledge through active involvement and see firsthand what they are learning [8].

Based on the above description, one of the main factors that causing ineffectiveness in the learning practice so far was the use of inappropriate teaching materials. It is necessary to used teaching materials to improve student's environmental concern attitude. The teaching materials utilize the environment around the students in order to produce environmental concern attitude to students. Thus, learning will be more meaningful. Learning will be more fun and provide comfort for students if a clean, beautiful and healthy school environment created [9].

The objectives of this research were to improve student environmental concern attitude of fourth grade using reading material based on a contextual approach. The expected benefits of this research were: (1) can improve students abilities in utilize reading materials in learning, (2) can improve the ability of teachers to utilize teaching materials in learning, (3) can motivate students in reading so as not to feel bored and remain enthusiastic in learning, (4) can motivate researchers to develop other teaching materials with better results. So as to contribute quality teaching materials to support the learning process.

2. Methods

This research was conducted in the fourth grade of SDN 5 Panjer. The number of research subjects was 24 students. The time of the research was carried out for three months and carried out in the second semester.

The data taken in this research are quantitative and qualitative data. Quantitative data in the form of observations of the environmental concern attitude, while the qualitative data in the form of learning effectiveness use reading material based on a contextual approach.

Data collection in this research is observation, interview guidelines, and documentation. The observation in this research was to observe the implementation process of learning and the caring attitude of the students using reading material based contextual approach.

There are two kinds of interviews un this research, namely interviews with observers and interviews with students. Interviews with observers and students were used to add data from observations about use of reading teaching materials based contextual approach in learning.

The documentation in this research is in the form of photos containing written images and objects as evidence (list of student values) for an event to occur. Shooting is also done at each step of the learning process. The results of the shooting are images of students that are perpetuated during the learning process, with the intention of perpetuating the behavior of students during research.

Data analysis was carried out through comparative descriptives analysis and qualitative analysis consisting of data reduction, data presentation, and conclusion drawing, which was carried out during and after data collection was completed.

Data reduction collected through various sources, namely interviews, observation, documentation. Data reduction is done by selecting which data is used and which data is ignored so that the data collected can obtain meaningful information.
The procedure of this research used a classroom action research method, which consists of planning, implementation, observation, and reflection. At the planning stage, researchers prepare learning plans, student worksheets, learning scenarios, observation sheets, interview guidelines, prepare documentation, and coordinates with the headmaster.

The steps for implementing class action research which includes four stages, namely action planning, implementation of actions, observing, and reflection. In its implementation, this stage is always related and sustainable in the process, and experiences with the results of observation and reflection to meet the expected results or objectives [10].

3. Results and discussion

The results of preliminary observations made there are problems, namely the low attitude of environmental concern students. The environmental concern attitude of students needs to be improved so that students will be happy to maintain the school environment. Students are still fixated on picket schedules. Students awareness to plant and care for plants need to be improved so that the school environment becomes more beautiful and comfortable for learning.

Learning should develop students environmental concern attitude. Learning should be able to produce positive characters and can be done through environmental concern attitude of students. It is expected that students have behavioral skills.

The teacher has not used teaching materials that utilize the surrounding environment. Therefore, it is necessary to use reading materials in an effort to improve students environmental awareness. Teaching materials need to take advantage of the environment around students so that they appear environmentally caring is students. Thus learning will be more meaningful.

The environmental concern attitude of students was assessed using an observation sheet. Assessment of students environmental concern attitude was carried out by researcher and teacher. This research was conducted in two cycles. Each cycle consists of three meetings, with an allocation of 2 x 35 minutes per meeting. Analysis of results in pre-cycle can be seen through the recapitulation of observation the environmental concern attitude. Recapitulation of environmental attitude on pre-cycle can be seen in table 1.

| Table 1. Recapitulation of environmental concern attitude of students in pre-cycle |
|------------------------------------------|----------------|----------------|
| Total score | Percentage | Category |
|-------------|------------|----------|
| 1045        | 25         | seen not yet |

Table 1 shows that the environmental concern attitude of students in pre-cycle gets 25% with seen not yet category. Based on the results of the pre-cycle, then the action is carried out using reading material based contextual approach to improve environmental concern attitude.

The observation results of the use of reading materials based contextual approach in the cycles 1 of meeting 1, 2 and 3 can be seen in table 2.
Table 2. Observation results the use of reading materials based contextual approach in cycle 1

| Learning Steps       | Observation Results |
|----------------------|---------------------|
| Constructivism       | 2,00                |
| Inquiry              | 2,33                |
| Questioning          | 2,00                |
| Learning community   | 2,33                |
| Modeling             | 2,33                |
| Reflection           | 2,00                |
| Authentic assessment | 2,67                |
| **Total**            | **15,66**           |
| **Average**          | **2,24**            |
| **Percentage**       | **56%**             |

Based on table 2 it appears that using reading material based contextual approach in cycle 1 is in accordance with the learning scenario. But, learning has not run optimally. This can be seen in the average score in cycle 1 is 2,24 and percentage of learning in cycle 1 is 56%.

Recapitulation of environmental attitude using reading material based contextual approach on cycle 1 of meeting 1, 2 and 3 can be seen in table 3.

Table 3. Recapitulation of environmental concern attitude of students in cycle 1

| Total score | Percentage | Category          |
|-------------|------------|-------------------|
| 1145        | 48         | Start to be seen  |

Table 3 shows that the average environmental concern attitude of students in cycle 1 get 48% with start to be seen category. Based on the results of cycle 1, then the action is carried out using reading material based contextual approach to improve environmental concern attitude. Learning activities in cycle 1 are in accordance with the learning scenario and lesson plan prepared by the researcher. But the steps of contextual learning have not run optimally because teacher and students are still adapting to reading material based contextual approach.

The problem that arises in cycle 1 is the initial activity of learning out of order, the teacher has difficulty in placing students into the group. Group discussion activities are not optimal, students are less serious in group discussions. The steps taken by the teacher to overcome the above constraints are the teacher provides students with an understanding of the aims and objectives of the teacher informing heterogeneous groups. The teacher also conditions the class more so that the initial learning activities run orderly. The teacher explains the duties of each group member in group discussion activities. The teacher must also be ready to guide each group that encounters difficulties, and reprimand each group member who is not serious in the discussion activities. Reflection on the results of the attitude in cycle 1 was used to improve the results of the environmental concern attitude in cycle 2.

The observation results of the use of reading materials based contextual approach in the cycles 2 of meeting 1, 2 and 3 can be seen in table 4.
Table 4. Observation results in the use of reading materials based contextual approach in cycle 2

| Learning Steps      | Observation Results |
|---------------------|---------------------|
| Constructivism      | 3.67                |
| Inquiry             | 3.33                |
| Questioning         | 3.00                |
| Learning community  | 3.00                |
| Modeling            | 3.00                |
| Reflection          | 3.33                |
| Authentic assessment| 3.33                |
| **Total**           | **22.66**           |
| **Average**         | **3.24**            |
| **Percentage**      | **81%**             |

Based on table 4 it appears that the implementation of learning using reading materials based contextual approach in cycle 2 is in accordance with the learning planning prepared by the researcher. Learning by using a contextual approach has run optimally. This can be seen in the acquisition score in cycle 2 is 3.24 with a percentage of 81%.

Recapitulation of environmental attitude using reading material based contextual approach on cycle 2 of meeting 1, 2 and 3 can be seen in table 5.

Table 5. Recapitulation of environmental concern attitude of students in cycle 2

| Total score | Percentage | Category       |
|-------------|------------|----------------|
| 1965        | 82         | Already entrenched |

Table 5 shows that the average environmental concern attitude of students in cycle 2 get 82% with an already entrenched category. Learning activities using reading materials based contextual approach in cycle 2 are in accordance with the learning plan prepared by the researcher. The learning steps using a contextual approach have run optimally.

Constraints that arise in cycle 2 are giving questions to students when the presentation is not evenly distributed. Students are noisy in the activity of reading the results of the discussion. Some students are not serious in discussion activities.

The solution taken to improve these conditions is the teacher gives questions more evenly to students. The teacher also gives understanding to students that each stage of learning is very important and interrelated. The teacher provides an explanation for students to wait their turn to read the results of the discussion in a calm and orderly manner.

Comparison of observation results in the environmental concern attitude in pre-cycle, cycle 1 and 2 can be seen in table 6.

Table 6. Recapitulation of environmental concern attitude of students in cycle

| Description     | Pre-cycle | Cycle 1 | Cycle 2 |
|-----------------|-----------|---------|---------|
| Total score     | 1045      | 1145    | 1965    |
| Percentage      | 25        | 48      | 82      |
| Category        | Seen not yet | start to be seen | already entrenched |

Based on table 6, it can be seen that there is an improvement in the environmental concern attitude of students from the pre-cycle, cycle 1 and cycle 2. In the pre-cycle, the environmental concern attitude of students gets a percentage of 25% with the category seen not yet. In cycle 1, the environmental concern attitude of students gained a percentage of 48% with category start to be seen. The environmental concern attitude of students starts to be seen in cycle 1. In cycle 2 there was an improvement in the environmental concern attitude of the students using reading material based contextual approach by obtaining a percentage of 82% with the already entrenched category.

Comparison of improving environmental concern attitude of students can be seen in figure 1.
4. Conclusions
Based on the results of the study concluded that the use of reading materials based contextual approach can improve the environmental concern attitude of grade 4 students in elementary school. This is indicated by an improvement in students environmental concern attitude. Students environmental concern attitude improved from 25 (seen not yet category) to 48 (start to be seen) to 82 (already entrenched category).

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