

IMPROVING THE LEARN RESULT ON INTEGERS MATTER THROUGH THE APPLICATION OF BAMBOO DANCING MODEL FOR THE FOURTH GRADE OF KEBONSARI 1 PRIMARY SCHOOL

Dyah Tri Wahyuningtyas

University of Kanjuruhan Malang
e-mail: dyahtriwahyu@unikama.ac.id

ABSTRACT

This study purposes to describe the application of bamboo dancing model which can improve the learn result on integers matter. It used Classroom Action Research (CAR) methodology applied on 38 students in the fourth grade of Kebonsari 1 Primary School Malang as subject research. The research product was a learning plan by applying bamboo dancing model. The results was showing the students' percentage of the learn result on Cycle I who reached the Standard of Minimum Completeness (SMC) was 72%. Then, in Cycle II the students' percentage who reached the Standard of Minimum Completeness (SMC) was raising to 88%. According to the results, the application of Bamboo Dancing model could improve the learn result on integers matter for the fourth grade of Kebonsari 1 Primary School Malang.

Keywords: bamboo dancing, integers, learn result

Mathematics is one of the field occupying an important role in education. Mathematics in implementation of education is given to all of education level. On primary school Indonesia curriculum, mathematics learning is known that it build the firm capability foundation on understanding concepts, ideas, rules, mathematics logics, reasoning utilices and verifications to solve a problem life (Department of National Education, 2007). By mathematics learning, students are expected to have discipline, toughness, curiousness and confidence. But by this day, a lot of students still think that mathematics is difficult because it is abstract, full of numbers and formula.

Negative perception of mathematics was also owned by the fourth grade of Kebonsari 1 Primary School Malang. Proven by the result of researcher's observation at the process of learning mathematics, enthusiasm of the students in learning mathematics was very low. It could be seen from the students who less of participation following the learning process, and the learn mathematics result indicating 60% fourth grade students or 22 students had beneath score of Standard of Minimum Completeness (SMC), which banned 75.

Number is one of the aspects developed on mathematics at the primary school level. The identification of number is started from natural number, whole number and integers. One of primary school basic competence of grade 4 and 5 in mathematics is integers. Integers taught covers the understanding operation of addition-subtraction and multiplication-division of integers. According to the interview result with the teacher of the fourth grade, researcher

obtained information that the understanding of integers in mathematics was still low. Connecting issues on integers in a school, where the students were still experiencing error concerning the direction of the movement on the line number, counting operation integers involving negative integers.

Learning process will not work without any learning activity from the students. Students' liveliness in learning is able to know the students' ability and understanding toward a matter. The teacher's role in learning process is able to increase students' liveliness by giving attractive activities and involving students directly in it. Effective learning can be reached, when a student play in an active role, while a teacher act as a tutor (Sudjana, 2009). The fourth grade students in Kebonsari 1 Primary School Malang were including as the students who quite active in the process of learning, but they were not in learning mathematics. Inasmuch, according to the observation, the students who were active in learning mathematics, were those who had understood the matter already, but the students who had not understood yet keep silent only and did not want to ask.

One of the models which including the students' liveliness is cooperative learning, where the students learn and work in the small group whose members consist of four to six people with the heterogeneous structure group (Rusman, 2010). Cooperative Learning is not only function as learn in the small group, but in the implementation also gives opportunity to the student to discuss, shares opinions, exchanges ideas and works together. The teacher of fourth grade students in Kebonsari 1 Primary School Malang has issued a number of cooperative models. One new innovations type of

cooperative learning which has never been applied is Bamboo Dancing type cooperative learning.

Bamboo dancing model is one of cooperative learning model managing its class done by the students line facing each other as similar as two pieces of bamboo used in a bamboo dance in Philippines which also popular in some region of Indonesia. Bamboo dancing learning is able to activate an existing cognitive structure that had been owned by the students (Agus, 2012). By this method, the students will discuss, share experience, knowledge and propose their idea to the other students. Therefore, learning becomes meaningful, and the students are also able to understand the concept of integers well.

The aim of this study is describing Bamboo Dancing learning model, that is able to improve the learn result on the integers matter for the fourth grade students in Kebonsari 1 Primary School Malang. In this study, the success criteria of the learn result can be improved if $\geq 75\%$ students reach the minimum score which banned 75 or more.

The learn result is a term used to denote something achieved by someone after making an effort. When the learn result is associated with learning, means the results showing something which accomplished by someone who learns in a particular time. The word learn itself is revealed by Slameto (2010:2) that "a process of effort done by a person to gain a whole change of a new behavior, as his own experience result in interacting to his environment." Therefore, to improve the students' learn result, the teacher need to develop the learning, and one of them is by applying a learning model which can improve students' activities in learning.

Bamboo Dancing learning model was one of cooperative learning model. Learning by using Bamboo Dancing model is as similar as inside outside circle model (Istarani, 2011). It is outstanding to be utilized for teaching material pertaining to the early knowledge for learning next matter. By using this model, is expected that there is similar information known by the students. It is also very beneficial in order to learn in a class more variety. Therefore, the students do not get bored easily.

The cooperative type steps of Bamboo Dancing learning model according to Istarani (2011) are as follows: (1) the introduction of material, (2) the displaying of material, (3) a group split, (4) a group discussion, (5) partner reshuffle, (6) class presentation, (7) closing.

This model is beneficial to shape togetherness among the students. In this

method, the competition is not occurring, the students are sharing information. Discussion among the students happened, when they are pairing of and when they are presenting the matter. Besides, it is also beneficial to increase the students' liveliness. In the learning process, there is a deal between the students and the teacher. Therefore, in the learning process, there are various attractive learning activities for students to discover information in achieving competence which want to be achieved.

METHOD

The research methodology was using Classroom Action Research (CAR) approach. This comprised of 38 students in the fourth grade of Kebonsari 1 Primary School Malang. It utilized a Classroom Action Research (CAR) approach which developed by Kemmis and McTaggart.

Hence, the study was composed of (1) the stipulation of research focus, the researchers requested research permission, conducted the first observation, validated the learning device and research instrument to the validator, (2) arrangement was preparing and composing research instruments, (3) execution was the performance of lessons plan's implementation, (4) observation and interpretation were recording of students' learning activities when the process of execution and interview was occurred, (5) analysis and reflection were illustrating the results of observations and interviews and analyzed the level of students liveliness in learning as well as reflecting what have not done yet and what was to be refined. The results of reflection would be utilized for improvement in next cycle.

The instruments of Bamboo Dancing learning model which was utilized by the researcher were as follows: (1) observation sheets, (2) interview, (3) validation sheets. After, the researcher assembled observation sheets of teacher's activities, students' activities, as well as the interview results have been collected, then, the next process was an analysis.

The data analysis stages which was used in this study consisting of 3 phases were (1) reducing the data was describing committed learning procedure, observed indicator of liveliness students' learning which was arise during the learning process, (2) displaying the data was making charts to distinguish dissemination of the liveliness students' learning, (3) drawing conclusion and verification of the data was glancing the achievement which had been determined.

This study withdrawal conclusion and verification were done toward the liveliness students' learning during the learning process. On the other hand, the withdrawal of conclusion results and verification would determine whether the researcher needed to conduct the next cycle or not. Indicator success of the liveliness students' learning

in this study was improving when the analysis result of the students' observation activities sheets suggested that they were active.

RESULTS AND DISCUSSION

In common, the stages of learning by using the Bamboo Dancing model in integers matter was produce:

1. The introduction of material. The teacher conveyed the integers matter. In this part, the teacher were doing a question and answer toward the students concerning the students' early knowledge about a matter given formerly.
2. Displaying of material. The teacher extended integers matter in the front of the class by using a media. Then, the teacher provided an example to use the media.
3. A group split. The teacher divided the students into 4 large groups, and each group sit facing each other.
4. A group discussion. The teacher distributed the Student Activities Sheets and media, and gave an assignment to each group. Automatically, the students were discussing to finish off their tasks in Student Activities Sheets by exhibiting the media.
5. Partner reshuffle. The teacher was directing one student in each group sitting at the tip of a line to move to another tip. Then, this was when a line shifted. Each student would get a new partner to discuss carrying out other existing tasks in Student Activities Sheets by using *wayangmatika* media. Shifting was undertaken until they returned into their first partner.
6. Class presentation, each large group presented the discussion result in front of the classroom. The teacher motivated the students to respond the presentation result which had outlined by their friend.
7. Closing. The teacher led and directed the students to make inferences against the material that had been learned, and gave homework and material which would be learned at the next meeting.

The learning steps by utilizing Bamboo Dancing model applied by the researcher was accordance with Istarani (2011); there were displaying of class, displaying of material, a group split, a group discussion, partner reshuffle, class presentation and closing.

Based on the observation results, students were lively in clusters to finish off work sheets activities. Activities in the work sheets were (1) those tasks activities on worksheets which was involving the use of media in the process, (2) the students were not

only listening their teacher, but also directly experiencing on playing arithmetic integers operation through media, (3) the tasks activities on worksheets were challenging the students to keep trying to convert simulation image into a mathematics sentence, (4) the tasks activities on worksheets contained associated story in daily life. According to some task activities on worksheets which had been completed by the students, it presented that the students' learning activities are not only lectured by the teacher and memorize all of formula but also able by learning activities directed on comprehending concept. This is claimed by Hiebert and Carpenter (1992:74) that understanding students reduce several things which must be remembered. Hence, it is expected to improve the students' learn result.

Based on the interview results to several students which participating in applying Bamboo Dancing model, the students learnt integers matter easily. Therefore, in learning process, the students were more pleasing to learn by using this method.

The students' learn results on integers matter were excellent. It could be seen from the last test of students' learn results, conducted for the purpose to know the level of the students' learn results on integers matter and to know the level of students' success. The final test was held at the end of Cycle I and II undertaken individually by the students. Specific criteria which says understanding concept of the students is improving when $\geq 75\%$ of the students reached Standard Minimum of Competence score, which banned 75.

The final test result of fourth grade students were obtained on Cycle I about 24 students or 72% students who reached Standard of Minimum Completeness score, and on Cycle II consisted of 29 students or 88 % who reached it. Based on the students' final test, the average final test score percentage was 72%, and improving into 88%.

CONCLUSION

Based on the research which had been conducted, improving the learn result on integers matter for the fourth grade of Kebonsari 1 Primary School Malang through the application of Bamboo Dancing model could be concluded that Bamboo Dancing learning model was covering 7 stages; those were displaying of class, displaying of material, a group split, a group discussion, partner reshuffle, class presentation and closing.

Bamboo Dancing learning model could improve the students' learn result on integers matter for the fourth grade of Kebonsari 1 Primary School Malang. This could be seen from improvement of the average final test score percentage from 72% to 88%.

Advice from these activities, the next researchers proper to conduct the further research

on the use of other innovative learning models which can improve the students' learn result in mathematics.

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