



## PICTURE AND PICTURE LEARNING MODEL USING TIME CLOCK MEDIA MATERIALS IN 3rd CLASS OF PRIMARY SCHOOL

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### Abstract

The purpose of the following research is to describe the increase in the score of mathematics learning outcomes by applying the picture and picture learning model through the media of an artificial clock about time calculation. In the learning outcomes of 3rd graders at SD Kartika IV-9, Surabaya, 52% of students did not complete their grades, especially in mathematics. This is one of the considerations taken by researchers in determining the solution to the problem is to use a picture and picture learning model through the media of an artificial clock. Artificial hour learning media on theme 6 is applied to class III semester 2. Artificial hours made in learning 5 sub-theme 1 include time calculations. The Artificial Clock is adjusted based on the calculation of time. In addition, the layout of the numbers on the clock must be correct so that it looks like the real one. The subjects chosen in the study were students in class III SD Kartika IV-9 Surabaya. It can be seen from the results of the analysis that shows a difference in student learning outcomes for mathematics subject matter 6 class III SD Kartika IV-9 Surabaya. The difference is shown by the learning result test score at the end of the first cycle is 47% and at the end of the second cycle it is obtained 81%, an increase of 34%. The conclusion that can be drawn is that the application of the picture and picture learning through mock-watch media improves learning outcomes.

**Keywords:** picture and picture; artificial clock; time calculation.

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### INTRODUCTION

Education is always related to the curriculum, our country uses the revised 2013 curriculum including at the primary school level. The 2013 curriculum itself is a curriculum that prepares students to acquire life skills as individuals and citizens who are innovative, productive, faithful, affective, creative and useful in community, state, and world life. As stated in the characteristics of the 2013 curriculum in the appendix of the Permendikbud, (Hasanah, 2017) which integrates



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and harmonizes the development of social and spiritual attitudes, creativity, psychomotor, curiosity, and cooperation in an intellectual way, as for the subjects taught by students one among them is mathematics.

Mathematics is a compulsory subject that is studied by students, of course the implementation of learning must be in line with the goals of national education. Learning mathematics makes students develop logical, creative, critical, and systematic thinking patterns. The reason for this is because structured mathematics, strongly and clearly interrelated between concepts, results in students being trained to think rationally.

Structured means that mathematical material is related to one another. New material will always require previous material in solving problems. This is one of the factors that make it difficult for students to learn new material. Because if students have not or have not mastered the previous material, it is certain that students will work harder in learning the latest material.

Based on the pre-cycle interviews that have been conducted with grade 3 teachers, it is found that mathematics learning in time calculation material still applies conventional methods. Teachers dominate the course of learning so that it makes students bored. In addition, some students seem less active, and tend to find it difficult to understand the material, coupled with the lack of improvisation by the teacher in delivering learning material. The teacher never teaches with concrete objects and only draws these objects on the board as a teaching medium. It cannot be denied that this results in students being less interested in the mathematics learning process. It is clear from the student scores that are still incomplete. The value of the minimum completeness criteria determined by the school is 75. In fact, from the 39 students who are in grade 3 at Kartika IV-9 Surabaya elementary school, 52% of students whose scores are less than the specified minimum completeness criteria are recorded. The details obtained were only 18 scores that reached the minimum completeness criteria, while 21 students scored below the minimum completeness criteria. Based on this fact, researchers are trying to find a



solution in solving problems in the learning process. One solution that can be chosen in attracting students' enthusiasm for learning in the teaching and learning process is improvisation in teaching by practicing cooperative learning models.

Cooperative learning model can be defined as a series of student activities in their study groups in achieving learning objectives (Fiteriani, 2016). As for the various types of cooperative learning, among others; Jigsaw, Student Teams Achievement Division, Jigsaw, Group Investigation, Picture And Picture, etc. From a variety of cooperative learning models, researchers tried to choose to use the picture and picture learning model because this model displays attractive and colorful pictures which is one of the things that elementary school students like. When we can make students like learning, then we can make students interested in learning the material, because this learning is considered suitable for solving problems in the learning of low-level elementary school students. The picture and picture learning model is a learning strategy that uses images as a tool in the implementation of learning (Ulfa, 2017). The Picture and Picture learning model is a learning method that uses pictures to be sorted or paired into a sequence that makes sense (Sa'adah, 2017).

However, in learning mathematics, researchers can certainly be creative in creating learning, not only applying a learning model so that learning is more enjoyable, but researchers can also use a learning medium to help deliver learning material. That way teaching and learning activities will be more effective and interesting. The Learning Media itself is a tool that helps in informing part or all of the subject matter that is difficult to explain with a lecture. Learning media consists of devices that are used in delivering the content of subject matter which includes slides, films, video recorders, video cameras, cassettes, tape recorders, computers and books (Reza, 2017).

According to Ridwan, (2018) As for several forms and types of media, among others; audiovisual media, auditive media, and visual media. Of the several forms and types of media that have been mentioned, researchers chose to use visual media types. Kholid (2017) states that visual media is a tool that is limited in terms



of view and does not contain sound elements, for example, transparency, slide flim, pictures, paintings, clocks, photos and others. The researcher chose to use an artificial clock form as a concrete form of time calculation material in learning mathematics. That way it is hoped that by practicing the learning model integrated with these media can activate and strive for student grades to increase, and learning becomes fun and conceptual so that the learning objectives can be achieved.

Based on the explanation above, it is necessary to carry out classroom action research to describe the increase in test scores of grade 3 students in mathematics by applying the picture and picture learning model through mock-clock media in grade 3 at Kartika IV-9 elementary school Surabaya.

## **METHOD**

The research was conducted in April 2019 at the Kartika IV-9 elementary school in Surabaya, the material for calculating mathematics lesson time. The subjects of this study were 39 students of grade 3 elementary school Kartika IV-9 Surabaya with 23 girls and 16 boys. This type of research is classroom action research. Classroom action research can be defined as one that is rooted in the problems that the teacher feels and faces directly. The procedure in this study includes a series of activities carried out in a repetitive cycle. There are four main activities in each cycle, namely: planning, acting, observing, and reflecting.

The test sheet was chosen as the instrument in this study. The data was collected by carrying out a learning outcome test and supported by field notes. This study uses two categories of learning completeness, the first individually is obtained from the completeness of the minimum criteria that have been determined at the school, namely 75. Next, the second is classically stated by the achievement of student learning completeness in the class exceeding or exactly 80% of the total students. This research is said to be successful if the classical percentage reaches 80% and increases from the previous cycle.



## RESULT AND DISCUSSION

The implementation of this research took place at the Kartika IV-9 elementary school Surabaya. This school is located in the middle of a residential area, precisely on the street Brawijaya No.38 Surabaya. Before cycle 1 is carried out, it is necessary to test the instrument through the validation test, to obtain valid results. The instruments tested were learning outcomes tests, lesson plans, worksheets, and mock-watch media. Instrument validation was evaluated by several experts, namely: (1) material expert Suhartono, S.Pd., M.Pd as validator I, (2) Class teacher, Yoga Budino, S.Pd as Validator II, (3) Peer, Dedi Yuanto as Validator III. Based on input from the validator, the compiled device was revised again to make it more valid. Cycle I was held in two meetings, each meeting was held 2 x 35 minutes.

Cycle I was held on April 17 and 18 2019. After the learning outcomes test was carried out, 17 students achieved completeness individually out of the 39 students who attended. The reason 3 students did not enter was 1 because the sick permit was 2 without information with the percentage of achieving the minimum completeness criteria was 47.22%. Based on the results obtained, the implementation of the teaching and learning process in cycle I was carried out well. Students become interested and enthusiastic in participating in mathematics learning time calculation material by applying the picture and picture learning model through the mock clock media provided. The researcher made field notes about everything that happened during the first cycle, these notes were:

- a. The conditioning of busy students has not been implemented properly. Given that today's children prefer to talk a lot rather than listen to the teacher in giving material.
- b. Time management that cannot be efficient in doing individual tasks. Evidenced by the delay from the predetermined time.

Before stepping into the second cycle of research, the researcher fixed the devices, instruments and any shortcomings in the first cycle and then tested the instruments through the validation test, to obtain valid results. The instruments



tested were learning outcomes tests, lesson plans, worksheets, and mock-watch media. Instrument validation was evaluated by several experts, namely: (1) material expert Suhartono, S.Pd., M.Pd as validator I, (2) Class teacher, Yoga Budino, S.Pd as Validator II, (3) Peer , Dedi Yuanto as Validator III. The results of the validation test for cycle two are stated to be good and the instrument is suitable for research. The implementation of cycle II consisted of two meetings, each meeting held 2 x 35 minutes. The thing that distinguishes between cycle I and cycle II is the discussion in the form of groups.

Cycle II was carried out for two meetings, namely on April 24 and 25 2019. From the learning outcome tests that had been carried out, it was found that the number of students who reached a value of  $\geq 75$  was 30 out of the total students who took the test at the end of cycle II. From the list of accepted attendance, the reasons for the 2 students who did not enter were Solomon and Farrel without explanation with classical completeness of 81.08%.

From the cognitive results of cycle I and cycle II, it was found that an increase in learning outcomes was 34%. The increase in cognitive learning outcomes is obtained from the results of individual assignments given in each cycle. The minimum completeness criteria specified in this study were  $\geq 75$ . There were 17 students who could pass the minimum completeness criteria from 39 people who took the test. From the first cycle, the percentage is 47% and it can be stated that it has not been reached from the specified percentage limit of 80%. As for the second cycle, the number of students who could exceed the minimum completeness criteria were 30 out of 39 students who took the 37 student test. The resulting percentage is 83% for this second cycle.

## CONCLUSION

The picture and picture learning model was chosen because the use of pictures can make elementary school students more motivated in learning the material. To be more effective, the researchers tried to combine the picture and picture learning model with artificial clock media, because of its suitability with the



material, namely the calculation of hours. Based on the application of the picture and picture learning model using artificial clock media for time calculation material for grade 3 students, the results and discussions that have been presented in this classroom action research conclude that classical mastery student learning outcomes increased by 34%, this can be seen from the results of classical mastery learning outcomes in the first cycle got 47% and in the second cycle it became 81%.

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