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## THE INFLUENCE OF THE USE OF *INSIDE OUTSIDE CIRCLE* MODEL ON THE RESULT OF SCIENCE LEARNING IN 3<sup>rd</sup> GRADE ELEMENTARY SCHOOL STUDENTS

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**Abstract.** The purpose of this study was to determine the effect of Inside Outside Circle learning model on the results of science learning outcomes of third grade students of elementary school 02 Pringtulis Jepara. This type of research is quantitative research in the form of Pre Experimental Design with One-Group Pretest-Posttest Design technique. The study population was all third grade students of elementary school 02 Pringtulis Jepara. The samples taken were 21 students using Saturated Sampling techniques. The data of this study were obtained through interviews, observation, documentation and pretest, posttest research instruments. The results of the pretest analysis there were 19 students did not complete with a percentage of 90% and the posttest results there were 16 students completed with a percentage of 76%. The difference in student learning completeness in the learning outcomes of the pretest and posttest was 24.38. This is evident in the final analysis of the results of the t test where  $t_{count} > t_{table}$  is  $16.3362 > 1.72$  at a significant level of 5%. the conclusion is that the application of the Inside Outside Circle learning model can improve student learning outcomes in science material.

### INTRODUCTION

Quality education is very important to support the creation of intelligent and skilled human beings so that they are able to keep up with the development of an increasingly modern era. The quality of human beings needed by the Indonesian people in the future is able to face increasingly fierce competition with other nations in the world, especially in the field of education. Based on the Government Regulation of the Republic of Indonesia Number 19 of 2005 concerning Education National Standards in chapter IV concerning Standard Process Article 19 Paragraph 1 says that "The Learning Process in educational units is held interactively, inspirational, fun, challenging, motivating students to actively participate, and providing sufficient space for initiatives, creativity and independence in accordance with the talents, interests and physical development and psychology of students .

The potential of students needs to be developed by improving teacher skills in managing the learning process. one of them is applying creative, innovative and varied learning models. When the learning process is carried out, sometimes there is a discrepancy between expectations and facts that occur in the field or problems in the implementation of the learning process. One of the problems is the level of student understanding of the material so that learning outcomes are still low. This is reinforced by the findings of interviews conducted at the elementary school 02 Pringtulis Jepara.

The results of observation and interviews in elementary school 02 Pringtulis Nalumsari Jepara in grade 3 students found problems that are many cognitive learning outcomes of students of science subjects who still have not reached the standard of learning completeness that is 65. there are 60% of 21 students who

have not achieved completeness grades. the science learning process takes place by providing extensive, conventional and monotonous material. the teacher has never used the learning model, and the lack of student involvement is an obstacle for students to understand the material and foster curiosity.

Joyce and Weill in Huda (2013: 73) say "teaching models are designed for specific purposes, teaching information concepts, ways of thinking, studying social values, and so on. By asking students to be actively involved in certain cognitive and social tasks. Arends (1997: 7) in Trianto (2010: 51) says that "The learning model is a plan or a pattern used as a guide in the tutorial". The learning model refers to the learning approach that will be used, including the objectives of teaching, the stages in learning activities, the learning environment, and classroom management.

Inside Outside Circle is a learning model with a system of small circles and large circles beginning with the formation of large groups in a class consisting of groups of inner circles and groups of outer circles. Members of the outer circle group stand facing inward. Between members of the inner and outer circle in pairs and face to face, where students share information at the same time with different pairs briefly and regularly. Then, students in the large circle shift one or two steps clockwise so that each student gets a new partner (Shoimin, 2014: 87-88).

In the learning process it is no longer just the transfer of knowledge from teacher to student, but the process of obtaining by understanding concepts that are oriented to student involvement actively and directly, so that this model can be implemented in science learning and can improve student learning outcomes.

This statement is reinforced by the results of the research of Kd Megawati and Pt Nanci Riastini in 2014 found that the average score for the experimental class was 19.44 while the control class was 15.40. the results of data analysis using the t-test obtained  $t_{count} = 14.49$  greater than  $t_{table} = 2.007$  at the significance level of 5%. Thus, the Inside Outside Circle (IOC) cooperative learning model affects the IPA cognitive learning outcomes of 5th grade students in the academic year 2013/2014 in cluster VII of the Sawan District.

The focus of this study is the application of the IOC learning model and the effect of learning outcomes on science learning. Based on the problems described above, the researcher raises the title "The Effect of Using the Inside Outside Circle Model on the Learning Outcomes of Science Subjects of Class 3 Students in Elementary School 02 Pringtulis Jepara.

## METHOD

This research uses quantitative research methods, where research methods are based on positivism philosophy in certain populations or samples. The sampling technique is generally carried out randomly, data collection uses research instruments, data analysis is quantitative / statistical in order to test the hypothesis that has been applied (Sugiyono, 2016: 14).

The research method used is the experimental research method. The experimental research method is as part of a quantitative method that has its own characteristics, especially with the existence of a control group (Sugiyono, 2016: 107). This study uses a Pre-Experimental design with experimental design forms One Group Pretest-Posttest. The research is described as follows (Sugiyono, 2015: 75).

### One Group Pretest Posttest Design

O1 = value of pretest (before being given treatment)

O2 = posttest value (after being treated)

Effect of treatment on learning outcomes = (O1 X O2)

In this design there is one class or one group that is given a pretest to find out the initial condition before treatment. The research design is carried out by carrying out stages, including: preparation, implementation and final stages. The initial stage has steps, including: determining the subject in the study, making a lesson plan, making a grid of test questions, making items based on the grid that has been made. Test the items in grade 4 of elementary school 02 Pringtulis, Jepara, analyze the data from the test results to find out the validity of the items, reliability of the questions, the level of difficulty and the distinguishing power of the questions. After doing the analysis then do the pretest in grade 3 SD 02 Pringtulis Jepara

During the implementation phase, the researcher held a learning in grade 3 at

elementary school 02 Pringtulis Jepara using the inside outside circle model. The final stage carried out by the researchers was: (1) Giving posttest in grade 3 of elementary school 02 Pringtulis Jepara, (2) Analyzing the results of the posttest that had been done.

The study population was all third grade students of elementary school 02 Pringtulis Jepara. Sugiyono (2016: 117) says that "population is a generalization region consisting of objects / subjects that have certain qualities and characteristics applied by researchers to be studied and then drawn to conclusions". While "the sample is part of the number and characteristics possessed by the population". So the sample is the representative of the population to be studied. With samples, researchers are not too difficult and not too broad in conducting research. (Sugiyono, 2015: 81).

In this study, a sample of 21 grade 3 students was selected. Taking sample using Nonprobability Sampling technique which includes saturated sampling is a sampling technique if all members of the population are used for samples (Sugiyono 2016: 124).

The data in this study used tests and non-tests. The types of tests in this study were pretest and posttest. The pretest was used by the researcher to find out the initial condition of the student, and the posttest was used at the end of the learning to find out whether the learning was successful or not. This test is used to measure learning outcomes in science subjects in grade 3 elementary school 02 Pringtulis Jepara.

The non-test techniques used were observation, interviews and documentation. In this study observations were carried out on grade 3 students of elementary school 02 Pringtulis Jepara by looking at and observing the affective and psychomotor aspects that arise when learning takes place. interview aims to get data about the students' initial state of learning outcomes in the realm of knowledge and skills.

The initial analysis is the normality test to find out whether the sample taken from the population is normally distributed or not. The initial normality test uses data from the students' pretest, while the final normality uses data from the students' posttest results.

The final stage of the analysis is used to compare the data on the results of the pretest and posttest and to determine whether or not there is a difference as a result of treatment using the inside outside circle learning model on the learning outcomes of grade 3 students in science subjects using a different test or t-test

## RESULT AND DISSCUSSION

The study was conducted in elementary school 02 Pringtulis Jepara 3rd grade even semester 2017/2018 academic year with 21 students. Researchers applying the inside outside circle model as an effort to improve science learning outcomes. This study uses a type of design that is Pre-Experimental with an experimental design form One Group Pretest-Posttest. The following are the results of the pretest and posttest.

**Table 1. Recapitulation of Calculation Results Normality Test Pretest and Posttest Value**

| Value           | $L_0$  | $L_{tabel}$ | Information         |
|-----------------|--------|-------------|---------------------|
| <i>Pretest</i>  | 0,1097 | 0,1866      | Normal distribution |
| <i>Posttest</i> | 0,1782 | 0,1866      | Normal distribution |

Based on the value of the pretest shows that grade 3 elementary school 02 Muryolobo Jepara is normally distributed because the value of  $L_0 < L_{tabel}$  is  $0.1097 < 0.1866$  with  $n = 21$  and the real level  $\alpha = 0.05$ . In the next final stage, the normality test is carried out again using the posttest value.

Based on the posttest value shows that grade 3 elementary school 02 Pringtulis Jepara is normally distributed because  $L_0 < L_{tabel}$  is  $0.1782 < 0.1866$  with  $n = 21$  and the real level  $\alpha = 0.05$ . The pretest and posttest values were used as cognitive aspect values, attitude and skills assessment sheets were used as an assessment of affective and psychomotor aspects. The recapitulation of the results of the affective and psychomotor value calculations can be in table 2.

**Table 2. Recapitulation of Results of Calculation of Affective Value**

| Meeting | Highest value | Lowes value | Average |
|---------|---------------|-------------|---------|
| 1       | 83,33         | 50          | 72,61   |
| 2       | 83,33         | 58,33       | 75,47   |
| 3       | 100           | 66,66       | 81,66   |

**Table 3. Recapitulation of Results of Calculation of Psycomotor Value**

| Meeting | Highest value | Lowe value | Average |
|---------|---------------|------------|---------|
| 1       | 75            | 50         | 70      |
| 2       | 100           | 75         | 85,71   |
| 3       | 100           | 75         | 93,57   |

Table 2 shows that the average score of attitudes at the 1st meeting reached 72.61, at the second meeting it increased to 75.47, and at the 3rd meeting it increased to 81.66. Table 3 shows that the average psychomotor value at the 1st meeting reached 70, at the second meeting it increased to 85.71, while at the 3rd meeting it increased to 93.57. So it can be concluded that learning using the inside outside circle model can improve grade 3 affective and psychomotor learning outcomes of elementary school 02 Pringtulis Jepara.

Based on the two-party t test by comparing the learning outcomes of the pretest and posttest, obtained tcount = 16,362 with N = 21 then compared with the price of ttable on db = 21-1 = 20 and the level  $\alpha = 0.05$  is 1.72.

Because thitung (16,362) > t table (1,72) then  $H_a$  is accepted so that there is an influence of the learning model inside outside circle on the learning outcomes of science students in grade 3 elementary school 02 Pringtulis Jepara.

Based on the results of research in grade 3 Pringtulis Jepara 02 elementary school that shows differences in learning outcomes before treatment with after being given treatment. Can be seen in Table 4.

**Table 4. Recapitulation of the Results of Calculating the Percentage of Pretest and Posttest Values**

| No                | Learning outcome | KKM | Percentage   |              |
|-------------------|------------------|-----|--------------|--------------|
|                   |                  |     | Complete     | Not Complete |
| 1.                | <i>Pretest</i>   | 65  | 2<br>(10%)   | 19<br>(90%)  |
| 2.                | <i>Posttest</i>  | 65  | 16<br>(76%)  | 5<br>(24%)   |
| <b>Rata- Rata</b> |                  |     | <b>48,76</b> | <b>73,14</b> |

From Table 4 shows the value of students' pretest, there are 2 students who complete with a percentage of 10% and 19 students who have not finished with a percentage of 90%.

While the value of Posttest shows as many as 16 students who complete with a percentage of 76% and 5 students who have not completed with the percentage of 24%. While the average test scores before and after learning using the inside outside circle model there are significant differences.

Before being treated, the average value of 48.76 was obtained while after being given treatment an average of 73.14 was obtained. The results of the comparison of the pretest and posttest values showed a significant increase of 24.38. It can be concluded that the inside outside circle model can improve the science learning outcomes of grade 3 elementary school 02 Pringtulis Jepara.

### CONCLUSION

Conclusions of the study with the use of the Model inside outside circle on the 3rd grade science learning outcomes of elementary school 02 Pringtulis Jepara are the results of the analysis obtained there were differences in student learning outcomes indicated by the pretest and posttest values  $48.76 < 73.14$  with a difference of 24.48. The t-test results show the influence of the Inside Outside Circle learning model on the science learning outcomes of third-grade students at Pringtulis Jepara elementary school.

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