THE DEVELOPMENT MODEL OF INDEX CARD MATCH TO INCREASE THE LEARNING OUTCOMES OF 4TH GRADE STUDENTS ON SOCAL SCIENCES AT ELEMENTARY SCHOOL

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Abstract. The background of this research was the low learning outcomes of students in Social Sciences (IPS). This research aims to obtain information about improving learning outcomes in Social Sciences (IPS) subject by applying the Index Card Match method in elementary school. This research was held at SDN Mandalawangi, Cipatat Sub-district, West Bandung District using a quasi-experimental method with the Nonequivalent Control Group Design. The subject of this research was the 4th grade students of SDN Mandalawangi, Cipatat Sub-district, West Bandung District. There were 60 students that divided into 2 classes, class IV A and IV B. The research sample was taken using saturated sampling technique because the number of samples was equal to the population. The techniques of data analysis include normality test, homogeneity test and t-test. After getting the pre-test and post-test learning outcomes of both classes students, the score were analyzed until the final results stated by the difference average test. The score for control class was 8.4 and the average score for the experimental class was 34.6. Based on the results, the application of the Index Card Match method can improve student learning outcomes in social sciences subject in elementary school and the hypothesis that said there is a significant improvement in student learning outcomes by applying the Index Card Match method on social sciences subject in elementary school is acceptable.

Keywords : learning outcomes, index card match method

A. Introduction

Learning Social Science at elementary school by students considered boring, unattractive, not so important, and relatively difficult. These things cause a lack of students' interest to follow the learning process. As a result, the students understanding to learning materials still low. Learning goals doesn't optimally achieved yet (Sukamanasa, 2017).

One of the students' problem which tend to not be able to understand Social Sciences subject is lack of use of learning models and inaccurate use of learning methods. Social Science learning in elementary schools if they are still using conventional methods tend to cause a lack of students' interest, so that during the learning process students tend to be less active and noisy.

This will affect the students' learning outcomes to achieve the level of completeness learning. Learning is intended to cause behavioural changes, like changes in cognitive, affective, and psychomotor aspect (Sapriya, 2009). Changes in these three aspects are the result of the learning process, learning outcomes are the relevant purpose of the teaching process that has been carried out. However, it was not easy to deliver the Social Science, because the in general situations now is a lot of various problems and difficulties that faced by students when studying Social Science, especially in elementary school.

The Social Science learning process will be carried out well if it starts from the process of identifying problems that are appropriate to the situation and factual in accordance with everyday life, so that the learning will be more meaningful for students (Sadiman, 2008). One of the measurement to assess teaching success is to use the results that achieved by students which is learning.

Learning outcomes are a final assessment of the process and recognition that has been down repeatedly. And it will be stored for a long time or even it will not disappear forever because learning outcomes are participate in shaping the personal of

individuals who always want to achieve better result, so it will change the way of thinking and produce better work behaviour (Risdianto, 2016).

Although up to now the tools that used to asses or measure the learning success of objectivity level are not known yet, but the students' learning success that achieved by students is based on the assessment of "as it being", giving clues that educators are required to improve the learning outcomes of their students (Windiyani,T., Lina, N., dan Anisa. P., 2018).

The duty of a teacher is not only understanding but also can carry out the tasks so that the Social Science in the classroom become effective (Damanhuri, Zerri, R., H., dan Mega, U.,P., 2016). To solve this problem, a learning model is needed to improve students' learning outcomes. A good learning model is a student-centered learning model (Sediasih, 2017).

There are several types of learning models to improve the learning outcomes, one that is the index card match method, so the material that has been studied can be recalled by students. The Index Card Match model is an active learning method for reviewing lesson's material with a technique of finding the index cards pairs that were the answer or a question while learning about a concept or topic in fun circumstances (Sumayana, 2015).

According to Suprijono (2013) Index Card Match is a method of "looking for pairs of cards" which is quite fun to use to repeat the lesson's material that has been given previously. Students are required to understand the concept of index card, where the card are consists of two part, the question and answer. Students have the opportunity to get one index card and asked to find the pairs of index cards that they have before. Students who get the question index card must look for students who have the answer index card and vice versa. Index Card Match (ICM) is one type of active learning strategy. Index Card Match is a fun and active way to review the lesson's material (Frasticha, Maman Fathurrohman dan Ihsanudin. 2016). Silbrem (2010: 80) stated that the function of Index Card Match method

is: 1) More enthusiasm in receiving the lessons. 2) Be more careful in the learning process. 3) Understanding a material will be much easier. 4) Do not feel surfeit in learning.

Students are expected to improve learning outcomes and activeness through the application of Index Card Match learning methods. According to Purwanto (2014) learning outcomes are the behavioral changes that happen after following the learning process that are suitable with educational purposes.

Based on the observations result in the field toward Social Science learning process of students in grade 4th at SDN Mandalawangi, Cipatat Sub-district, District of West Bandung, still found conditions such as: students tend to be less active in the learning process, the condition of class is tend not conducive, tend to lack understanding of the material that has been delivered, learning outcomes tend to be low.

Based on observations that have been made during the learning process of Social Sciences, the teachers holds the main role. Learning uses only the media of package books and lecture methods. Teachers does not involve students to active in learning. That kind of learning is always considered a boring and tiring subject because students are required by teachers to memorize a lot of lessons (Wirya, Lalu Kerta, 2017).

Seeing these problems, the increasing learning outcomes are needed to be pursued for the students' success in learning, so educators as an important element in learning process must be able to overcome them. One of the way to overcome this is by the way of professional educators in determining a varied method that will optimized the delivery of lessons, so that students are more motivated in participate at Social Science lesson.

B. Research Methodology

The experimental design that used for this research was Quasi Experimental with the research pattern of Nonequivalent Control Group Design. This design is almost same as the pretest-posttest control group design, except that in this design the experimental group and the control group were not randomly chosen.

The design of this design consists of two group, which is experimental group and the control group. The control group and the experimental group were given the pretest first. For experimental group given certain treatment, while the control group was treated conventionally and the experimental group was given posttest to see the effect from treatment toward the experimental group.

The research location is a place to conduct research activities to obtain the required data from respondents. The location for this research is SDN Mandalawangi, Cipatat Sub-district, District of West Bandung, West Java 40554.

In this research, the population which will be observed is from 4th grade students in SDN Mandalawangi, Cipatat Sub-district, District of West Bandung, that have 60 students.

The sampling of this research is the total or saturated sample. Total sampling or saturated sample is a sampling technique where the total samples are equal to the population. Taking sample produce 30 students of 4th grade A as the Control Group and 30 students of 4th grade B as the Experimental Group. So, the total is 60 students.

The analysis data in this research is a quantitative data, analysis data will continuously done since the beginning to the end of research. Data analysis done quantitatively, which is data in the form of sentences or statements that are interpreted to know the definition and to understand the relevance with the problem that is being observed.

C. Research Results and Discussions

Observation Result

Observation is done to observe the students' affective and psychomotor. Observation were made to students just before the treatment and after treatment, this aims to see whether there were changes to the students both before and after being given treatment. Processing data obtained from observations that conducted by researchers in the experimental group that aimed to know the achievement of the steps in index card match method and in control group using conventional methods. The results of processing observational data that calculated using Microsoft Excel software are listed in table 2 below:

Table 2. Students' Observation Results

Num	Giving Treatment	Class/Group	Observation	Percentage (%)	Information
1	Before	Experimental	Affective	56	Below Average
			Psychomotor	60	Below Average
		Control	Affective	57	Below Average
			Psychomotor	50	Poor
2	After	Exsperimental	Affective	80	Good
			Psychomotor	83	Good
		Control	Affective	70	Below Average
			Psychomotor	63	Below Average

Based on the results of the observation data above, the affective and psychomotor observation results of the students before given the treatment, in the experimental group reach average of 50% and in the control group reach the average of 50%. Both are below average than learning criteria. After being treated with the Index Card Match method in the experimental group, the affective and psychomotor observations results became more good with an average of 80% including both learning criteria and the control group without being given treatment, on average of 60% were still below average than learning criteria.

Tabel 3. T Test Data of Posttest

	F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.702	.405	12.308	58	.000	27.867	2.264	23.335	32.399
Equal variances not assumed			12.308	56.893	.000	27.867	2.264	23.333	32.400

Based on the data that obtained from the post test data above, it is proved that the learning of students using index card match method can significantly improve learning outcomes when it compared to students who do not use the Index Card Match method or using conventional learning process

Discussion the Results of Research

Based on the results of research observation above, it can be seen that by using Index Card Match method treatment there is an increasing students' learning outcomes in Social Science learning in elementary schools with the use of Index Card Match method and the use of conventional methods. The improvement of students' learning outcomes in elementary schools using Index Card Match method can be seen from the increase in the average of pre-test and post-test at both group, where the improvement average score of experimental group pre-test at 46.60 after being treated with index card match method can be seen in the post-test score at 81.20. So there is a very good improvement. While the improvement average score of control group at pre-test was 44.93 and at post-test 53.33, the average score was not too good.

The differences in learning outcomes between students who use index card match method with students who use conventional methods in Social Science learning at elementary school, can be seen from the statistical results of processing calculations data and test of

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significances (sig 2-tailed) with T test, shows a significant differences because the score of significance was 0,000 is less than 0.05. So the students' learning outcomes in Social Science between the experimental group and control group have differences after being treated.

The explanation above shows that the application of Index Card Match learning method in experimental group can be done very well and there is achievement of leaning. The results of this research shows that the application of Index Card Match method can more improve students' learning outcomes, students more understand the lesson that been taught because students directly involve in learning (Senoaji H., 2017). Students can also work together in solving problems in their learning groups by discussing or can be stated that students become more active so it is easier the understanding in learning process. Teachers in improving the activeness of students and students' learning outcomes using Index Card Match method are the right action. Because by using Index Card Match method, students will be directly involved in learning process and students also work and study together with their partners who have different capability. With mutual assistance, exchanging ideas and working together in study groups will not bore students in learning history and will improve students' social skills and learning outcomes can be optimally achieved (Umaryati, Yani. 2009).

Thus, the learning process using Index Card Match method can be used as an alternative for educators to improve students' learning outcomes in Social Sciences subject with the ethnic and cultural diversity lesson.

D. Conclusion

Based on the research results and observation that have been analysed, the conclusion of this research is:

Based on the test results, can be conclude that the application of Index Card Match method can improve students' learning outcomes in Social Sciences subject at elementary schools. This is proven by a significant differences in students' learning outcomes in Social Science between experimental group and control group after being given treatment. So it can be concluded the hypothesis that states "there is a significant improvement at students learning outcomes by applying Index Card Match method in Social Sciences subject at elementary schools" is acceptable.

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