ISSN No:-2456-2165

Application of Discovery Learning to Train the Creative Thinking Skills of Elementary School Student

Suida Suwandari,
Postgraduate Program
Primary Education Study Program
State Universitas Negeri Surabaya

Muslimin Ibrahim
Profesor, Natural Science Study Program
Universitas Negeri Surabaya

Wahono Widodo
Doctorate, Natural Science Study Program
Universitas Negeri Surabaya

Abstract:- This research aimed to describe the learning outcomes by using the methods of discovery learning and examine the effect of discovery learning methods to creative thinking skill elementary school fifth grade students. This research is an experimental research design with pretest posttest control group design. The subjects were students of class fifth grade SDN Sidotopo II/49 Surabaya. The technique of collecting data through observation sheet learning outcomes and evaluation tests of creative thinking skill. Before analyzing the research data, researcher conducted an instrument trial analysis using validity and reliability test. Data were analyzed using normality test, homogeneity and hypothesis testing using t test. The results showed that: First, learning outcomes by using discovery learning methods obtain an average yield of 88,3% and the percentage of these scores are included in the criteria very well. Second, discovery learning methods effect on creative thinking skill, it is based on the value of learning outcomes tcount of 7.549 (7.549>1.997) and and the results sig. 2 tailed worth 0.015 (0.000 <0.05). Based on observations and data analysis, it can be concluded that the *discovery learning methods* can significantly improve the creative thinking skill students and excellent learning outcomes.

Keywords:- *Discovery Learning, Learning Outcomes, Creative Thing Skill.*

I. INTRODUCTION

In the era of modernization and globalization and the increasingly rapid development of science and technology, many problems need to be solved individuals with limited knowledge possessed. Everyone should have the skills to be able to compete and solve problems, make each individual race to create new ideas that are considered attractive and useful to society. Changes in various fields of human life demands to be able to confront and adapt in line changes. Creative thinking skills need to be developed early on, because it is expected to be equipped in dealing with problems in everyday life.

The importance of the development of creative thinking is based on four grounds, namely the ability of creative people can give birth to the individual himself, the ability of creative thinking as the ability to look at various opportunities to tackle a problem, familiarize themselves creatively not only useful, but also gives satisfaction to the individual, as well as the creative ability that enables people to improve their quality of life (Munanda, 2002: 31). In the context of everyday life, creativity is not just a productive or a different origin to other people, but rather a process of innovative thinking, subjective and personal.

According Sudarma (2013: 34) thinking skills (thinking skills) or a trained critical thinking of every person in his life. Exercising good thinking skills that will be easier to solve problems in everyday life. According Siswono (2008: 4) attempts to establish a capacity to think creatively as a provision in the face of the demands of life, changes and developments of the era through quality education. Another opinion expressed by Torrance (1976: 52) that the creative bepikir is a process in understanding a problem, look for solutions that might be, interesting hypothesis, test and evaluate. Creative thinking abilities required in all fields of knowledge or education to find new ideas that will be beneficial to themselves and to others. For this reason, in the learning process needs to be a method, models and media that support for the improvement of students' creative thinking skills. Sutikno (2009: 88) states that the teaching methods are ways of presenting the subject matter is performed by educators for a process of learning on students in an effort to achieve the goal

At this time the creative thinking skills of students, especially in science subjects less menojol in students because teachers are less able to facilitate students to think creatively. It is shown from their lessons have not provided a container as possible for students to be able to think creatively, even still nerpusat on teacher learning in a conventional manner. Pemebelajaran lead teacher-centered learning environment that is less attractive and less communicative which ultimately leads to lower learning outcomes and downs of creativity of students (Kusprianto, 2013). Therefore, creative thinking skills of students to be less refined. Creative thinking skills students need to be increased by providing facilities and opportunities for students to develop their creativity.

Teach effectively is very dependent on the selection and use of teaching methods. By using the method of learning, the learning process seem fun and not make the students all night, and also the students will be able to capture the knowledge of educators with ease. Therefore, when choosing a method of learning must pay attention to

the characteristics of learners. Educators can use different methods for each class tailored to the capabilities and characteristics of students.

Based on the observations done at SDN Sidotopo II/49 Surabaya contained the same problems as happened in school in Indonesia in general, are still learning center teacher and students tend to be the object of which should be given by the teacher. So in learning more active teachers than students. The reason given by teachers is the limited time, facilities, learning environment, and the number of learners who are too much. These conditions lead to saturation in the students so it is less motivated in the learning process and less increase activity and creativity. Students are not taught to learn strategies to motivate yourself, pemebelajaran only do more dominant in aspects of knowledge and understanding of the concept, consequently students' creative thinking skills among students are not able to grow on as expected. This is evident from analysis of the results of creative thinking skill tests carried out showed that the answers were written the students are limited to what is written in the book, there are no other answer that is beyond example in the book. It can be concluded that the creative thinking skills of students in class V SDN Sidotopo II/49 Surabaya is still low.

From the above description, it is necessary to act in the learning of the application that is active learning. In the process, the learning method has a lot of variety, a lot of creative learning model that could potentially improve the ability of students in thematic learning. One of them, learning discovery learning, the method is to develop active learning how to find their own, investigate itself, then the results will be obtained last long in the memory so it is not easily forgotten by the students (Kristin, 2016: 86). The stages of discovery learning models, consisting of observation to find the problem, formulate the problem, propose hypotheses, planning experiments or solving problems through other means, carry out observation and data collection, data analysis, and draw conclusions on experiments that have been done or invention. If students are involved constantly in discovery learning, then students will better understand and be able to develop its cognitive aspects (Suryasubrata, 2002). Through the model of discovery learning students to be closer to what the source of learning, self-confidence of students will increase because he feels what he has understood invented by himself, in cooperation with his friend was going to increase, and certainly adds to the experience of students (Putrayasa, 2014) ,

Discovery learning method is used as a solution so that students are encouraged to become directly involved in the learning process that starts from orientation activities, formulate the problem, proposed a hypothesis, collect data, testing hypotheses, and formulate conclusions. In the normal orientation, students are encouraged to foster an atmosphere or climate responsive learning where teachers act to condition students to be ready to implement the learning process. In formulating the problem activity students are invited to observe the issue of containing puzzles - puzzles. The issue presented is a problem that challenges students to think to solve puzzles - puzzles itu. On activities hypothesis, students are encouraged to formulate answers while or can formulate various estimates the possibility of a problem that is assessed through questions guru.Pada activities of collecting data, students find the information needed to test the hypothesis. This activity is a very important process for developing a student's intellectual. Activity test the hypothesis teaches students to look for a confidence level of students on the answers given. In addition, test the hypothesis also means developing reasoning skills which answer truth not only by argument, but must be supported by the data is recovered and can be accounted for. In the last activity,

In addition to the description above, the model of discovery learning is also able to encourage students to discuss with the group as well as more daring to express their opinions or communicate. So using this model the students not only know about the material but also the students really understand the learning material so that later can deliver material to describe it in accordance with the basic competencies that are taught in the study. Moreover, with a series of activities such discovery learning, can train students to develop the ability to think creatively to not dwell only on one answer or way of solving the problems encountered. But by bringing up a lot of answers or alternative way of solving the problem by applying fluency (fluency),

Creative thinking skills do not grow naturally but through the process and can be trained, and each person is unique, distinctive and individual potential, even every person has a creative talent. In discovery learning students will be guided to seek and find their own material or answers being studied. Slameto (2003) says that the creative thinking means thinking in a different direction, will obtain answers uniquely different but true. In discovery learning students are required to be able to think creatively in finding answers material or the material being studied. In the learning process of discovery learning models using activity and experience so that it will attract the attention of students and allow the formation of abstract concepts that have meaning, and its activities were more realistic (Divine, 2012). Research conducted Apriyani (2013), entitled "Effects of Invention Learning Model (Discovery Learning) to the Thinking Skills students on the material properties of Light" Discovery Learning stated that the model is effective to improve creative thinking skills of students. This is confirmed by research Nahdi (2015) which states that the creative thinking abilities of students has increased significantly with the application of discovery learning learning. Research conducted Apriyani (2013), entitled "Effects of Invention Learning Model (Discovery Learning) to the Thinking Skills students on the material properties of Light" Discovery Learning stated that the model is effective to improve creative thinking skills of students. This is confirmed by research Nahdi (2015) which states that the creative thinking abilities of students has increased significantly with the application of discovery

learning learning. Research conducted Apriyani (2013), entitled "Effects of Invention Learning Model (Discovery Learning) to the Thinking Skills students on the material properties of Light" Discovery Learning stated that the model is effective to improve creative thinking skills of students. This is confirmed by research Nahdi (2015) which states that the creative thinking abilities of students has increased significantly with the application of discovery learning learning.

The purpose of this study are: (1) describe the enforceability of learning to apply the discovery learning, (2) describe the creative thinking skills of students after the teaching implementation of discovery learning, (3) describe the students' responses to learning activities apply discovery learning

II. THEORETICAL FRAMEWORK

- *Discovery Learning*

(discovery learning) is defined as a learning process that occurs when students are not presented the information directly, but students are required to organize an understanding of the information independently. Students are trained to get used to be a scientist (scientist). They are not only as consumers, but is also expected to play an active role, even as the perpetrators of the creator of science. According Hosnan (2014: 282), discovery learning is a model for developing active learning how to find their own, investigate itself, the results obtained would be loyal and long-lasting in the memory. Learning through discovery, students can also learn to think of analysis and try to solve their own problems. According Ruseffendi (2006: 329) discovery learning method is a teaching method that regulates teaching in such a way that children gain knowledge that they do not yet know through notification, partially or wholly found by themselves, thus by learning students' discoveries, students can obtain knowledge from their own experience rather than through transmission from the teacher

- *Berpikir kreatif*

The ability to think creatively is a habit of thinking sharp intuition that drives the imagination that reveal new possibilities or new ideas as a development of the old idea to solve the problem from different angles. Liliawati and Puspita (2010: 425) says that the skills of creative thinking is a cognitive skill to bring out and develop new ideas, new ideas as the development of ideas that have been born earlier and skills to solve the problem of divergent (from different angles). According to Maslow (in Munandar, 2012), creative thinking is a manifestation of a fully functioning individual. Thinking skills can be trained on the students to bring up issues that have a positive impact for learners and the surrounding environment. Creativity as a means of individuals to express creativity possessed as a result of creative thinking ability is a skill reasoning to generate ideas, create something new, original, extraordinary, valuable, both abstract, manifest in the form of an idea or ideas, to find meaning and resolution of problems innovatively. Creativity with aspects of creative thinking skills can be developed and used in the filing or troubleshooting. Creativity as a means of individuals to express creativity possessed as a result of creative thinking ability is a skill reasoning to generate ideas, create something new, original, extraordinary, valuable, both abstract, manifest in the form of an idea or ideas, to find meaning and resolution of problems innovatively. Creativity with aspects of creative thinking skills can be developed and used in the filing or troubleshooting. Creativity as a means of individuals to express creativity possessed as a result of creative thinking ability is a skill reasoning to generate ideas, create something new, original, extraordinary, valuable, both abstract, manifest in the form of an idea or ideas, to find meaning and resolution of problems innovatively. Creativity with aspects of creative thinking skills can be developed and used in the filing or troubleshooting.

The role of teachers in teaching especially melatif creative thinking skills is to help, guide and bring up topics of interest so that students can divergent thinking, tolerance of dissent. Creative thinking skills can be measured with a test for the four aspects, namely think smooth, flexible thinking, originality of thought and decomposition

III. RESEARCH METHOD

This study uses research methods to try out experimental treatment (treatment) is a method of learning that is expected to have an impact on creative thinking skills. Experimental research design used in this study is called a quasi-experimental design or quasi-experiment. This design has the control group, but not able to function fully control external variables that affect the performance of an experiment

O_1	X	O_2
O_3	C	O_4

Tabel 1:- Design Nonequivalent Control Group Design

Keterangan:
O_1 and O_2 : Initial test and final test in the experimental group
X : The experimental group (treatment using discovery learning)
C : The control group (conventional method)
O_3 and O_4 : Initial test and final test in the control group

Subjects in this study were students of class V SDN Sidotopo II / 49 Surabaya with the number of students 70 students consisting of VB-grade students as an experimental group of 35 students and class VC as the control class of 35 students. Subjects who were subjected to this study is the fifth grade science subjects particularly changes in states of matter. The research was conducted in the academic year 2019-2020.

The collection of data on research using tests and observation. Tests include bentul achievement test with multiple choice questions. The observations were made for the observation of the students' social skills. Before analyzing the data, the researchers to test the validity and reliability test aims to determine the feasibility of an instrument. Data collected from the results of the instrument and then analyzed using normality test and homogeneity test. After the hypothesis test.

IV. RESULT AND DISCUSSION

- *Learning Implementation*

Observations implementation of learning in this study using sheets observer implementation of learning. Observation activities conducted to collect data learning implementation process. Observation involves two observers, namely Siti Qomariyah, S.Pd. as an observer 1 and Devilita Bahar, S.Pd., as an observer 2. Calculation observation learning implementation is 88.3% with an average score of 3.53. The score is included in the criteria very well. All steps in the learning at each meeting can be done well. This suggests that aspects of the activities carried out in accordance, systematic and precise with planned learning syntax. This adherence to describe the success of teachers in implementing the learning stages of discovery learning.

Initial processing step in discovery-based learning learning elementary school class in general in the category very well received with an average score of 3.83. This suggests that teachers have been conducting early-ie learning activities include motivational conveying learning objectives, and do apersepsi well enough to have an impact on a student's readiness to learn, raising initial knowledge, and enthusiastic students in participating in learning.

Phase core activities in discovery-based learning elementary school classroom learning in general fall into both categories with an average score of 3.5. Teachers have been conducting with both core activities that includeconducting learning by applying the learning discovery learning, conduct debriefing of learning materials, using media and learning resources are diverse, organize students in the group, explaining the instructions do worksheets, provide reinforcement to the results of students' presentation, and foster active participation of students through teacher interaction, students, and learning resources. There are some core activities are performing reasonably well, that deliver learning materials and guides the students make a presentation of group work.

Phase-based learning activities at the end of fifth grade elementary discovery learning in general fall into both categories with an average score of 3.25. This suggests that teachers have been conducting end with good learning which covers the activities of reflection to make his conclusions with learners and provide follow-up action plans.

Curriculum 2013 is a learning paradigm shift from conventional learning becomes that enable students and train the students' ability to think creatively. Curriculum 2013 is a competency-based curriculum, formulated in an integrated manner in which competencies include attitudes, knowledge, and skills that must be possessed of learners. Indriasih (2015: 128) states in facilitating the achievement of competencies defined thematic learning was chosen as a base for learning. According to Nur and Wikandari (2000: 1) to learn more than just remembering. A student to really understand and can apply the knowledge they have to work hard to solve problems, find something and keep in touch with the idea or ideas.

A teacher at the school not merely act as a transmitter of the subject matter (transfer of knowledge), but must also be able to portray himself as a social worker, students and scientists, parents, exemplary search, and search safety (Usman, 2002). Teachers have a responsibility in terms of professionalism. According Aeni (2015) to carry out these roles then the teacher should put himself as a professional educator and competence. This is in accordance with the opinion Simsek (2017) which states that a teacher should have a wide range of competencies and professional skills. A teacher must have skills in the management class. In addition, the skills that a teacher should possess is the skill to evaluate and assess students. Furthermore, teachers can develop a variety of learning materials with a variety of instructional media. Regular meeting teachers can also be used to share information in developing learning materials. Seminars or workshops in the material editor also need to be done for better education

One measure of the success of educators in delivering learning is when learning that can be done to achieve optimal results. (Nahdi, 2017: 67). The success is highly dependent on the ability of educators to manage the learning process. It has a meaning that the learning process is something that needs more attention, because the learning process is expected to take place direct interaction between student and teacher and student interaction with other students

Researchers conducted a feasibility test before the test instrument to analyze the research data. At this stage 8 items declared valid evaluation of creative thinking when rhitung greater than rtabel. From the data analysis using SPSS program version 21 showed that the aspects of social skills show 8 items declared invalid

ISSN No:-2456-2165

Aspect	r count	r tabel	Valid or Not
question item 1	0,640	0,349	Valid
question item 2	0,776	0,349	Valid
question item 3	0,775	0,349	Valid
question item 4	0,616	0,349	Valid
question item 5	0,655	0,349	Valid
question item 6	0,624	0,349	Valid
question item 7	0,794	0,349	Valid
question item 8	0,670	0,349	Valid

Tabel 2:- Test Result for Validity of Creative Thinking Skills
Source: author processed data, 2019

After the test the validity of the matter is done, the next step researchers to test the reliability of the instrument about the evaluation of creative thinking. This is to determine whether the test instrument has been reliable or not. Reliabilias testing in a research instrument that has been trusted and reliable will produce reliable data as well. In this study, the reliability test twice to test aspects of the instrument of social skills and achievement test using Cronbach's alpha via a data processing SPSS program version 21.

Cronbach's Alpha	N of Items
,846	8

Tabel 3:- Test Result for Reliability of Creative Thinking Skills
Source: author processed data, 2019

Based on Table 3, indicates that the instrument about the evaluation of creative thinking has reliablitias value of 0.846. Thus, evaluation of creative thinking about the instrument meets the requirements that Cronbach's Alpha values greater than 0.6, so that the instrument is otherwise reliable.

Normality Test is used to test whether the data were normally distributed or not. Testing normality Kolmogorov-Smirnov formula used with a significance level of 0.05 or 5%, using SPSS program version 21

Variable	Class	Value Significance	Level	Information
Creative Thinking Test (Pretest)	Kontrol	0,519	0,05	Normal
Creative Thinking Test (Posttest)		0,235	0,05	Normal
Creative Thinking Test (Pretest)	Eksperimen	0,423	0,05	Normal
Creative Thinking Test (Posttest)		0,235	0,05	Normal

Tabel 4:- Normality Test Result
Source: author processed data, 2019

Test for normality using Kolmogorov-Smirnov formula with 5% significance level of 0.05. If the significance value <0.05 conclusions berditrubusi data is not normal. However, if the significance value> 0.05 then the data is normally distributed. Based on Table 5 that all variables have a value of more than 0.05, so it can be stated that all normal berditribusi research variables.

Homogeneity test was conducted to examine the similarity of some of the samples of this part. This homogeneity testing using Oneway ANOVA test using SPSS with the criteria if the probability of (P> 0.05), then the sample is homogeneous, whereas if probalittas (P <0.05), then the sample is not homogeneity.

Variabel	Kelas	Nilai Signifikansi	Taraf	Keterangan
Tes Berpikir Kreatif (*Pretest)*	Eksperimen	0,165	0,05	Homogen
	Kontrol			
Tes Berpikir Kreatif (*Posttest)*	Eksperimen	0,932	0,05	Homogen
	Kontrol			

Tabel 5:- Homogeneity Test Result
Source: author processed data, 2019

Table 5 shows the test data homogeneity using a 5% significance level of 0.05. Decision conclusion, if the significance value <0.05 then the variant data group is not homogeneous, and if the significance value> 0.05 then the variant data group is homogeneous.

On the creative thinking test variable (pretest) 0.165 significance value> 0.05, it can be said that the variable is homogeneous. On the creative thinking test variable (posttest) 0.932 significance value> 0.05, it can be said that the variable is homogeneous. From the results of which have been described concluded that the data are homogeneous or have met the basic assumptions of homogeneity.

.

➢ *Creative Thinking Skills Test*

Hypothesis test in order to answer the formulation of the problem and the hypothesis proposed in this study. Hypothesis test used in this study is using the t test.The t-test is required for testing the level of significance between each of the independent variables influence the dependent variable partially.

Class Type	Average	
	Pretest	Posttest
Kelas Eksperimen	59,55	79,64
Kelas Kontrol	57,41	64,64

Tabel 6:- Average of Creative Thinking Test Result
Source: author processed data, 2019

Variable	T	Df	Sig. (2-tailed)	Description
Creative Thinking Test	6,989	68	0,000	H_a accepted

Tabel 7:- Test T
Source: author processed data, 2019

The results of the analysis in Table 7, show that the results obtained by analysis of 2-tailed sig 0.000 <α (0.05) with t table (6.989>1.997). Thus, it can be stated that Ha is accepted. Based on the above data analysis, conclusions can be drawn that the differences are significant tests of creative thinking between the value of the control class and the value of the experimental class. The significant difference is evidenced by the t-test analysis. It is appropriate Nahdi opinion (2015: 70) states that there are significant differences between the students' ability to think creatively obtaining discovery model of learning with conventional learning gain.Learning science using discovery learning model of maximally involve the whole ability of learners to locate and investigate systematically, critically and creatively and logically so that they can find their own knowledge, attitudes, and skills as a form of changes in its behavior.

Creative thinking skills of students were measured by testing creative thinking skills. Creative thinking skills tests conducted twice, before and after learning the purpose of measuring the level of creative thinking skills of students after learning discovery-based learning. Creative thinking skills tests were 8 about the description, about the number one and number five indicators to measure fluency (fluency) and about the number two and number six indicators measure of flexibility (flexibility). As for number three and number seven indicators to measure the originality (newness) and about the number four and number eight measuring indicators elaboration (of detail).

After doing research, there are findings that found in research that discovery learning effect on students' ability to think creatively. This is consistent with research Yuliawati et al (2017) that the discovery learning can improve students' ability to think creatively groups of high, medium and low. In addition, there is no difference between student groups increase the high, medium and low. It is also in line with research Syolendra (2019: 2) that affect the students 'creative thinking skills and be able to able to increase students' creative thinking skills compared with conventional learning

The development of creative thinking abilities required to be applied by every educator to their students. Seriousness required in designing learning activities that can be meaningful and useful learning for each student. One way to develop creative thinking of students are using discovery learning. (Rahman, 2017: 98), Creative thinking requires a child to have the ability to solve problems, have some variation, have the ability to master a concept issues, convey an idea or the idea of a subject matter. Therefore, creative thinking into one capability developed in the curricula of 2013, so that creative thinking is very influential on learning outcomes in which the learning outcomes are usually influenced students' understanding of a concept of learning as well as the student's ability to solve a problem of learning process.

Learning containing a series of activities that have been designed to make a person who was initially not knowing to knowing. Learning the teaching and learning process in which this activity students acquire new knowledge provided by the teacher who acts as a conduit of knowledge he had. In this case study science subjects Heat and temperature of objects with any of the content contained therein. For this reason, studying science should be done with the empirical approach, because such a study is not enough to be memorized and understood, but must go through several processes, such as observation, experimentation and analysis in order to know the truth of the knowledge gained. Students must have a broad mindset and creative in learning science because it is required to solve a problem in learning. To solve a problem must have high creativity. (Yuliawati, 2017: 222).

Learning discovery learning can stimulate students to think creatively which includes the ability to think fluent, flexible, original, and elaborative in solving their own problems by linking the problems with the experience they have had before. The use of discovery learning makes students take an active role in learning because students are directly involved in finding a concept or answer to the problems that have been oriented. The direct involvement

of students in problem solving can improve students' ability to think creatively, because solving a problem should bring original ideas of the student so that demanded creative. Learning fun and direct student involvement make students more interested and enthusiastic about taking learning, students are able to develop talent using appropriate learning styles intelligence they have, so as to enhance the creative thinking skills of students. This is consistent with the proposed Abd (2018: 54) that in a model of discovery learning students can experience alone or interacting directly with the object under study so that students can find their own concepts without getting more guidance from the teacher.

- *Student Response*

Student responses result at the end of the process of learning science with material changes in states of matter using motode *discovery learning*, Student responses was conducted in the experimental class because only experimental classes who receive treatment methods of discovery learning, while the control class with the treatment method of lecture

From the collection of the questionnaire that has been given researchers with 5 questions and 2 option choice. The percentage of student response that is the question in point 1: 80% of students answered yes and 20% of students answered no, item 2: 80.95% of the students answered happy and 19.04% of students answered no fun, point 3: 82.85% of the students are answering clear and 17.14% of students answer is not clear, point 4: 90.47% of the students answered attractive and unattractive 9.52 student answers, as well as point 5: 92.85% of the students are answering yes and 7.14% of students answered no. Thus, in the fifth grade science lesson by using discovery learning can make students more active and enthusiastic and can enhance creative thinking skills.

Yuliawati (2017: 224) mengemukakn after discovery learning is used in learning, it can be seen how the students' response to the learning. The response of students need to be considered, because the good response raised by the students can improve students' motivation in learning, and the delivery of the learning objectives will be easily conveyed. Unlike the case with students who have a poor response to learning, then learning the student is going to be lazy, making it difficult for teachers to deliver the learning objectives. Thus the students' response to learning is necessary for the achievement of learning goals.

Students who are interested in learning discovery-based learning can be seen in the activity of learning that students pay attention when the teacher explains, completing worksheets well, actively asking questions and were able to present the work. While students who have a poor response can be seen from the students who are not actively participating in learning activities based on discovery learning. This is in line with research Wijayanti Frieda (2014) that the student responses to discovery-based learning learning very well known.

V. CONCLUSION

The conclusions of this study can be taken after all the results of learning activities that have been carried out for two cycles, and based the entire discussion and analysis has been done can be summarized as follows:

Implementation of discovery learning learning effect on creative thinking skills of elementary school fifth grade students. The data used is the difference between the value of creative thinking skills first meeting (pretest) to the value of creative thinking skills meeting II (posttest). Students have a high creative thinking skills in the following study compared to learning with conventional approaches. In learning to apply discovery learning, students have a desire to figure out something. Seen that students are more active in asking and answering questions to the teacher. While learning by using the conventional approach, the students just listen to the explanation of the teacher and then the task assigned by the teacher.

Their positive response from students towards learning science by applying discovery *Learning*, This is evident from the overall students feel happy and enthusiastic to apply discovery learning learning

REFERENCES

[1]. Aeni, A. (2015). Menjadi Guru SD yang Memiliki Kompetensi Personal-Religius Melalui Program One Day One Juz (ODOJ). *Mimbar Sekolah Dasar,* vol. 2 (2), 212-223. DOI: http://dx.doi.org/10.17509
[2]. Asrul, Ridlo, S., & Susilo. (2018). Creative Thinking Analysis, Motivation and Concept Mastery on Learning of Cooperative Discovery Model in Elementary School. *Journal of Primary Education*, vol. 7 (1), pp. 48-56
[3]. Hosnan, M. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21*. Bogor: Ghalia Indonesia.
[4]. Illahi, M. Takdir. (2012). *Pembelajaran Discovery Strategi & Mental Vocation Skill*. Yogyakarta: Divapress
[5]. Indriasih, A. (2015). Pemanfaatan Alat Permainan Edukatif Ular Tangga dalam Penerapan Pembelajaran Tematik di Kelas III SD. *Jurnal Pendidikan*, vol. 16 (2), pp. 127-137.
[6]. Kristin, F. (2016). Analisis Model Pembelajaran Discovery Learning dalam Meningkatkan Hasil Belajar Siswa SD. *Jurnal Pendidikan Dasar Perkhasa*, vol. 2 (1), pp. 90-98.
[7]. Kuspriyanto, B. 2013. Strategi Pembelajaran dan Kemampuan Berpikir Kreatif terhadap Hasil Belajar Fisika. *Jurnal Teknologi Pendidikan*, vol. 6 (2)
[8]. Liliawati, Winny dan Puspita Erna. (2010). *Efektivitas Pembelajaran Berbasis Masalah Dalam Meningkatkan Keterampilan Berfikir Kreatif Siswa*. Prosiding Seminar Nasional Fisika 2010. Bandung: Universitas Pendidikan Indonesia.

[9]. Munandar, S.C. Utami. (2002). *Kreativitas dan Keberbakatan Strategi Mewujudkan Potensi Kreatif dan Bakat*. Jakarta: Granada Pustaka Utama
[10]. Munandar, S.C. Utami. (2012). *Pengembangan Kreativitas Anak Berbakat*. Jakarta: Rineka Cipta
[11]. Nahdi, Dede Salim & Fery Apridadi. (2015). Pengaruh Model *Discovery Learning* Terhadap Kemampuan Berpikir Kreatif Siswa Pada Mata Pelajaran Ilmu Pengetahuan Alam. *Jurnal Cakrawala Pendas*, Vol. 1 (2), pp 66-71
[12]. Nur, M. & Wikandari, P. R. (2000). *Pengajaran Berpusat Kepada Siswa dan Pendekatan Konstruktivis dalam Pengajaran*. Surabaya: Unesa University Press
[13]. Rahman, Mardia Hi. (2017). Using Discovery Learning to Encourage Creative Thinking. *International Journal of Social Sciences & Educational Studies*, Vol. 4 (2), pp. 98-103
[14]. Ruseffendi. (2006). *Pengantar Kepada Membantu Guru Mengembangkan Kompetensinya dalam Pengajaran Matematika*. Bandung: Tarsito
[15]. Sanjaya, Wina. (2008). *Perencanaan & Desain Sistem Pembelajaran*. Jakarta: Kencana Prenadamedia Group
[16]. Şimşek, Y. (2017). The Evaluation of the Application of Transported Education by Teachers. *International Journal of Educational Research Review*, 2(1), 41–48. DOI: 10.24331/ijere.309972
[17]. Siswono, Tatag Yuli Eko. (2006). *Desain Tugas Mengidentifikasikan Kemampuan Berpikir Kreatif Siswa Dalam Matematika*. Dalam Jurnal Terakreditasi "Pancaran Pendidikan". Publisher: FKIP UNEJ.
[18]. Slameto. (2003). *Belajar dan Faktor-Faktor yang Mempengaruhinya*. Jakarta : PT Rineka Cipta.
[19]. Sudarma, Momon. 2013. *Mengembangkan Keterampilan Berpikir Kreatif*. Jakarta: PT Raja Grafindo.
[20]. Suryabrata, Sumadi. (2002). *Psikologi Pendidikan*. Jakarta: Raja Grafindo Persada.
[21]. Sutikno, M. Sobri. (2009). *Belajar dan pembelajaran "Upaya kreatif dalam Mewujudkan Pembelajaran yang Berhasil".* Cetakan kelima, Bandung: Prospect.
[22]. Syolendra, D. F., & Laksono, E. W. (2019). The Effect of Discovery Learning on Students' Integrated Thinking Abilities and Creative Attitudes. *Journal of Physics: Conference Series*. DOI: 10.1088/1742-6596/1156/1/012018
[23]. Torrance, E Paul. 1976. *Guiding Creative Talent.* Newyork: Robert E. Krieger Publishing Company.
[24]. Usman, M. U. (2002). *Menjadi Guru Profesional*. Bandung: PT. Remaja Rosdakarya.
[25]. Wijayanti, Frieda & Widiyatmoko, Arif. (2015). Pengembangan LKS IPA Berbasis Multiple Intelligences Pada Tema Energi Dan Kesehatan Untuk Meningkatkan Kemampuan Berpikir Kreatif Siswa. *Unnes Science Education Journal*, vol. 4 (1), pp. 772-779
[26]. Yuliawati, N., Panjaitan, R. L., & Maulana. (2017). Pengaruh Discovery Learning terhadap Kemampuan Berpikir Kreatif Siswa Sekolah Dasar Pada Materi Perpindahan Energi Panas. *Jurnal Pena Ilmiah*, Vol. 2 (1), pp.221-230