

APPLICATION OF DISCOVERY LEARNING MODEL TO IMPROVE LEARNING OUTCOMES OF FOURTH GRADE LEARNERS

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ABSTRACT

The purpose of this research is to improve learners' learning outcomes through the application of *Discovery Learning* models. The type of research used is Class Action Research (PTK). The subject of the study was a class IV student of SDN Talagasari 3 Karawang City. Data collection techniques use tests, observation data and rubric activities of Teachers and Learners. Data analysis techniques used in the form of quantitative and qualitative descriptive. The learning outcomes of 28 learners in the first cycle study of IPA subject content with KKM 67 showed that as many as 19 learners had reached KKM if it was percentaged to 68%. While 11 students have not reached KKM if the percentage becomes 32%. Then in the results of the Second Cycle study increased when compared to cycle I which was (93%) or as many as 26 completed learners. Based on these data, it can be concluded that learning outcomes in cycle II have reached the target of 85%. Thus through the application of the *Discovery Learning* learning model can improve the learning outcomes of class IV learners of SDN Talagasari 3 Karawang City.

Keywords: *Discovery Learning* Model and Learning Outcomes

ABSTRAK

Tujuan penelitian ini adalah untuk meningkatkan hasil belajar peserta didik melalui penerapan model pembelajaran *Discovery Learning*. Jenis penelitian yang digunakan adalah Penelitian Tindakan Kelas (PTK). Subjek penelitian yaitu peserta didik kelas IV SDN Talagasari 3 Kota Karawang. Teknik pengumpulan data menggunakan tes, data hasil observasi dan rubrik kegiatan Guru dan Peserta Didik. Teknik analisis data yang digunakan berupa deskriptif kuantitatif dan kualitatif. Hasil belajar peserta didik dengan jumlah 28 orang pada penelitian cycle I muatan pelajaran IPA dengan KKM 67 menunjukkan bahwa sebanyak 19 peserta didik sudah mencapai KKM jika di persentasekan menjadi 68%. Sedangkan 11 peserta didik belum mencapai KKM jika presentasekan menjadi 32%. Kemudian pada hasil penelitian Cycle II mengalami peningkatan jika dibandingkan dengan cycle I yaitu sebesar (93%) atau sebanyak 26 peserta didik tuntas. Berdasarkan data tersebut dapat disimpulkan bahwa hasil belajar pada cycle II sudah mencapai target sebanyak 85%. Dengan demikian melalui penerapan model pembelajaran *Discovery Learning* dapat meningkatkan hasil belajar belajar peserta didik kelas IV SDN Talagasari 3 Kota Karawang.

Kata Kunci: Model *Discovery Learning* dan Hasil Belajar

INTRODUCTION

Education is a conscious and composed effort in developing the potential of learners. As stated in Undang-Undang Sistem Pendidikan Nasional (Sisdiknas) No. 20 of 2003 states, Education is a conscious and planned effort to realize the learning atmosphere and learning process so that learners actively develop their potential to have religious spiritual power, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation, and state.

Education is the main foundation in efforts to advance the nation (Khoe Yao Tung, 2002: 2). According to Law Number 14 of 2005 concerning Teachers and Lecturers Chapter I Article 1 confirms that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education pathways of formal education, basic education, and secondary education.

Education is carried out in the form of programmatic and formal teaching and learning activities. Education takes place in schools or within certain environments created intentionally for education in the context of school education programs (Syam & Amri, 2017). In achieving learning objectives, educators must be able to streamline learning as well as possible because the learning process is one of the factors that has the greatest role. To create an atmosphere of a pleasant learning process for students requires the ability and willingness of the educator. The learning success of learners is determined by the affective realm. The learner will achieve optimal learning outcomes if he is interested in a subject (Hendriana & Kadarisma, 2019). So that whatever material is delivered by educators can be well received by students.

According to Shobirin (2016) at the elementary school level education using the 2013 curriculum has been established in integrative thematic learning. Integrative thematic learning is an integrated learning that emphasizes the involvement of students in the learning process and in problem solving, so as to foster an attitude of curiosity, student activity, and increase cooperation and learning outcomes of students in accordance with their competencies and abilities that differ from one another (Murfiah, 2017).

Changes in one's attitude will not just happen but there must be a learning process that is carried out continuously so that the change in attitude that wants to be instilled will become one of the habits then the change in attitude will be seen to increase (Hamalik, 2010). Every learning process has goals that must be achieved. As it was blown on Undang-undang Republik Indonesia No. 20, of 2003 about Sistem Pendidikan Nasional Bab II pasal 3. Stated that National Education serves to develop abilities and form dispositions and make people who believe and obey God Almighty, be noble, healthy, knowledgeable, capable, creative, independent and become democratic and responsible citizens.

This goal should be achieved by planned and systematic efforts through educational activities in schools. The process of learning activities carried out by the school in the classroom and outside the classroom or school environment and the community environment should form students who have character because it is to form the continuous refinement of an individual's self-improvement and train one's ability to lead a better life (Sagala, 2013).

As for what is meant by elementary school is one form of basic education that organizes a six-year education program. The purpose of basic education to students in developing their lives as individuals, community members, citizens, and preparing students to continue to the first level of advanced school (Shobirin, 2016).

Curriculum is one of the elements that contribute to realizing the process of developing the quality of potential students (Elisa, 2017). There is also an official state opinion as stated in Undang-Undang No. 20 of 2003 Pasal 1 ayat 19, which states that the curriculum is a set of plans and arrangements regarding the objectives, content and materials of the lessons and the means used as guidelines for the implementation of learning activities to achieve certain educational goals. In the elementary school level in general, it has begun to implement the Curriculum 2013.

Curriculum 2013 is a set of learning that emphasizes core competencies and basic competencies, is thematic and involves several subjects to provide a meaningful experience to learners. Thematic learning is very demanding on the creativity of teachers in choosing and developing teaching materials. The learning process is developed on the principle of learning active learners through a scientific approach of observing (seeing, reading, listening, listening), asking (oral and written), analyzing (telling, determining relationships, building stories or concepts), communicating (oral, writing, drawing, graphing, table, and others). Its development is characterized not only by the existence of a collection of facts, but by the existence of scientific methods and scientific attitudes. Thematic learning serves to provide convenience for students in understanding and deepening the concept of materials incorporated in the theme and can increase the spirit of learning because the material learned is real (contextual) and meaningful material for students (Kosasih, 2016).

The purpose of thematic learning is to learn knowledge and develop various competencies in the same theme, develop students' thinking skills in accordance with the problems faced, so that students are more passionate about learning because they can communicate in real situations such as telling stories, asking questions, writing and learning other lessons and cultivating social skills through cooperation (Kosasih, 2016).

There are several factors that cause problems in the learning process which among them cause low learning outcomes of learners because at the time the learning process is still not effective. Because not all teachers in the learning process use a learning model but only use lecture and mastery methods that only work on students' books so that learning looks very monotonous. Other facts in the field show that, the learning process activities are still not

carried out effectively, because in the learning process still do not use the right models and methods so that students do not understand the learning delivered by teachers so that the learning outcomes of learners are less than optimal.

Based on the above problems, a learning model is needed to improve learners' learning outcomes by using alternative learning models, one of which is the *Discovery Learning* model. Discovery learning is a learning process that can create learning situations and atmospheres related to problems, encourage students with diverse questions, encourage students to be able to solve questions, and be able to do trials (Wikanengsih & Ningrum, 2021). In applying the Discovery Learning learning method, the teacher acts as a guide by providing opportunities for students to learn actively, as the teacher's opinion must be able to guide and direct student learning activities in accordance with the objectives (Sudirman, 2012, hlm. 145 dalam Dewi et al., 2018). Therefore, the author is interested in conducting research with the title Penerapan Model Pembelajaran *Discovery Learning* Untuk Meningkatkan Hasil Belajar Peserta Didik Kelas IV Tema 6 Subtema 2 SD Negeri Talagasari 3 Kota Karawang.

METHOD

This type of research is Classroom Action Research (PTK), namely a study of activities that are deliberately put forward and take place in the classroom (Arikunto, 2009). This research was conducted in SD Negeri Talagasari 3 and applied to learning tematik class of IV Tema 6 Subtema 2 Pembelajaran 1 and 2. The stages of implementation of activities are carried out for approximately four months, from January to April 2021. The subject of this action research in the classroom is a class of IV semester 1 SD Negeri Talagasari 3 tahun pelajaran 2020/2021, There are 28 students consisting of 11 male students and 17 female students.

Data collection techniques use tests, observation data and rubric activities of Teachers and Learners. Data analysis techniques used in the form of quantitative and qualitative descriptive. Qualitative data analysis to see the activities that occur during the learning process. Quantitative data analysis to see whether or not there is an increase in learners' learning outcomes. Quantitative data is obtained from the evaluation before doing learning using the Discovery Learning model and the evaluation after learning using the Discovery Learning model.

The indicators of success in this study are based on the learner's IPA understanding based on the end-of-cycle test. If in the learning process there is an increase in the number of learners

who complete the understanding from cycle I to the next cycle Kriteria Ketuntasan Minimal (KKM) 65 amounted to 85% of the total learners in the class.

RESULT AND DISCUSSION

Result

Cycle I: Planning Stage

At this stage, what is done by the teacher as a researcher, namely: 1) Compiling RPP tematik with the Discovery Learning model learning scenario. Material discussed on cycle I be tema 7 subtema 2 pembelajaran 1; 2) Mempersiapkan instrumen lainnya seperti PPT pembelajaran yang berkaitan dengan materi, lembar observasi untuk peserta didik dan guru, dan lembar kerja peserta didik.

Implementation Stage

Implementation of actions on cycle I held at 09.00 – 10.00 WIB, February 9, 2021. Materials taught about tema 4 Keluargaku. 1) Teachers deliver subject matter with a scientific approach with observing and questioning activities; 2) Teachers share zoom meet links and learning videos relevant to the material as well as LKPD *through Whatsapp Grup and display Slide Power Point*; 3) Fase 1 (*Stimulation*) learners observe, discuss, and listen to explanations; 4) Fase 2 (*Problem Statement*) learners are given questions; 5) Fase 3 (*Data Processing*) learners conduct experiments; 6) Fase 4 (*Verification*) learners prove; 7) Fase 5 (*Generalization*) Learners conclude the results of the experiment and alternately present the results of the experiment, teachers give awards and input, learners do Q&A, learners listen to reinforcement from teachers.

Observation Stage

Observation of the teacher on the implementation cycle I, data collection through observation sheets and formative tests. Teacher performance in the implementation of learning cycle I reaching a score of 8.4 or indicating the teacher's performance falls into the good category, but there are several indicators in RPP (Rencana Pelaksanaan Pembelajaran) which has not been carried out to the maximum. Value achieved by drafting RPP at cycle I in the good category with an average score of 8.2.

Observation of Learners on cycle I The lowest value is 50 and the highest value is 100. The criteria for completeness of learning is 85% while the completeness of learning learners in

cycle I Reaching 68% of the 19 learners and who have not fulfilled as many as 11 learners or 32% so it needs to be implemented cycle II.

Reflection Stage

At this stage, the activities carried out are 1) Reflection of data obtained from data obtained on cycle I; 2) Processing of data from teacher, student observations and written tests; 3) Combining existing results with success metrics; 4) Plan to improve the types of actions that lead to incomplete success metrics. Since the indicators of success are not visible, the research continues on cycle II.

Cycle II: Planning Stage

At this stage, what is done by the teacher as a researcher, namely: 1) Compiling RPP tematik with the Discovery Learning model learning scenario. Material discussed on cycle II be tema 7 subtema 2 pembelajaran 2; 2) Prepare other instruments such as learning power points related to materials, observation sheets for learners and teachers, and student worksheets.

Implementation Stage

Implementation of actions on cycle II held as many as one meeting with an allocation of 2 x 35 minutes each, on March 16, 2021. Materials taught about tema 7 subtema 2. 1) Teachers deliver subject matter with a scientific approach with observing and questioning activities; 2) Teachers share zoom meet links, power point slides containing learning materials and LKPD through *Whatsapp Grup*; 3) Fase 1 (*Stimulation*) learners observe, discuss, and listen to explanations; 4) Fase 2 (*Problem Statement*) learners are given LKPD; 5) Fase 3 (*Data Processing*) students work on LKPD by discussing with parents; 6) Fase 4 (*Verification*) each learner presents the results of his LKPD.; 7) Fase 5 (*Generalization*) Learners conclude the results of the experiment and alternately present the results of the experiment, teachers give awards and input, learners do Q&A, learners listen to reinforcement from teachers. At the end cycle II Teachers conduct final tests through google form that serves to measure learners' learning outcomes.

Observation Stage

Observation of the teacher on the implementation cycle I, data collection through observation sheets and formative tests. The ability of teacher performance in the

implementation of learning in cycle II This result is stated that the teacher has carried out the learning well when compared to cycle I. This is indicated by increasing the value to 9.1 or has reached the good category. The value achieved from the preparation of the RPP, which is 8.2 in cycle I Increased to 8.9 on cycle II. Observation of Learners on cycle II The lowest value is 60 and the highest value is 100. The criteria for completeness of learning is 67 while the completeness of learning of learners in cycle II Reaching 93% of the 26 learners and who have not fulfilled as many as 2 learners or 7% so there is no need to carry out an advanced cycle.

Reflection Stage

1. Based on the data obtained:
2. The learning outcomes of students in cycle II are better than cycle I. It can be seen that the average grade of the class in cycle I 77 rose to 84 in cycle II and the classic completeness of 68% in cycle I rose to 93% in cycle II. This means that classical completeness has exceeded the indicator of success by 85%. So the learning outcomes of students in cycle II have been completed.
3. Learning management, especially guidance and direction to students, is good so that students can complete tasks in a timely manner. Overall, what the teacher did in cycle II has been relatively good and has increased from cycle I.
4. Based on the analysis of observations about the planning and implementation of learning carried out by educator teachers and the completion of student learning, it can be concluded that there is an increase in the results of planning and implementation observations and improved learning outcomes through the implementation of the Discovery Learning learning model. Thus the Discovery Learning learning model is able to improve the learning outcomes of learners in the IV class of SDN Talagasari 3.

Discussion

Cycle I

The implementation of learning uses the Discovery Learning model to improve learners' learning outcomes. Based on the data obtained that the results of learners in cycle I have increased from before the Action was carried out. The average grade in cycle I is 77. The number that has not been completed in the learning results is 11 learners and 19 students have been completed. Based on these data, the classical completion obtained is 68%. This shows

that the completion of classical learning has not reached 85% because there are still many students who get grades under KKM.

Cycle II

Implementation of learning in cycle II by using the Discovery Learning model to improve learner learning outcomes. Based on the data obtained, the learning outcomes of learners increased. As for the unfinished learners as many as 2 learners and who have completed 26 students. Based on these data obtained classical completeness to 93%. This shows that the student's learning completion has been achieved and in accordance with the expected learning goals. Based on the stages carried out in the study of class actions as many as two cycles, the learning outcomes of learners have increased. You can see the results of the comparison of cycle I and cycle II in the following tables and diagrams:

Table 1. Comparison of Cycle I and Cycle II Learning Outcomes

No	Learning Outcome Achievement Criteria	Cycle	
		Cycle I	Cycle II
1	Number of students who meet KKM	19	26
2	Number of students under KKM	11	2
Average value		77	84
Classical completeness		68%	93%

Diagram 1. Comparison of Percentage of KKM Cycle I and Cycle II Achievements

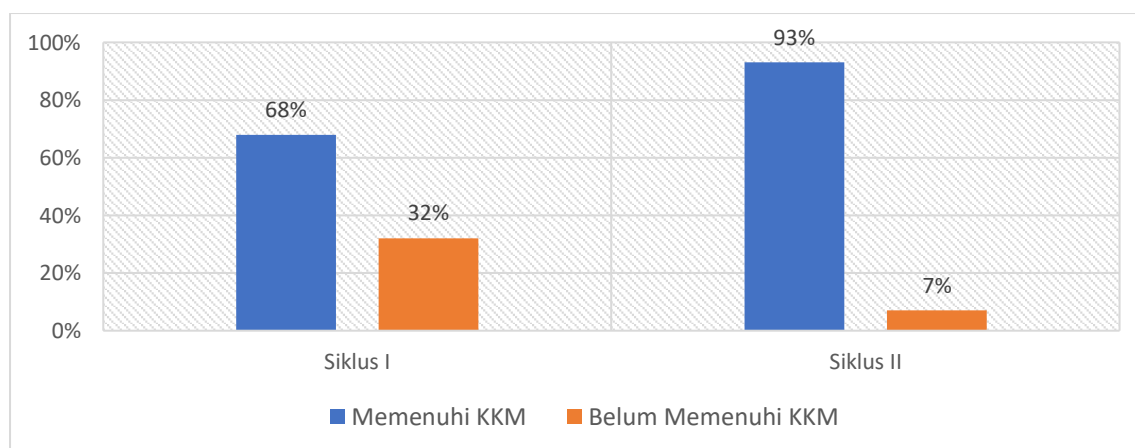
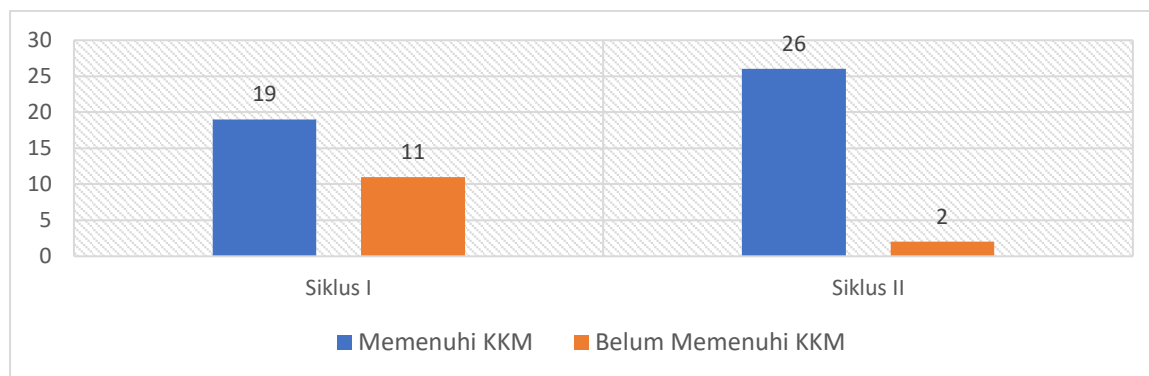
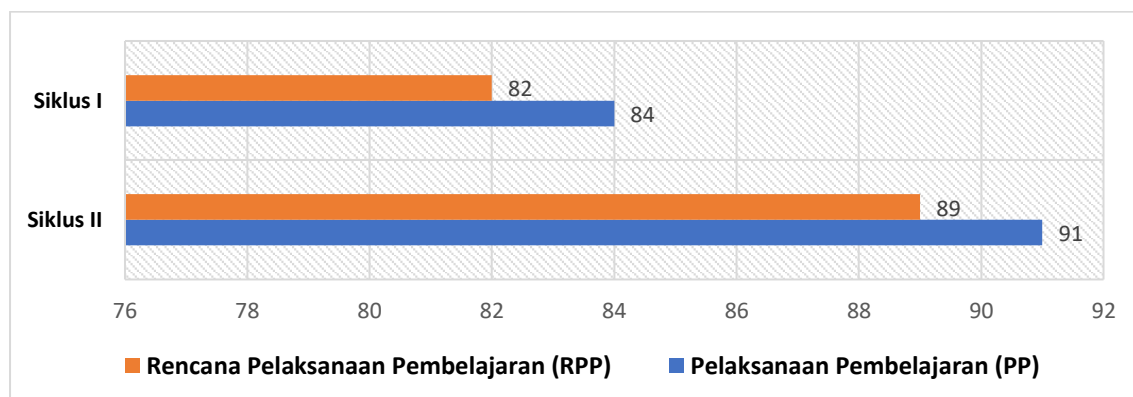


Diagram 2. Comparison of KKM Cycle I and Cycle II Achievements



As for the results of observations on the Implementation of Learning and Learning Implementation Plans carried out by teachers in cycle II is better than cycle I. It can be seen that the average value of observation results in the aspect of the implementation of cycle I 8.2 learning rose to 8.9 in cycle II and in the RPP aspect the observation results can be increased from cycle I 8.4 to 9.1 in cycle II. To see more clearly the increase in the value of observation results in PP (Pelaksanaan Pembelajaran) and RPP starting from cycle I and cycle II can be seen in the diagram below:

Diagram 3. Comparison of Learning Implementation PP and RPP Cycle I and Cycle II



Based on the findings of the above research, it was obtained that the results of PP and RPP observations in research activities on the implementation of the first action and the second action addressed the increase and the results of the learner's learning test were relatively good. The learning process using the Discovery Learning model is proven to improve learners' learning outcomes.

CONCLUSION

Based on the results of PTK implemented in SDN Talagasari 3 Kota Karawang it can be concluded as follows:

1. Steps in the Discovery Learning learning model can improve the activities and learning outcomes of classroom learners IV SD Negeri Talagasari 3. The steps of this learning model include through stimulus, problem-giving, temporary conjecture, collecting data, processing data, verifying data, and concluding. During the learning, students are able to identify or formulate questions, answer questions from teachers and other learners, convey ideas or ideas when discussing and are able to draw conclusions according to facts. With active and enjoyable learning conditions as well as becoming more meaningful through the Discovery Learning model makes learning achievements more optimal.
2. On aspects PP (Perencanaan Pembelajaran) Increased in each cycle. In the implementation of cycle I, teachers carry out 84% of the 20 aspects set. In cycle II implementation, the shortcomings in cycle I have been corrected and equipped so that in cycle II this teacher has implemented 91% of all aspects. Then in the aspect of Teacher Performance increased in each cycle. In the implementation of cycle I, teachers carry out 82% of the 37 aspects set. In the implementation of cycle II has increased, the shortcomings in cycle I have been corrected and equipped so that in cycle II this teacher has implemented 89% of the 37 aspects that have been determined.
3. Learner learning outcomes on tema Indahnya Keragaman di Negeriku subtema Indahnya Keragaman Budaya Negeriku learning 1 and 2 After the implementation of the Discovery Learning learning model has improved. This can be seen from the completion of learning in cycle I with an average score of 77 and a percentage of completeness reaching 68% illustrates that it is good enough. Then after the action was carried out in the second cycle with the average score of student learning outcomes reaching 84 and the percentage of learning completion to 93% means that it has exceeded classical completion which is 85%. So that it proves that the application of the Discovery Learning learning model has succeeded in improving the learning outcomes of class IV learners SDN Talagasari 3 Kota Karawang.

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