



Increasing Student Learning Outcomes by Collaborating the Dmr Model (Multy Repercentacy Discourse) and Make a Match Model

¹Ningrum Sudioanto

²Agung Riadin

Muhammadiyah University of Palangkaraya

Abstract - This study aims to (1) describe the increase in student learning outcomes in teaching and learning activities using the DMR (Discursus Multy Repercentacy) Model and the Make A Match Model, (2) determine the increase in science learning outcomes in grade VI students at SD IT Al - Amin after using the DMR (Multy Representation Discourse) Model and the Make A Match Model. The type of research used by the researcher is Classroom Action Research (CAR) which seeks to solve the problems faced in the current situation. The subjects in this study were all sixth grade students of SD IT Al - Amin which consisted of 29 students, 29 women. For data collection techniques used are observation and tests. While in this study using qualitative and quantitative data analysis. The results showed that: (1) The activities of students when using the DMR Model (Discourse Multi-Representation) and the Make A Match Model became good in the first cycle with an average of 52 and the second cycle with an average of 73 with a good category. (2) There is an increase in science learning outcomes through the use of the DMR Model (Multy Representation Discourse) and the Make A Match Model which shows that the initial results are 0%, in the first cycle 13.7%, and in the second cycle 87%.

Keywords: Learning, Model, DMR, Make A Match.

Received 06 October, 2021; Revised: 18 October, 2021; Accepted 20 October, 2021 © The author(s) 2021. Published with open access at www.questjournals.org

I. INTRODUCE

Natural Sciences (IPA) is a learning concept that is closely related throughout human life. Science is related to how to find out about nature systematically, so that science is not only mastery of a collection of knowledge in the form of facts, concepts and principles, but also a process of discovery. Science subjects expect students to be able to study the natural environment and are required to be able to find facts from the theories that have been studied and can solve problems in everyday life, especially those related to the natural surroundings.

Science is a theoretical knowledge that is obtained or compiled in a special or special way, namely conducting experimental observations, formulating theories, inferring, experimenting, observing and so on linking one way to another. The way to get knowledge like this is called the scientific method, because the scientific method is a logical way to solve a particular problem.

Through the environment students can better understand science learning, because the surrounding environment is an important medium in science learning activities students can find problems and can find solutions through

surrounding environment. The material presented is closely related to the daily lives of students, especially material regarding the structure and function of plant parts that are easily found in the surrounding environment. In addition, the use of the right method plays an important role in improving the learning process.

However, based on the results of observations made by researchers On November 22, 2017, the fourth grade students at SD IT Al-Amin Kapuas, the researchers found that most of the students had difficulties in understanding science subject matter and also in the observations, there were still many students still less in science learning outcomes. The fourth grade guardian told the researcher that the fourth grade students' learning outcomes, especially in science subjects, were still relatively low, in addition, fourth grade students sometimes could not focus on listening to the teacher's explanations. The low ability of students is because students pay less attention, and teachers do not use varied methods that can arouse students' learning motivation. This is

because the less varied methods make students less enthusiastic in learning. There are some students whose learning outcomes are still incomplete and even only able to quite reach the KKM value set, while the KKM value set by the school in science subjects is 60.

Based on observations, it is known that the factors that cause low science learning outcomes are due to factors from the students themselves and factors from educators.

Factors from students are students' attention to lessons is still lacking, difficulties in understanding examples of structures and types of leaves. While the factor from the educators is the cause of the educators not applying varied learning methods. In learning tend to use methods that are less varied, so that students feel bored and pay less attention to learning.

The learning method is a tool of extrinsic motivation or as a means of external stimulant that can arouse the enthusiasm of learning in students. Learning methods are important in teaching and learning activities, because inappropriate methods can lead to low learning outcomes. Conversely, if the use of learning methods is in accordance with the material, it is likely that students will be able to understand and get satisfactory learning outcomes.

So it can be concluded, the learning method is a method used by educators in learning activities that can increase the motivation and interest of students in learning in order to achieve the goals set.

The basic competence in this research is to explain the relationship between the structure of plant parts and their functions. In this case the researcher determines from various alternative learning methods, researchers are interested in using the Multi-Repcentacy Discourse Model (DMR) and make A match model in an effort to improve science learning outcomes. This is because the Multi-Repcentacy (DMR) Discourse Model and the Make A Match Model can give suggestions to students to be able to concentrate fully on the knowledge conveyed by the educator. However, in reality the Multi-Repcentacy Discourse Model (DMR) and the Make A Match Model are very rarely used by educators, because according to most educators this method requires more time in delivering subject matter, because educators must pay attention one by one to students. In addition, this method is considered less effective if used in classes that have a large number of students.

In addition to using the right method, learning activities also require the existence of useful learning media to clarify the material presented. In this study, researchers used concrete learning media so that students could clearly know the structure and types of leaves. Learning media is also an important thing that can support the success of student learning outcomes. Therefore, learning media is very necessary because it has a great function in the implementation of learning. Based on the descriptions of the problems that have been disclosed above, the teacher needs to determine and apply learning methods that can improve student learning outcomes.

Learning is a process or effort made by individuals to obtain changes in behavior both in the form of knowledge, skills and positive attitudes and values as an experience for individuals. Learning can be done anywhere and anytime, because learning is not only done at school. But learning can be done at home with parents or learn from everyday experiences.

It is characterized by the ability to think where the ability to think and knowledge can not be separated. That is, humans cannot develop the ability to think without material knowledge, and vice versa. This goal has a greater tendency to develop in learning activities. In this case the role of the teacher as a teacher is more prominent. In practice, this method can be done by making presentations and giving reading assignments. In this way students will be given knowledge so as to increase their knowledge and at the same time will seek it themselves to develop ways of thinking in order to enrich their knowledge.

Planting concepts or formulating concepts also requires skills. These skills can be physical or spiritual. Physical skills are skills that can be seen and/or observed that aim to focus on the movement skills of a person's limbs who are learning. While spiritual skills are more complicated than physical skills. This is because it is more abstract through appreciation and thinking skills in solving and formulating a problem or concept.

The formation of mental attitudes and behavior of students will not be separated from the matter of inculcating values (transfer of value). Therefore, a deserter is not only a teacher, but also an educator who will transfer these values to his students. Based on these values, students will grow awareness and willingness to practice everything they have learned. How to interact or methods that can be used such as discussion, demonstration, sociodrama, and role playing.

Learning outcomes are changes in behavior that include cognitive, affective, and psychomotor fields that are seen during or after the learning activity ends. To see the learning outcomes, the teacher can give a test or evaluation at the end of the lesson which aims to determine the level of students' understanding of the material that has been studied.

Science is a science that is not just a product, but the truth can be obtained in the scientific process through observation, experimentation, rational analysis. While the scientific attitude is an objective and honest attitude in obtaining data. Therefore, through the scientific process and attitude, products and discoveries will be obtained in the form of facts, concepts, principles and theories.

Natural Sciences (IPA) is related to how to find out about nature systematically, so that science is not only the mastery of a systematic collection, science is not only the mastery of a collection of knowledge in the form of facts, concepts, or principles, but also a a discovery process.

From some of the definitions above, it can be concluded that science is a science that is not only in the form of facts, concepts, and theories, but science is useful for finding out and understanding about something that happens in the natural environment through systematic observation so that it is a proven discovery process.

Understanding the model according to Oemar Hamalik (2003) reveals that the learning model is one of the ways used by teachers in establishing relationships with students during learning to achieve the goals set. Meanwhile, according to Sangidu (2004:14) method is a systematic way of working to start the implementation of an assessment activity in order to achieve predetermined goals.

Meanwhile, according to Salamun (in Sudrajat, 2009:7) states that the learning model is a different way to achieve different learning outcomes under different conditions. Based on this understanding, it can be concluded that the learning method is a method used by teachers in learning activities that can achieve the expected goals.

Multi-Representation Discourse Learning (DMR) can be defined as structured group work/study. Included in this structure are five main elements (Johnson & Johnson, 1995), namely positive interdependence, individual responsibility, personal interaction, teamwork skills, and group processes.

Multi-Representational Discourse type cooperative learning model, hereinafter abbreviated as DMR, is part of cooperative learning. Cooperative learning model has been developed intensively through various studies, the aim is to cooperate among students, form positive relationships, develop self-confidence, and improve academic abilities through group activities.

According to Suyatno (2009:69) "Multi Representational Discourse Method (DMR) is: learning oriented to the formation, use and utilization of various representations with class settings and group work." The DMR type of cooperative learning model is a method that emphasizes learning in heterogeneous groups helping each other, working together to solve problems, uniting opinions to obtain optimal success both in groups and individually.

This method is oriented towards the formation, use, and utilization of various representations such as books, articles from newspapers, news, posters, results of interviews with informants (such as teachers, principals, friends, experts), internet materials and so on in a classroom setting. and group work.

The Multi-Representation Discourse Model (DMR) has not been widely used by educators in Indonesia, so the use of this method is actually seen as strange by some people, especially people who are not fully aware of the importance of the Multi-Representation Discourse Model (DMR) in optimizing teaching and learning activities. . This is exacerbated by the assumption that hypnosis is a negative and detrimental thing.

The Multi-Representation Discourse Model (DMR) method has the advantage that learning activities become more dynamic, active, students can be more creative and motivated in learning. In addition, the Multi-Representation Discourse Model (DMR) method also has drawbacks, including that this method is less effective if used in a class that has many students, the use of this method also requires prior learning for educators and lecturers to better master it, lack of facilities and infrastructure owned by schools that can support the implementation of the Multi-Representation Discourse Model (DMR).

The make a match learning model (looking for a partner) was developed by Lorn Curran in 1994 in this model students are asked to find a partner from the card, Aqib Zainal (2013: 23)

According to Tarmizi in Novia (2015: 12) states that the make a match learning model means that students look for partners, each student gets a card (can be a question or an answer) and then immediately looks for a partner that matches the card he holds.

The application of this model begins with the technique, where students are asked to find pairs of cards which are the answers or questions before the time limit, students who can match the cards are given points.

II. METHOD

This study uses a Classroom Action Research (CAR) design, because it is trying to solve the problems that occur now and is expected to improve the quality of learning and improve student learning outcomes through the stages that have been arranged.

According to Suaidin (Jasman Jalil, 2014: 6), CAR is defined as a form of reflective study by the teacher as an action actor aimed at increasing rational stability in carrying out his teacher duties, deepening understanding of the actions he takes, and improving the learning carried out.

In this case, it should be noted that the class does not refer to a physical room, in the form of a classroom, but to students as learning subjects.

This Classroom Action Research is carried out by the researcher and two observers. This Classroom Action Research was conducted with several processes and stages to determine the expected level of learning success.

Learning outcomes are the final results of learning activities which are indicated by changes in behavior that include cognitive, affective, and psychomotor fields that can be seen after the learning activities end. Learning activities are said to be successful if students can understand the knowledge conveyed by educators, so that when educators provide evaluations at the end of learning students can obtain satisfactory learning outcomes.

According to Arikunto (Anitra Nirvana, 2014:41) Classroom Action Research contains three elements, namely:

1. Research is an activity of observing an object using certain method rules to obtain data or information.
2. Action is a movement of activities that is deliberately carried out with a purpose certain.
3. Class is a group of students who are at the same time receiving the same lesson from the teacher.

In this case, it should be noted that the class does not refer to a physical room, in the form of a classroom, but to students as learning subjects.

This Classroom Action Research is carried out by the researcher and two observers. This Classroom Action Research was conducted with several processes and stages to determine the expected level of learning success.

Science subjects aim so that students can understand the universe not only through concepts, theories, or principles, but students are required to prove the truth of the theory systematically and can solve problems related to everyday life. related to the Natural Sciences. In addition, science aims for students to be grateful for the greatness of God Almighty for his creation by always guarding, maintaining, and preserving the surrounding environment.

Science learning using the Multi-Representation Discourse Model (DMR) and the Make A Match Model is expected to motivate students, so as to improve learning outcomes. In this method, students are suggested with subconscious language that can make them pay attention to explanations and it is easy to master the material because educators always motivate each student. From this description, the Multi-Representation Discourse Model (DMR) and the Make A Match Model can improve science learning outcomes for students.

In a study, it is necessary to have a hypothesis because it is a temporary answer to the formulation of the research problem. According to Erwan Agus Purwanto and Dyah Ratih Sulistyastuti (2012) a hypothesis is a statement or accusation that while the research problem is still weak (not necessarily true) so it must be tested empirically.

Meanwhile, according to Suharsimi Arikunto (2012) the hypothesis can be interpreted as a temporary answer to the research problem, until it is proven through the collected data.

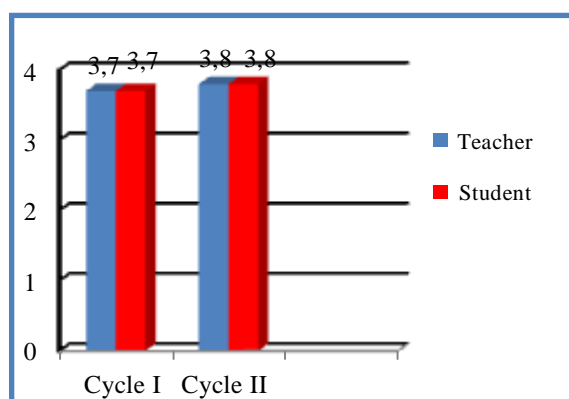
III. RESULTS AND DISCUSSION

The data from the results of this study are: 1) observation of teacher and student activities 2) science learning outcomes using the DMR (Multy Reprerentacy) Discourse and Make A Match Model.

(1) Observation of teacher and student activities, teacher and student activities can be seen in the following tables and figures:

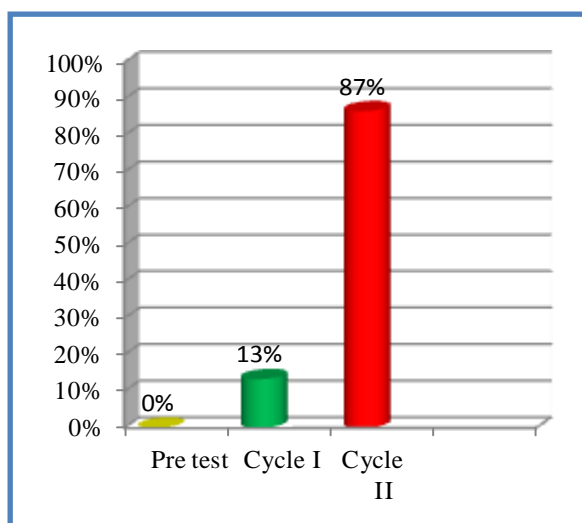
Teacher and Student Activity

No	Activity	Cycle I	Cycle II
1	Teacher	3	4
2	Student	3,7	3,8



Based on the tables and graphs above, it can be seen that overall there is a good increase in teacher activity in the first cycle, which scores 3 and increases to a score of 4 in the second cycle, and in the student activity, a score of 3.7 increases to a score of 3.8 in the second cycle. cycle II.

(1) Student learning outcomes, using the DMR Model (Multy Representation Discourse) and Make A Match. can be seen in the following table and figure:



Graph of Recapitulation of the Average Value of Student Learning Outcomes

In the tables and figures above, the average student learning outcomes in the pre-test (0%) and the first cycle (13%) have not reached classical completeness, which is 85%. Furthermore, in the second cycle, it reached 87% complete or exceeded the specified completeness of 85%, so it was not continued in the next cycle. Thus, from the pre-action data, the first and second cycles of science learning outcomes for fourth grade students of SD IT Al - Amin increased.

Based on the type of research carried out by researchers, namely using Classroom Action Research (CAR), the presence and role of researchers is very necessary because apart from being a teacher, researchers also play a role in planning, implementing actions, observing the learning process and observing student activities, reflectors and as reporters.

The test used in this study is the test of learning outcomes. This learning outcome test refers to the overall teaching results held at the end of the lesson. This test is used to measure the level of understanding and learning outcomes of students in science lessons using the Multi-Representation Discourse Model (DMR) and the Make A Match Model.

The research instruments used to collect data were observation and tests. Qualitative data is presented in the form of observations made to educators and students to see the teaching and learning process regarding science subjects using the DMR (Multy Representation Discourse) Model and the Make A Match Model. Quantitative data is presented in the form of a test given to students after the teacher conveys material about the structure of leaves and their functions. To obtain quantitative descriptive data presented in the form of test results from science subjects using the Multi-Representation Discourse Model (DMR) and the Make A Match Model.

IV. CONCLUSION

Based on the results of this study, it can be concluded that:

1. Students' science learning activities are good by collaborating with the Multi-recentacy Discourse Model (DMR) and Make A Match on energy materials and their use in SD IT AL - AMIN. This can be seen in the activities of students in the first cycle with a good category with an average score of 3.7 and in the second cycle there is an increase in the average score of 3.8 with a good category.

2. There is an increase in science learning outcomes by collaborating with the Multi-recentacy and Make A Match Discourse Model (DMR) on energy materials and their use at SD IT AL - AMIN. The average in the pre test got 38.97 results with a classical completeness percentage of 0%. In the first cycle, the average result was 52 with a classical completeness percentage of 13.7% and in the second cycle the average result was 73 with a classical completeness percentage of 87% or classically achieved.

ACKNOWLEDGMENTS

We as researchers, would like to express our deepest gratitude to the Ministry of Education and Culture and Research and Technology through Program Kompetisi Kampus Merdeka (PKKM), and the University of Muhammadiyah Palangkaraya for their support, as well as to LP2M UM. Palangkaraya, and those who have supported researchers to continue working in the field of educational research, hopefully the results of this research can be useful for the community, especially the community. innovators and education experts.

REFERENCES

- [1]. Arikunto, S, dkk (2012). *Penelitian Tindakan Kelas*, Jakarta : Bumi Aksara.
- [2]. Arifin ,M 1995 .*Pengembangan Program Pengajaran Bidang study Kimia*. Surabaya Airlangga University Press.
- [3]. Dimiyati. *Belajar dan Pembelajaran*. Jakarta: PT. Rineka Cipta. 2006.
- [4]. Dimiyati dan Mudjiono. (2013). *Belajardan Pembelajaran*. Jakarta: PT. Asdi Mahasatya
- [5]. Djamarah, Syaiful Bahri. (2011). *Psikologi Belajar*, Jakarta : Rineka Cipta.
- [6]. Erwan Agus Purwanto dan Dyah Ratih Sulistyastuti (2012) *Hipotesis*
- [7]. Firmansyah, (2014:8). *Belajar dan Pembelajaran*. Jakarta: PT. Asdi Mahasatya
- [8]. H. Muhammad Fauzani, *Strategi dan Model Pembelajaran Yogyakarta 2015*
- [9]. Hamalik, Oemar. *Proses Belajar Mengajar*. Jakarta : PT Bumi Aksara. 2007.
- [10]. Hamalik, (2008). *Proses Belajar Mengajar*. Jakarta: Bumi Aksara.