https://dx.doi.org/10.22161/ijcmp.3.3.1 *ISSN: 2456-866X*

Students Effort to Improve Learning Results by Using Quantum Learning Method in North Tapanuli

Meslin Silalahi

Lecturer of Sisingamangaraja XII Tapanuli University, Indonesia
Email: meslin.hrs@gmail.com

Abstract*—This research aims to determine student learning outcomes by applying Quantum Learning method of prism and pyramid by eight grade students of SMP Negeri 2 Sipoholon in academic year 2017/2018. This type of research is Class Action Research (CAR). The subjects in this study were eight grade students of SMP Negeri 2 Sipoholon in academic year 2017/2018 were 28 student. The objective of this research is improving student learning outcomes. Instruments used were: description tests, observation sheets and interviews. Descriptive tests use to find out student learning outcomes, observation sheets use to find out ability of the teacher to apply learning and interviews to find out where the students are wrong. The average initial test score was 35.46 and the classical completeness was 0%. The average value of the first cycle was 59.78. Students who completed were 11 students (39.29%), 17 students (60.71%) were not finished, and the implementation of learning was in a less category (value 2.00). The increase in classical completeness was 39.29% and the average increase was 24.32 from the results of the initial tests. The average value of the second cycle was 76.04 and 25 students (89.29%) from 28 students had achieved mastery learning while the other 3 students (10.71%) had not yet completed, and the learning went well (average 3, 00). Cycle II has achieved classical completeness. Classical completeness has increased by 50% and the average has increased by 16.25 from cycle I. Thus the Quantum Learning method can improve student learning outcomes on the Prism and Piramid by eight grade students of SMP Negeri 2 Sipoholon in academic year 2017/2018.*

Keywords*—*Quantum Learning Method, improving learning outcomes.

I. INTRODUCTION

Preparing the quality of human resources, the potential that plays a strategic role is needed. One of these potentials is Mathematics education. Mathematics is one of the fundamental mastery that can foster students' reasoning abilities and needed in development of science and technology. According to Cornelius (Abdurrahman, 2003: 253) that:

"Mathematics is a clear and logical means of thinking, a means to solve everyday problems, a means of recognizing patterns of relationships and generalization of experience, a means to develop creativity, and a means to increase awareness of cultural developments. Through mathematics students can think critically, logically, thoroughly, carefully and can be used in daily life. This is supported by the statement Abdurrahman (2003: 253) that:

"Mathematics needs to be taught to students because: 1) Mathematics always used in terms of life; 2) all fields of study require appropriate math skills; 3) is strong, clear and short communication; 4) can be used to present information in various ways; 5) improve logical thinking skills, accuracy, and spatial awareness; 6) giving satisfaction to efforts to solve challenging problems ".

II. REVIEW OF LITERATURE

The learning method used by the teacher should be able to overcome the problem of student learning interest, and make students active in learning process. Soejadi (2000: 104) Stated: "Mathematics teacher's tips to choose strategies, approaches, methods, and techniques that are suitable for use on certain Mathematical topics and a certain group of students". In this case a more meaningful learning method is needed, one of the methods is the Quantum Learning method. The Quantum Learning method prioritizes strategies to create an effective learning environment, design curriculum, deliver content, and

https://dx.doi.org/10.22161/ijcmp.3.3.1 *ISSN: 2456-866X*

facilitate the learning process so learning becomes fun with the learning framework, namely Growing, Naturally, Name, Demonstrate, Repeat and Celebrate, Suyatno (2005: 40) . The quantum learning method tries to combine the two hemispheres of the brain, the right brain and the left brain. Bahaudin (in Rostikawati:http://pkab.wordpress.com/2010/04/0 2 /quantum-learning- Method /) explains that: "The left brain plays an important role in processing logic, words, mathematics, and sequences or so-called brains related to academic learning. The right brain is related to rhythm, rhythm, music, pictures, imagination, or what is referred to as the brain associated with activity creative. These two hemispheres balance the messages that come and combine abstract and holistic images with concrete and logical messages ".

The effective and efficient Quantum Learning method can be applied to Mathematics learning, one of which is Prism and Limas, which demands Mathematical Logical intelligence of students to think with reasoning, problem solving skills and mathematical abilities, as De Porter and Reardo Stated (2008: 99):

"Quantum Learning involves multiple intelligence, where one of them is logical-mathematical intelligence in teaching content and design, so that students automatically get more in the learning process and strengthen their intelligence".

III. RESEARCH METHODOLOGY

Type of Research is Classroom Action Research, which is research that aims to improve student learning outcomes by applying the Quantum Learning method of Prism and Piramid. The subjects in this study were eighth grade students of SMP N.2 Sipaholon in academic year 2017/2018 with the number 28 of students. The objective of this study was application of the Quantum Learning method to improve student mathematics learning outcomes of Prism and Piramid.

Tehnique of collecting the data

Test

Test used in this study is a written test in the form of a description test (essay test). This test consists of initial tests and learning outcomes tests. Learning outcomes tests are given after learning with the aim to determine the result or improvement of student learning outcomes.

Observation

Observation or commonly called direct observation to the object of research to see the activities carried out. Activities carried out need to be observed to determine the level of success of the implementation of learning. According to Margono (2005: 158) "observation is interpreted as observing and recording systematically the work that appears on the object of research". In this study, the mathematics teacher acts as an observer and researcher as a teacher.

Interview

Interviews were conducted to enrich and strengthen the data obtained in the study. The interview requires direct communication between researchers and the subject to be studied. Interviews are focused on knowing the extent to which students are involved in the learning process and what difficulties are encountered by students in completing learning outcomes tests so that solutions can be found to increase learning outcomes.

IV. FINDING AND DISCUSSION

The application of Quantum Learning Method can improve student learning outcomes. Based on the results of the study, before being given the action the average value of the initial test of the class was 35.46 with a classical completeness level was 0%. After cycle I using the Quantum Learning model increased by an average was 24.32 and an increase in classical completeness was 39.29% from the initial test. Then after giving the cycle II, where learning still uses the Quantum learning model Learning but there has been an improvement in its implementation, obtained by the average value of the second cycle of student learning outcomes was 76.04 with classical completeness was 89.29%. There is an average increase was 16.25 and an increase in classical completeness was 50% of learning tests I. Thus the application of the Quantum Learning learning method of Prism and Piramid material by eight grade students of SMP Negeri 2 Sipoholon in academic year 2017/2018 was able to improve student learning outcomes. The application of the learning framework of the Quantum Learning Method applied TANDUR (Tumbuhkan, Alami, Namai, Demonstrasikan, Ulangi dan Rayakan) is able to make students excited and still motivated to stay focused on learning. The teacher's efforts to give compliments make it bolder and active to ask. In learning Quantum method , very prioritizing motivation during learning.

https://dx.doi.org/10.22161/ijcmp.3.3.1 *ISSN: 2456-866X*

V. CONCLUSION

Based on the results of the study, it can be concluded that: Quantum Learning Method can improve student learning outcomes, especially in solving the problems of Prism and Piramid by eight grade students of SMP Negeri 2 Sipoholon in academic year 2017/2018. After the first cycle there was an average increase of 24.32 and an increase in classical completeness of 39.29% from the initial test. After the second cycle there was an increase of an average of 16.25 and an increase in classical completeness of 50% of the learning test I. The implementation of learning from less is increased.

REFERENCES

[1] Arikunto, dkk (2006), *Penelitian Tindakan Kelas*, Penerbit Bumi Aksara, Jakarta.

[2] Abdurrahman, Mulyono, (2003) *Pendidikan Bagi Anak Berkesulitan Belajar*, Rineka Cipta, Jakarta.

[3] De Porter dan Hernacki, (2005), *Quantum Learning*, Penerbit Kaifa, Bandung.

[4] Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Negeri Medan (2009), Pedoman Penulisan Proposal dan Skripsi Mahasiswa Program Studi Pendidikan FMIPA UNIMED, FMIPA Unimed, Medan.

[5] *Kiat Pembelajaran Quantum Learning (*www. Wordpress. Com /2007/05/14/169/)

[6] *Metode Quantum Learning (2007)*, (http://faculty.petra.ac.id./ido/artikel/quantum learning.html)

[7] Trianto, (2007), *Model Pembelajaran*, Penerbit Rineka Cipta, Jakarta.

[8] *Teori Pembelajaran Quantum Learning* (http:// faculty. petra. ac.id./ido/artikel/quantum learning. Html.