The Influence of Quantum Learning Model on Psychomotor Competence of VII Grade Students in Learning Natural Science at Junior High School 3 Rambatan

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Abstract - Based on interviews with a teacher, the main problem faced by teachers in the learning process is the teacher's difficulty in making students active during the learning process, especially in asking questions and issuing their ideas or opinions. This statement is also supported based on observations that have been made at junior high school 3 Rambatan. The following results are obtained: 7,7% of students asking questions and 3,8% of students issuing ideas or opinions. Asking questions and issuing ideas or opinions is part of presentation activities when viewed from students' psychomotor competencies. From these data, it can be said that students' psychomotor competencies, especially in asking questions and issuing ideas or opinions, are still low. This can also affect the learning process in the classroom. Based on the problems faced by students, one of the efforts that can be done by the teacher to help students is by using the quantum learning model. At the demonstration stage, give students the opportunity to show that students know or understand about the material being studied. This type of research is quasi-experimental (quasi-experimental research). The instrument used is the observation sheet. The data analysis technique used the Mann Whitney U test. The analysis was performed using SPSS software. So that the sig value is obtained. the value of 0,003 <0,05. The results of this study indicate that there is the influence of the quantum learning model on psychomotor competencies of VII grade students in learning natural science at junior high school 3 Rambatan.

Keywords - Quantum Learning Model and Psychomotor Competence.

I. INTRODUCTION

Learning in essence is the process of interaction with all situations around the individual. Learning can be seen as a process directed at the goals and processes of doing through experience. Learning is also a process of seeing, observing and understanding (Sudjana, 2005: 28). In the learning process there will be an educational interaction between the teacher and students, students with students and students with their environment. This interaction needs to be designed in such a way that it can achieve optimal results in accordance with the objectives of national education (Lufri, 2007: 1).

The National Education Objectives contained in the Minister of Education Regulation No. 20 of 2003 emphasizes the development of the potential of students to be human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible

citizens. The purpose of this national education is in line with government programs through the 2013 curriculum. According to Mulyasa (2013: 6-7) the 2013 curriculum emphasizes student character education in the form of knowledge, attitudes and skills as a form of students' understanding of contextually learned concepts.

Biology learning involves students looking for extensive sources of information from various sources. Students should enthusiastically raise their hands to answer questions or contribute their thoughts, give opinions or ideas, think critically, analytically and logically so that an effective learning atmosphere is created. According to the Ministry of National Education (2003: 5-6), effective learning is one that empowers student potential and refers to the achievement of individual competencies of each student.

Student activity in the learning process is very necessary in order to improve students' learning competencies. The emergence of student activity is not independent of the role of a teacher. Usman (2010: 21) reveals that, a teacher or teacher has a very important role in determining the quality and quantity of teaching carried out in the learning process. Based on interviews with a teacher at school, the main problem faced by teachers in the learning process is the teacher's difficulty in making students active during the learning process, especially in asking questions and issuing their ideas or opinions.

The statement above is also supported based on observations made at junior high school 3 Rambatan. The results are as follows: 7,7% of students who asked questions and 3,8% of students issued ideas or opinions. Asking questions and issuing ideas or opinions is part of presentation activities when viewed from students' psychomotor competencies. From the data above, it can be said that students' psychomotor competencies, especially in asking questions and issuing ideas or opinions, are still low. This can also affect the learning process in the classroom.

Based on the problems faced by students, one of the efforts that can be done by the teacher to help students is by using the quantum learning model. The quantum learning model is one of the learning models that is carried out by changing the various interactions that exist in and around the learning situation (Suyadi, 2013: 97-98).

As DePorter (2005: 12) states that quantum learning confirms the atmosphere of happiness, positivity, and helps strengthen the memory of students in understanding the theories that they have acquired. Fun and pleasant atmosphere will increase students' interest and learning

motivation. This is in line with the statement of Darmansyah (2010: 3) which states that "The results of research in the past decade's learning reveal that learning will be more effective, if students are in a happy state. Joy in learning has been proven to have a tremendous effect on the achievement of student learning competencies. Such an atmosphere will make students easy to understand biological concepts ". If learning becomes fun the interests and motivation of students increases, students will be enthusiastic in asking questions and issuing ideas or opinions in the learning process.

DePorter (2004: 7) says that "Quantum learning changes the various interactions that exist in and around the learning moment. This interaction includes the elements for effective learning that affect the success of students. These interactions change students' natural abilities and talents into a light that will benefit themselves and others. "

The quantum learning model has six learning steps that must be applied and is known as the TANDUR learning design framework, namely:

1) Growing interest in student learning by satisfying AMBAK (what is the benefit for me) that is done through exploring students' initial knowledge and creating a comfortable learning environment,

2) Natural that is creating or bringing out general experiences that can be understood by students in the learning process by involving students directly in the learning process,

3) Name is to provide keywords so that students are able to give names to the concepts learned,

4) Demonstration that is giving opportunities to students to show that students know or understand about the material being studied,

5) Repeat that is gluing a picture of learning as a whole and giving an opportunity to show that students really know about the concept of material that has been studied, and

6) Celebrate that is giving recognition to the completion, participation, and achievement of understanding of the material concepts learned by students during the learning process (Bobbi deporter 2004: 10).

Therefore, researchers are interested in conducting research entitled:

"The Influence of Quantum Learning Model on Psychomotor Competence of VII Grade Students in Learning Natural Science at Junior high school 3 Rambatan".

II. RESEARCH METHODS

This type of research is quasi- experimental (quasi-experimental research), this research was conducted in class VII of junior high school 3 Rambatan in the second semester of the 2018/2019 academic year. The study population was all of VII grade students at junior high school 3 in Rambatan, who were enrolled in the 2018/2019 academic year. The number of class VII students numbered 93 consisting of 3 locales.

The sampling technique using Simple Random Sampling. the point is that sampling is done randomly, each member of the population or unit in the population gets the same opportunity to be chosen as a sample in the study. (Lufri, 2017: 159) In simple terms, it can be done using the lottery system. Terms of Random all classes must be homogeneous. To find out, the third class homogeneity test is carried out. That is done by using the daily test score (UH) as data. The homogeneity test results show that sig. the value of the three classes is 0,256, which means that the three classes have homogeneous data (if sig. Value> 0,05, then the three sample classes have the same / homogeneous variance).

Based on the results of Random, the sample chosen in this study will be class VII. 2 as experiment class and class

VII. 3 as a control class. In addition, this study uses the Randomized Control-Group Posttest Only Design. The instruments in this study are practice sheets and product observations. This is complemented by an assessment rubric to facilitate observers in assessing students' affective competencies. It was also validated by one expert and one Natural Sciences teacher.

Data processing using SPSS software. Data analysis techniques are carried out through hypothesis testing. The statistical test used is the Mann-Whitney U-Test because the data is ordinal. The hypothesis testing criteria using the Mann- Whitney U-Test are as follows.

Basic decision making:

H 0 is accepted if sig. value > 0,05. H 0 is rejected if sig. Value < 0,05. Description:
H0 : there is no effect on the application of the quantum learning model to psychomotor competence of VII grade students in learning natural science at junior high school 3 Rambatan.
H1 : there is an effect of the application of the quantum learning model on psychomotor competence of VII grade students in learning natural science at junior high school 3 Rambatan.

III. RESULTS AND DISCUSSION

1. Results

Data on students' psychomotor competence is obtained from observations made by the teacher as an observer. Data on student psychomotor competence can be seen in Table 1 below.

Table 1. Number of students, Average Score, Maximum Score, and Minimum Score, experimental class and control in Psychomotor Competence

Class	N	$\overline{X}$	X maks	X min
Experiment	30	79,44	100	66,66
Control	32	72,91	83,33	58,33

Based on Table 1, it is known that the average score of psychomotor competencies in the experimental class is 79,44 higher than in the control class 72,91. Meanwhile, the highest score was in the experimental class 100 and the control class 83,33. The minimum score in the experimental class is 66,66, while the minimum score in the control class is 58,33.

Furthermore, hypothesis testing is carried out using the Mann-Whitney U-Test in the help of SPSS software. The results of hypothesis testing can be seen in Table 2.

Table 2. Hypothesis Testing Results

Class	Sig.	α	Conclusion
Experiment	0,00 3	0,05	H 0 is rejected H 1 Accepted
Control			

Based on Table 2 above, it is known that the significant value of the hypothesis testing is 0,003. That means sig. value <0,05, so H0 is rejected. Therefore, it can be concluded that there is an effect of the application of the quantum learning model on psychomotor competencies of VII grade students in learning natural science at junior high school 3 Rambatan.

2. Discussion

Based on the research that has been done, the average score of psychomotor competence of students in the experimental class 100 is higher than in the control class 83,33. From testing the hypothesis, it is known that the value of sig. Psychomotor competence is 0,003, which indicates that H0 is rejected, and H1 is accepted. This means that there is an influence there is the influence of the application of the quantum learning model on psychomotor competencies of

class VII students in learning natural science at junior high school 3 Rambatan.

The high acquisition of psychomotor competence in the experimental class also gives a positive influence from learning using the quantum learning model where students are required to be more skilled in communication and play an active role in displaying the results of the discussion in front of the class. class, as well as skilled in writing practical results neatly, cleanly, and can be read.

Skills competency assessment in KD 3.8 of environmental pollution material students are required to be able to use tools and materials as well as steps in the implementation of laboratory practices at junior high school 3 Rambatan. And make a practice report in accordance with the results that have been obtained. So that the results obtained will be reported / delivered in front of the class. In accordance with the syntax of quantum learning at the demonstration stage, which is to give students the opportunity to show that students know or understand about the material being studied. While other students are required to ask questions or give opinions about the results that their friends have conveyed in front of the class. In the final stage for students who dare to convey the results of the obtained practice and students who provide questions and who give their opinions get rewards / awards. Rewards / rewards can make students excited and competition occurs to communicate the results of the practices that have been obtained.

Competency assessment of skills in KD 3.9 material on global warming learners make products in the form of posters about global warming students are required to be creative, both images and colors on the poster. So that the poster attracts the reader to see and read it. When students have creativity, then the skills learning competencies will increase because skills competency assessment is done through product assessment. In making products in the form of posters, students are required to have high creativity to produce creative products as well.

The reason for using the quantum learning model in solving the causes of the low understanding of the science concept, especially for science subjects (biology) in the learning process, is as follows:

1) Quantum learning provides opportunities for students to learn according to what students want through the exploration of experiences possessed by students and utilize the experience as initial information to carry out further learning;

2) The quantum learning model can foster interest in learning by satisfying AMBAK the students' learning;

3) The quantum learning model provides opportunities for students to learn according to their abilities, how to use an interactive process to assess what learners know, identify what students want to know and evaluate what students do;

4) The quantum learning model provides an opportunity for students to be actively involved in the learning process, interacting both with material, friends, and teachers (Yastiti, 2012).

IV. CONCLUSION

Based on the research that has been done, it can be concluded that there is an effect of the application of the quantum learning model on psychomotor competence of class VII students in learning natural science at junior high school 3 Rambatan.

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