The Application of Quantum Learning to Improve

by Rifai 3 Rifai

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The Application of Quantum Learning to Improve Self–Learning Motivation and Learning Outcomes of the 8th Grade Students of State Junior High School 2 Balerejo Madiun

Eni Windarti; Universitas PGRI Madiun
Satrijo Budiwibowo✉; Universitas PGRI Madiun
Moh. Rifa'i; Universitas PGRI Madiun

Abstract: This study aims to determine the increase in self-learning motivation and learning outcomes in students of class VIII-B at State Junior High School 2 Balerejo Madiun Academic Year 2019/2020. To improve the ability of independent learning motivation and students' social studies learning outcomes, a class action research study was conducted consisting of two cycles. Each cycle consists of planning, implementing, observing and reflecting. The subjects of this study were students of class VIII-B at State Junior High School 2 Balerejo Madiun in Academic Year 2019/2020 consisting of 30 students. Data collection techniques used observation, questionnaires, tests and documentation. Result reveals that there are increasing motivation of students' independent learning in the first cycle obtained from average percentage of 59.8% (sufficient criteria) into 79.7% (high criteria). The average of student learning outcomes in the first cycle of 68.80 with a classical completeness of 57%. The average student learning outcomes in the second cycle amounted to 80.27 with a classical completeness of 87%. Based on the results of the study it can be concluded that the application of the Quantum Learning model increases motivation for independent learning and learning outcomes. The teachers should provide motivation or appreciation in the form of grades on student assignments, so students are motivated to learn because they feel valued. Quantum Learning models can be used as an alternative to varying learning models.

Keywords: Quantum learning, independent learning motivation, learning outcomes.

✉satrijo@unipma.ac.id

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INTRODUCTION

Education is a basic requirement for every human being. The quality of education a person has will determine the quality of his life in the future. Teachers as teaching staff, play an important role in the world of education. To become a professional teacher is not easy and is not obtained from a short process.

Social Science subjects aim to equip students with social knowledge and also seek to foster and develop students into human resources with social and intellectual skills as citizens and citizens who have caring, responsible social concerns. Social Sciences examines a set of events, facts, concepts, and generalizations related to social issues. The learning objective of Social Sciences is that students are able to develop the knowledge, understanding, and analytical skills of the social conditions of society in entering a dynamic social life.

In achieving the objectives of the Social Sciences education, there are problems in the social studies learning strategy and tools themselves. This happens because of the tendency of the wrong understanding that Social Science is a subject that tends to memorize and still emphasizes the activities of teachers more actively than students.

One effort to improve the quality of education is by improving the teaching and learning process. Teaching and learning are basically interactions or reciprocal relationships between teachers and students in educational situations. Therefore, teachers in teaching are required patience, tenacity and open attitude in addition to the ability in more active teaching and learning situations.

The teacher as a teacher places more emphasis on carrying out the task of planning, carrying out the teaching and learning process, and evaluating the results. To carry out this task, in addition to having to master the material or material to be taught also required to have a set of teaching knowledge and technical skills. In connection with professional responsibilities in carrying out this teaching assignment, teachers are required to always look for new ideas (innovations), try to perfect the implementation of teaching assignments, try various methods of teaching and seek the creation and use of teaching aids.

In teaching and learning process, the teacher not only conveys the material but also the teacher must be able to optimally convey the contents of the material taught in the Social Sciences subjects. In addition, the teacher's task must also be able to convey the material using a learning method or strategy that is able to create a pleasant learning atmosphere and students are able to understand the material presented so that student achievement increases.

Learning achievement is the result obtained from the learning process that someone has done. The better the learning achievement produced, the better a person is trying to do the activity or learning process. The difference in learning achievement is influenced by factors that influence. According to Slameto (2010) factors that influence learning of many types, but can be classified into two groups, namely internal factors and external factors. Internal factors are factors that exist in individuals who are learning, while external factors are factors that exist outside the individual. Internal factors consist of health factors, psychological factors, and fatigue factors, while external factors consist of family factors, school factors, and community factors.

But in reality the social studies learning process at State Junior High School 2 Balerejo Madiun is still conventional. Learning conducted by teachers puts more emphasis on the use of lecture methods. The lecture method minimizes student involvement in the learning process, so that the teacher looks more active compared to students.

The habit of being passive in the learning process can cause most students to be afraid and embarrassed to ask the teacher about material that is poorly understood. The learning atmosphere in the classroom becomes very monotonous and unattractive. This method is quite boring, so in its implementation requires certain methods / strategies so that the presentation is not boring but attracts the attention of students.

One active learning strategy is quantum learning. The main character behind quantum learning is Bobbi DePorter, a housewife who then plunges into the property and financial business, and after all her businesses go bankrupt, finally wrestle in the field of learning.

The main principles underlying the quantum model are "Bring Their World (Learners) into Our World (Teachers), and Deliver Our World (Teachers) into Their World (Learners)". Every form of interaction with learners, every curriculum design, and every learning method must be built on these key principles. This principle requires teachers to enter the world of learners as the first step of learning as well as requiring teachers to build authentic bridges into learner's life. For this reason, teachers can take advantage of the experiences of learners as a starting point. In this way the teacher will easily learn the learner in the form of leading, assisting, and facilitating the learner to a wider awareness and knowledge. If this can be implemented, both learners and instructors will gain new understanding. Besides meaning the world of learning is expanded, this also means the world of teaching is expanded. This is where our world becomes a world with teachers and learners. This is the dynamics of human learning as a learner.

Quantum learning contains powerful principles and communication that is strengthened by a multi-sensational approach. Multi-intelligence and based on a quantum learning design framework known as *TANDUR*: *Tumbuhkan* (Growing) - satisfy interests; *Alami* (experiencing) - create common experiences that can be understood; *Namai* (Naming) - provide keywords, models, formulas, strategies; *Demonstrasikan* (Demonstrating) - give the chance they know; *Ulangi* (Repeating) - show how to repeat the material; *Rayakan* (Celebrating) - recognition for completion, participation. By using the *TANDUR* teaching planning framework, students are expected to become interested and interested in each lesson. Because students experience learning, practice, make the content of the lesson real for students and achieve success (Deporter, 2005).

It is in this context that a positive, safe, supportive, relaxed and pleasant atmosphere must be maintained; learning environment that is comfortable, uplifting, and nuances of musical and physical environment that is participatory, helping each other, containing games and the like.

A picture is more meaningful than a thousand words. And if teachers use teaching aids in learning situations, amazing things will happen to learning. Affirmation poster installation on the classroom wall can attract students' attention. Affirmation posters are posters that contain messages that can be used as motivation and create confidence for students who see them. Affirmation posters can contain messages such as "I am able to learn them" and others. The posters are placed on the side wall so that students' eyes can be seen during the learning process. Posters around the room "say" affirmations such as internal dialogue so that students strengthen their beliefs about learning and about the content being taught.

Quantum is an interaction that converts energy into light. Quantum learning is teaching that can change a pleasant learning atmosphere and transform students' natural abilities and talents into a light that will benefit

themselves and others. Quantum is an orchestration of various interactions in and around the moment of learning or a learning which has the main mission to design a fun learning process that is adjusted to the level of student development.

Quantum teaching is a learning process by providing background and strategies to improve teaching and learning and make the learning process more enjoyable. The quantum teaching model is almost the same as a symphony. If watching a symphony, there are many elements that become factors in the instructor's music experience. Quantum teaching can divide these elements into 2 categories namely context and content (Context & Content). Context is the setting for the teacher's experience. Context is the familiarity of the orchestral space itself (the environment), the spirit of the conductor and the musicians (atmosphere), the balance of instruments and musicians in working together (the foundation) and the maestro's interpretation of the sheet music (design). These elements combine and then create a comprehensive musical experience, different but as important as context. The sheet music itself is as content, real notes on a page, more than notes on a page. One element of content is how the type of music phrases are played (presentation). The contents also include the maestro's expert facilitation of the orchestra, utilizing the talents of each music player and the potential of each instrument. The magic of experience becomes open because the context is right, and makes music come alive. When the teacher changes student success, the same elements are well-structured: atmosphere, environment, foundation, design, presentation and facilities.

There are three main types of principles that form the figure of quantum learning. The three main principles referred to are as follows: 1) the main principles of quantum learning read: Bring Their World (Learners) into Our World (Teachers), and Deliver Our World (Teachers) into Their World (Learners); 2) in quantum learning also applies the principle that the learning process is a symphonic orchestra game. Besides having songs or scores, this symphony game has a basic chord structure. The basic structure of this chord can be called the basic principles of quantum learning; 3) in quantum learning also applies the principle that learning must have an impact on the formation of integrity. In other words, learning needs to be interpreted as forming excellence. Therefore, this advantage has even been seen as the heart of the quantum learning foundation.

Motivation is defined as strength, drive, needs, passion, pressure, or psychological mechanisms that encourage a person or group of people to achieve certain achievements in accordance with what they want. Hakim (2007) suggested the notion of motivation is an impulse that causes a person to commit an action to achieve a certain goal. Huitt, W. (2001) says motivation is a condition or internal status (sometimes interpreted as a need, desire, or desire) that directs a person's behavior to actively act in order to achieve a goal. According to Sardiman (2001) learning motivation has the following indicators: a) Persevering in the task; b) Resilient in facing difficulties (not easily discouraged); c) Showing interest in various adult problems; d) More comfortable working independently; e) Fast bored with routine tasks; and f) Can maintain his opinion. According to Sudjana (2009) provides an understanding of learning outcomes are: Verbal processes of facts or physical behavioral processes in the form of memory or mental memories, he also added, learning outcomes are the process of the relationship between teacher and student in the class that has implications for self-development of students independently, the formation of

memory (memory) in students, and the formation of understanding in students.

A person will succeed in learning if there is a desire to learn, Mouly (in Sudjana, 2002) learning is a process of changing one's behavior thanks to experience. A similar opinion was expressed by Kimble and Garmezi (in Sudjana, 2002) learning is that changes in behavior that are relatively permanent occur from the results of experience.

Basically learning is a process that is marked by changes in a person, changes such as: knowledge, understanding, attitudes and behavior, skills, skills, habits and changes in other aspects that exist in individual learning. According to Arnie Fajar (2001) the principle of learning can be explained as follows: (1) Learning must be oriented towards clear goals; (2) The learning process will occur if someone is faced with a problematic situation; (3) Learning with understanding will be more meaningful than learning by rote learning; (4) Overall learning will be more successful than divided learning; (5) Learning requires the ability to capture the essence of the lesson itself; (6) Learning is a continuous process. Learning is a process, because it is a process, learning requires time; (7) The learning process requires the right method; and (8) Learning requires students' interests and attention.

METHODS

This research is a type of classroom action research or CAR. According to Wardhani and Wihardi (2012) classroom action research is an activity carried out by the teacher to improve its performance carried out in the classroom aimed at improving student learning outcomes. This research was carried out at State Junior High School 2 of Balerejo Madiun, located in Kuwu Village, Balerejo District, Madiun Regency.

The research subjects in this Classroom Action Research were students of class VIII-B of State Junior High School 2 Balerejo Madiun in the 2019/2020 Academic Year, totaling 30 children. Data collection techniques in research using 1) Observation, namely According to Sugiyono (2013) data collection techniques with observation are used when research regarding human behavior, work processes, natural phenomena, and if the respondent observed is not too large. Observation is done by participant observation, that is, the researcher is involved in the daily activities of the person being observed or used as a source of research data. Observations were carried out systematically, which was carried out by observers using the guideline as an observation instrument in knowing the activities and learning outcomes of eighth grade students of State Junior High School 2 Balerejo Madiun on social studies subjects; 2) Questionnaire is used to reveal student's independent learning motivation data. According to Sugiyono (2011) a questionnaire or questionnaire is a data collection technique that is done by giving a set of questions or written statements to the respondent to be answered. Questionnaire compiled by researchers in direct and closed forms; 3) Tests are used to measure students' cognitive abilities in mastering social studies subjects. According to Arikunto (2010) the test method is a series of questions or exercises and other tools used to measure the skills, knowledge of intelligence, abilities or talents possessed by individuals or groups Test methods are used to obtain data about learning outcomes. This test technique is carried out after the implementation of learning with the aim of getting the latest data; 4) documentation, is a data collection technique by collecting documents, both written documents, drawings, books, notes and so on Arikunto (2010). This method is used to explore grades and learning process of VIII grade students at State Junior High

School 2 Balerejo Madiun on social studies subjects.

1. Self-learning motivation

   Self-learning motivation = $\frac{\text{amount of student's score}}{\text{maximum score}} \text{ x } 100\%$

2. Individual learning completeness

   Individual completeness = $\frac{\text{amount of obtained score}}{\text{amount of maximum score}} \text{ x } 100\%$

3. Classical learning completeness

   Evaluation mark is obtained after class action, then analyzed to find out the completeness of learning outcomes. Complete learning outcomes are classically calculated using the formula as follows:

   Classical completeness = $\frac{\sum \text{completedlearningstudent}}{\sum \text{student}} \text{ x } 100\%$

RESULT AND DISCUSSION

Cycle I

Student's Self-learning motivation

Based on the Table 1, the results of the first cycle of student learning motivation questionnaire showed an increase in the indicator shows the interest and attention of students to the lesson and indicators of diligently facing the task or responsibility in doing the learning tasks that is in the sufficient category. Whereas the tenacious indicator faces difficulties (not easily discouraged) and the indicator of diligently facing the task or responsibility in carrying out the study tasks has not been increased compared to pre-cycle. When calculated as a whole, the average motivation of students' independent learning towards social studies has increased 59.8% with sufficient categories.

Student's learning outcomes

Student's social studies learning outcomes of Class VIII-B at State Junior High School 2 Balerejo Madiun with the Quantum Learning model showing in Table 2.

Table 1. Data of Cycle I Student's Self-learning motivation

No.	Indicator	Obtaining score	Achievement percentage	Category
1	Resilient in facing difficulties (not easily discouraged)	372	62,0%	Sufficient
2	Showing students' interest and attention to the lesson	373	62,2%	Sufficient
3	Prefer to work independently	380	51,3%	Low
4	Diligently facing the task or responsibility in carrying out their study assignments	382	63,7%	Sufficient
	Average		59,8%	
	Criteria		Sufficient	

Table 2. Data of Cycle I Student's learning outcomes

No.	Category	Mark range	Student's Frequency	Percentage (%)
1	Completed	≥ 75	17	57%
2	Uncompleted	< 75	13	43%
Amount			30	100%
Average				68,80

Table 3. Data of Cycle II Student's Self-learning motivation

No.	Indicator	Obtaining score	Achievement percentage	Category
1	Resilient in facing difficulties (not easily discouraged)	378	79,0%	High
2	Showing students' interest and attention to the lesson	476	79,3%	High
3	Prefer to work independently	484	80,7%	High
4	Diligently facing the task or responsibility in carrying out their study assignments	479	79,8%	High
	Average		79,7%	
	Criteria		High	

Table 4. Data of Cycle II Student's learning outcomes

No.	Category	Mark range	Student's Frequency	Percentage (%)
1	Completed	≥ 75	26	87%
2	Uncompleted	< 75	4	13%
Amount			30	100%
Average				80,27

Cycle II

Student's Self-learning motivation

Based on the table above the results of the second cycle of student learning motivation questionnaire showed an increase in learning motivation compared to cycle I on all indicators, namely in the high category. Overall, the average student motivation to study social studies increased 79.7% with a high category.

Student learning outcomes

Social studies learning outcomes for students of Class VIII-B at State Junior High School 2 Balerejo Madiun with the Quantum Learning model showing in Table 4.

CONCLUSION

Based on observations and data analysis that has been submitted, it can be concluded that the application of the quantum learning model can increase the motivation of independent learning and student learning outcomes in class VIII-B at State Junior High School 2 Balerejo Madiun.

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