ABSTRACT

Underachiever student is a student who has a high level of intelligence but acquire learning achievement below average (low). Underachiever is caused by the way the teacher chooses a model for delivering mathematic materials and treats student during the teaching and learning activities. In addition, lack of motivation and low self-perception of student on the ability to obtain high achievement also becomes the factor causing the student to be an underachiever. Thus, the teacher’s understanding to the underachiever student's character and the implementation of the mathematic learning process to the evaluation and following-up study should be concerned in order to achieve a successful learning. One of the efforts to increase the underachiever student's mathematical achievement and motivation is through quantum learning. Quantum Learning is fun learning that is expected to increase student interest so at last their learning outcomes can be improved overall. Fun learning environment can also create motivation on student that directly affects student learning.

Keywords: Mathematics, learning performance, learning motivation, Underachiever Student, Quantum Learning

INTRODUCTION

Education is one of the most important things for all people because the human education is expected to have a good mindset and broad insight so as to become a better human being. Generally, educated people have more experience so that they can make themselves capable of leading it to be useful to themselves and others.

Education should be well planned. Education is planned to make students have various skills in life. Efforts are being made so that education can make a significant contribution to the nation. The government has made a variety of efforts to increase the quality of education, including renewal and upgrading of infrastructure, renewal of the curriculum, the development of effective learning models and innovative, and teacher certification program. These efforts should make the quality of education better.

It needs efforts from students, teachers, parents, environment and government so that a learning process can be managed optimally. Teachers should be able to choose appropriate learning models so that teaching and learning activities can be carried out effectively. In mathematics, the efforts have been done to improve learning achievement that is to choose a model of learning that can include a process of interaction between students and teachers. Thus, the teacher should choose the model of learning that are tailored to the mathematical material presented and the students' characteristics in order to make students participate actively in learning activities.

Indicators of a student achievement is successful in learning mathematics one of which can be seen from the accomplishment obtained. However, not all students can get their achievement in accordance with their potential, many students are not able to show the maximum results. This is due to the fact that the process of learning that students in schools is affected by various factors that lead to their learning outcomes depending on the interaction of factors related to one another. Student’s intelligence one factor that is generally predicted as the main culprit in reaching student achievement. Thus, the level of intelligence is often used to predict the ability in learning and achievement that would be achieved by the students.
Dalyono (Djamarah, 2002) clearly state that a person who has a high IQ (good intelligence) clearly states that the learning outcomes tend to be good. But on the contrary, students with low IQs tend to have difficulty in learning and the academic achievement is low, even they are slow thinking. Djamarah (2002) describes a broader point of view that many studies have shown there is a close relationship between IQ and academic achievement in school. Students with more than 120 IQ are predicted not to have trouble in learning. That stance is in line with Prabu (2002) who states that if a student with a high IQ is in the proper environment they will reach good achievement and success in life. Thus, it is proper to say that IQ of an individual is a guarantee in achieving academic success. However, in reality, many students with high IQs experience difficulty in completing school assignments and have under standardized achievement.

Surya’s Research (Sulistiana, 2009) about the high IQ students with less achievement showed that 78 students at one high school in Bandung are classified as having high ability, but about 32 people (41%) students performed worse. Achir’s research (Munandar, 2002) at two high schools in Jakarta which were identified from IQ tests and tests of creativity found that 39% of the students are categorized to have low achievement.

The data of these studies suggests that although the number of students with less achievement vary but it is believed that students who get academic achievement that is not up to his potential will always appear in every school. Thus, the level of potential students does not guarantee that students can actualize well, in the context of the psychological phenomenon known as an underachiever. Underachiever students are students who have a high intelligence level but earn relatively low educational achievement (Son, 2013). Underachiever occurs if there is a discrepancy between children's school performance and the index of ability based on tests of intelligence, creativity or from observational data (Munandar, 2004). Relating to the characteristics of the underachiever students, during the process of teaching and learning of mathematics, underachiever students tend to be passive and tend not interested in following the lesson. Thus, they have less motivation to learn mathematics. Moreover, they rarely do their homework, not fast enough to catch the concepts taught by their teachers, and slow in completing the task.

The underachiever students’ low motivation to learn mathematics can lead to low achievement of their learning. And if it is ignored then their motivation of learning mathematics will decrease. Thus, efforts by teachers should be made to overcome the problems including teachers understanding about the need of mastering various approaches in learning. Therefore, it is necessary to develop learning approaches that can improve the performance and motivation to learn mathematics. One of the learning models that can be selected is quantum teaching. Quantum teaching is a learning which changes the atmosphere of learning from boring activity into fun activity so that it can improve the performance of students with the framework of learning design called TANDUR: (1) Grow (T); (2) Natural (A); (3) Name (N); (4) Demonstrate (D); (5) Repeat (U); and (6) Celebrate (R) (DePorter et al, 2001).

Based on the explanation above, the purpose of this paper is to theoretically examine quantum learning as an effort to improve the underachiever students’ achievement and motivation to learn mathematics. It is hoped that quantum learning can improve the quality and quantity of learning in Indonesia, especially for underachiever students.

RESULT AND DISCUSSION

Students who have difficulty to follow a math lesson in the school have a variety of causes. Typically, the main causes of low achievement of learning tend to be the level of intelligence possessed. Many researchers say that when students have the potential of high intelligence then they will not have difficulty in achieving at school. However, in reality only few students who have learning achievement which are exactly in line with the capacity they have.

Underachiever students are students who have a gap between the potential of the learning achievement obtained. The potential of the students as initial capital in the learning process in schools is measured by intelligence tests while academic achievement acquired in school is measured by the results of the evaluation conducted by the teacher.

The underachiever student’s characteristics as disclosed by Clark (Tol'ah, 1992), are: (1) the progress is contrary to expectation or potentiality; (2) has no sense of liking with the teacher or school; (3) likely to join friends who have a negative attitude in school; (4) motivation to learn is less, sleepy, do not do chores or when working, it is often not complete; (5) feeling less passionate and often get noisy when being in the classroom; and (6) has low discipline and often coming late in the class. Montgomery (Tarmidzi 2008) adds that underachiever students do not have motivation to learn in
school so that their achievement is below the expectation in one lesson, part or even the whole.

One of the ways that can be used by teachers to improve underachiever student’s achievement and motivation to learn math is by implementing quantum learning. The excellence of applying quantum learning in mathematics, are among others: (1) This learning can improve achievement and motivation to learn mathematics; (2) provide students the opportunity to relate the material to be examined with everyday life; (3) engage students actively in learning (student centered); and (4) provide comfort to the students learning environment.

Quantum learning can create interaction and student activeness so the ability, talent and potential of the students can develop which in turn can give impact of maximal learning achievement. In the learning process of quantum learning there will be alignment and empowerment of learning communities so that teachers and students get involved in the learning process equally pleased with each other and work with each other.

The principles of quantum learning as suggested by Herdian (2009) are: (1) Everything speaks; (2) The learning process is posited as a symphony orchestra; and (3) learning should give an impact on the formation of excellence. Guided by these principles, the quantum learning can improve student achievement and learning motivation, especially in mathematics.

The strong points of quantum learning which becomes the consideration of why this learning can improve achievement and motivation to learn mathematics, are among others: (1) humanistic; (2) constructive; (3) rooted in cognitive psychology; (4) emphasis on accelerated learning with a high level of success; (5) focus on meaningful learning; and (6) inculcate positive beliefs. Based on these advantages, achievement and motivation to learn math by using quantum learning is not something impossible.

CONCLUSION

Every child is born with the different ability and potential. The state owned by the underachiever students is when they are not able to reach certain achievements which in fact they have a good potential for achievement that must be achieved. The causes of underachiever are among others, the unpleasant learning experience of students in the classroom, the learning styles of students which are different from the teaching styles of the teachers and the teachers do not tolerate it, frustration due to pressure from parents, and so forth.

Quantum Learning is an innovative learning that can be applied to improve the performance of teachers and underachiever students’ motivation to learn math. This is because quantum fun learning is learning that is expected to increase underachiever student’s interest so that finally they can increase the learning outcomes overall. Pleasant learning environment can also lead to motivation on underachiever students that directly affect their learning process. The stages that exist in the quantum learning are expected to facilitate various development of underachiever students’ mathematical abilities and increasing the quantity and quality of teaching and learning activities in the classroom so that achievements and their motivation to learn math are more optimal.

Suggestion

Most underachiever students assume that mathematics is a difficult subject so that teachers in schools should provide sufficient guidance and training so as to improve achievement and motivation to learn math optimally.

Students underachiever requires the allocation of sufficient time to study the material of abstract mathematics that need to be considered by the teacher.

BIBLIOGRAPHY


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