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Improving Student Learning Achievement through Quantum Teaching in Madrasah

Yusrifaini
Madrasah Ibtidaiyah Syafiiyah II, Probolinggo, East Java, Indonesia
Corresponding Author: yusfaini@gmail.com

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Abstract:

This study aims to analyze whether the application of quantum teaching learning can improve students' learning achievement of Fiqh at Madrasah Ibtidaiyah Syafiiyah II Banyuanyar, Probolinggo Regency. This study used a qualitative approach to class action research. The stages of action research in a cycle include planning or implementing observation and reflection. Each cycle includes planning (plan), action (action), observation (observation) and reflection (reflection). This cycle continues and will be stopped if it is by the needs and is sufficient. The results showed that quantum teaching learning positively improved student achievement in the class, which was marked by an increase in student mastery in each cycle, namely cycle 1 47.2%, cycle 2 61.1% and cycle 3 86.1%. This research provides implications about the importance of learning design that teachers must carry out so that learning becomes meaningful and of high quality.

Keywords: *Quantum Teaching, Learning Achievement, Meaningful Learning*

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INTRODUCTION

Teachers in educational activities play a vital role (Sanjani, 2020). In this case, the teacher functions as a mediator in delivering the material being taught to students, to be followed up by students in real life, both inside and outside school (Aulia et al., 2021). In this learning process, to become a professional teacher, the teacher should have two categories, namely capability and loyalty, meaning that the teacher must have the ability in the field of science he teaches, have good theoretical skills about teaching, from planning, implementation to evaluation and have teacher loyalty, namely being loyal to teacher assignments that are not solely in class, but before and after class (Bahri et al., 2021; Magdalena et al., 2020).

Teacher work is a profession or position that requires special skills. This work can only be done by someone outside the education sector (Hoesny et al., 2021; Anwar, 2020). The duties of the teaching profession include: educating, teaching and training. Educating means continuing and developing science and technology. While training means developing skills in students. While the teacher's social duties are not only limited to the community but furthermore the teacher is someone who is expected to be able to educate the nation and prepare intelligent, skilled and civilized human beings who will build the future of the nation and state (Allen et al., 2020; Imron et al., 2020). The more accurately teachers perform their functions, the more reliable human resources are guaranteed to be created and developed in nation-building (Aulia et al., 2021).

In simple terms, the teacher's responsibility is to direct and guide students so that their knowledge increases, their skills become more proficient and their potential is developed and developed (Zou, 2020). In this connection, some experts say that a good teacher is a teacher who can carry out inspiring teaching, namely a teacher who, through his teaching activities, can inspire his students (Ridwan, 2021). Through teaching activities, a teacher can encourage students to express big ideas from their students.

In teaching and learning, the teacher must have a strategy so students can learn effectively and efficiently and hit the expected goals. One of the steps to having that strategy is to master presentation techniques, or what is usually called the teaching method (Nuryasana et al., 2020).

The lesson presentation technique is a knowledge of the teaching methods the teacher or instructor uses. Another meaning is as a presentation technique mastered by the teacher to teach or present lesson material to students in the classroom so that students can capture, understand and use the lesson properly. In reality, the method or teaching method or presentation technique used by the teacher to convey information or oral massage to students differs from the method used to strengthen students in mastering knowledge, skills and attitudes. The method used to motivate students to be able to use their knowledge to solve a problem they face or to answer a question will be different from the method used to make students able to think and express their own opinions in dealing with all problems (Syaparuddin et al., 2020).

The teaching method that the teacher uses in every meeting is not arbitrary. However, after going through a selection, that is, by formulating specific instructional objectives because teaching and learning activities are not merely a matter of telling (Ela, 2022). Learning is not an automatic consequence of contemplating information in students' minds. Learning requires mental involvement and students' work. Explanation and demonstration alone will not produce lasting learning outcomes.

Therefore, a teaching method is needed to increase student motivation and learning achievement to improve student learning achievement in the material it teaches, especially in Fiqh subjects. One of these methods is quantum teaching.

Quantum Teaching creates an effective learning environment by using elements that exist in students and their learning environment through interactions that occur in the classroom (Yanto, 2018; Fitri, 2021). In addition, Quantum Teaching is also a lively learning model that activates interactions in learning activities that affect student achievement and can accommodate student interests. Knowing whether students' interest in learning is high or low (Sigalingging et al., 2021; Hartati, 2021) is essential.

The results of research conducted by Lestari (2018) say that student learning outcomes in subjects taught using the quantum teaching-learning model are higher than those taught using conventional learning methods. Cahyaningrum (2019) says that implementing the TANDUR-type quantum teaching-learning model in teaching and learning activities affects student learning outcomes. Wote et al. (2020) The quantum teaching model allows teachers to innovate their learning to be enjoyable and later impact student learning outcomes. Widiyono (2021) said that applying the quantum teaching model can optimally improve science learning outcomes so that students are more enthusiastic, motivated, and understand the material better. Aspects of TANDUR (Grow, Experience, Name, Demonstrate, Repeat, and Celebrate) in quantum teaching can provide learning experiences, discover concepts, and make students more skilled in choosing the steps to solve each learning problem.

The presentation of Fiqh learning with the Quantum Teaching approach is an ideal learning model because it emphasizes cooperation between students and teachers to achieve common goals. This learning model is also practical because it allows students to learn optimally, which in turn will significantly increase student achievement.

Quantum teaching describes new ways that facilitate the learning process by integrating elements of art and achievements with all its nuances. It includes all activities, interactions and differences that maximize learning moments that focus on dynamic relationships within the class circle and interactions that establish the foundation and framework for learning.

This interaction includes an element of practical learning that transforms students' natural gifted abilities into a light that will benefit themselves and others. The trick is to relate what is taught to an event, thought, or feeling gleaned from the student's home, social, musical, artistic, recreational or academic life. So that students can avoid feelings of pressure and anxiety that interfere with their ability to understand Fiqh subjects.

Appropriate teaching methods are expected to reduce or even eliminate students' anxiety in learning Fiqh. So that students can achieve learning objectives to improve learning outcomes. By being aware of the symptoms or facts mentioned above, this study aims to analyze whether the application of quantum teaching learning can improve students' learning achievement in Jurisprudence at Madrasah Ibtidaiyah Syafiiyah II Banyuanyar, Probolinggo, East Java.

RESEARCH METHODS

This research is action research because the research was conducted to solve learning problems in the classroom. This research also includes descriptive research because it describes how a learning technique is applied and how the desired results can be achieved. This study uses the form of the teacher as a researcher, where the teacher plays a vital role in the classroom action research process. In this form, the main objective of classroom action research is to improve learning practices in the classroom. In this activity, the teacher is fully involved in planning, action, observation and reflection. The presence of other parties in this research could be more dominant and minimal.

This research refers to the continuous improvement of learning. Kemmis and Taggart (1988) state that the action research model is a spiral. The stages of action research in a cycle include planning or implementing observation and reflection. This cycle continues and will be stopped if it is by the needs and is sufficient. This research uses the action research model from Kemmis and Taggart (Arikunto, 2002), which is a spiral from one cycle to the next. Each cycle includes planning (plan), action (action), observation (observation) and reflection (reflection). The steps in the next cycle are revised planning, action, observation and reflection.

In order to compile and manage the collected data to produce a conclusion that can be accounted for, quantitative data analysis is used, and quantitative data is used in the observation method. The method of calculating the completeness of student learning in the teaching and learning process is as follows; 1) Recapitulate test results, 2) Calculate the total score achieved and the percentage for each student using the learning completeness formula. 3) Analyze the results of observations made by colleagues on teacher and student activities during teaching and learning activities.

HASIL DAN PEMBAHASAN

Cycle 1

At this stage, the researcher prepares the lesson, which consists of lesson plan 1, formative test questions one and supporting teaching tools. In addition, an observation sheet for the management of Quantum Teaching learning and an observation sheet for student activities are also prepared. At the end of the teaching and learning process, students are given a formative test to know the success of students in the teaching and learning process that has been carried out. The research data in cycle 1 are as Table 1.

From the table above, by applying Quantum Teaching learning, the average value of student achievement is 70.25, and learning completeness reaches 47.2%, or there 17 students out of 36 students who have finished studying. These results indicate that in the first cycle, students have not studied classically thoroughly because students who score ≥ 65 are only 50% smaller than

the desired mastery percentage of 85%. Students still feel new and do not understand what the teacher means and uses by applying Quantum Teaching-learning.

Table 1 Recapitulation of Student Test Results in Cycle 1

No	Description	Cycle 1 Results
1	Formative test average score	70,25
2	Number of students who complete the study	17
3	Percentage of learning completeness	47,2 %

In implementing teaching and learning activities, information is obtained from the following observations; a) Need to be more intensive in motivating and conveying learning objectives, b) Need to be more effective in managing time, c) Students are less active during learning.

From the data analysis, the results showed that 17 children (47.2%) had good interest, ten children (27.8%) had sufficient attention, and nine children (25%) had less interest. Meanwhile, in the aspect of attention, it was found that the data analysis showed that 17 children (47.2%) had good attention, ten children (27.8%) had sufficient attention, and nine children (25%) had insufficient attention. As for participation, data obtained were 17 children (47.2%) had good participation, ten children (27.8%) had sufficient participation, and nine children (25%) had less participation.

From these results, it can be drawn that there are still deficiencies in the implementation of teaching and learning activities in cycle I, so a revision is needed to be carried out in the next cycle; a) teachers need to be more skilled in motivating students and clearer in conveying learning objectives. Where students are invited to be directly involved in every activity that will be carried out, b) the teacher needs to distribute the time well by adding information that is deemed necessary and giving notes, c) the teacher must be more skilled and enthusiastic in motivating students so that students can be more enthusiastic.

Cycle 2

At this stage, the researcher prepared learning tools consisting of 2 lesson plans, two formative test questions and supporting teaching tools. In addition, observation sheets for Quantum Teaching learning management and student observation sheets are also prepared.

The teaching and learning process refers to the lesson plan by paying attention to revisions in cycle one so that errors or deficiencies in cycle I do not recur in cycle 2. Observation (observation) is carried out simultaneously with implementing teaching and learning. At the end of the teaching and learning process, students are given test 2 to know the level of success of students in the teaching and learning process being carried out. The instrument used is test 2. The research data in cycle II are as follows:

Table 2 Recapitulation of Student Test Results in Cycle 2

No	Description	Cycle 2 Results
1	Formative test average score	75,50
2	Number of students who complete the study	22
3	Percentage of learning completeness	61,1 %

Table 2 shows that the average value of student achievement is 75.50, and the learning completeness reaches 75% or 22 out of 36 students have completed their studies. These results indicate that in cycle 2, the classical learning completeness has increased slightly better than in cycle 1. There is an increase in student learning outcomes because after the teacher informs that at the end of each lesson, a test will always be held so that students are more motivated to learn at the next meeting. In addition, students also understand what is meant and wanted by the teacher by applying Quantum Teaching-learning.

From the data analysis, the results showed that 22 children (61.1%) had good interest, 12 children (33.3%) had sufficient interest, and two children (5.55%) had less interest. As for the level of student attention, it was obtained data that 22 children (61.1%) had good attention, 12 children (33.3%) had sufficient attention, and two children (5.55%) had insufficient attention. As for student participation, the results obtained were that 22 children (61.1%) had good participation, 12 children (33.3%) had sufficient participation, and two children (5.55%) had less participation.

In carrying out learning activities, information is obtained from the following observations: a) motivating students, b) guiding students in formulating conclusions/finding concepts, and c) time management.

Implementation of learning activities in cycle II, there still needs to be improved. So it is necessary to have revisions to be carried out in cycle II, including a) the teacher in motivating students should be able to make students more motivated during the teaching and learning process takes place, b) the teacher must be closer to students so that there is no feeling of fear in students either to express opinions or ask questions, c) The teacher must be more patient in guiding students to formulate conclusions/find concepts, d) the teacher must distribute the time well so that learning activities can run as expected.

Cycle 3

At this stage, the research prepared learning tools consisting of 3 lesson plans, three formative test scans and supporting teaching tools. Additionally, observation sheets for Quantum Teaching learning management and teacher and student activities were prepared.

The teaching and learning process refers to the lesson plan by paying attention to revisions in cycle two so that errors or deficiencies do not recur in cycle 3. Observation (observation) is carried out simultaneously with implementing teaching and learning. At the end of the teaching and learning

process, students are given formative test 3 to know the level of success of students in the teaching and learning process that has been carried out. The instrument used is formative test 3. The research data in cycle 3 are as follows;

Table 3 Recapitulation of Student Test Results in Cycle 3

No	Description	Cycle 3 Results
1	Formative test average score	80,50
2	Number of students who complete the study	31
3	Percentage of learning completeness	86,1 %

Based on the table above, it was obtained that the average value of the formative test was 86.1%, and of the 36 students who had completed it, 31 students and five students still needed to achieve learning mastery. So classically, the learning completeness achieved is 86.1% (including the complete category). The results in cycle 3 experienced a better increase than cycle 2. An increase influenced the increase in learning outcomes in cycle 3 in the teacher's ability to apply Quantum Teaching learning so that students more easily understood the material given.

From the data analysis, the results showed that 31 children (86.1%) had good interest, four children (11.1%) had sufficient interest, and one child (2.78%) had less interest. As for student attention, the results showed that 31 children (86.1%) had good attention, four children (11.1%) had sufficient attention, and one child (2.78%) had insufficient attention. At the same time, student participation resulted in 31 children (86.1%) having good participation, four children (11.1%) having sufficient participation, and one child (2.78%) having less participation.

At this stage, it will be examined what has been implemented well and which still needs to be improved in the teaching and learning process by applying expository learning. The data obtained can be described as follows: a) during the teaching and learning process, the teacher has carried out all the learning well. Even though several aspects are not perfect, the percentage of implementation for each aspect is quite large; b) Based on the observational data, it is known that students are active during the learning process; c) deficiencies in the previous cycles have undergone improvements and improvements so that they become more suitable, d) Student learning outcomes in cycle 3 achieve completeness.

In cycle 3, the teacher has implemented Quantum Teaching learning well, and the teaching and learning process has gone well from student activities and student learning outcomes. So there is no need for too many revisions, but what needs to be considered for further action is to maximize and maintain what already exists with the aim that in the implementation of the teaching and learning process, further the application of Quantum Teaching learning can improve the teaching and learning process so that learning objectives can be achieved.

The results of this study indicate that learning Fiqh with the Quantum Teaching approach has a positive impact on improving student achievement. This can be seen from the more solid understanding of students towards the material presented by the teacher (learning completeness increased from cycles 1, 2 and 3), namely 47.2%, 61.1% and 86.1%, respectively. In cycle 3, classical student learning completeness has been achieved.

This research is in line with the results of Murnawan's research (2021) which says that the average score of the test results for cycle 1 is 62.78 with a learning completeness level of 50.00%, and the average score for cycle 2 is 75.00 with a learning completeness level of 88, 89%. This study concludes that applying the quantum teaching-learning model can improve students' mathematics learning outcomes. Likewise, Hartati's research (2021) results showed that at the end of action cycle 1, student learning activities increased by 72.29% in cycle 2 to 88.97%. Furthermore, the average formative test score for cycle 1 was 72.33, which increased in cycle 2 78.33. Classical learning completeness in cycle 1 was 73.33% and increased in cycle 2 to 86.67%, so it experienced an increase of 13.24%. It was concluded that applying the quantum teaching model with visual media can increase students' social studies activity and learning outcomes on economic activities.

The same thing was also conveyed by Mufida et al. (2022), who stated that 1) It was found that differences in learning outcomes in quantum learning mathematics with concept maps obtained an average of 71.3 and conventional obtained an average of 60.2 with a Fcount of 4.0697 greater than Ftable, namely 4.05 and 2) The quantum learning model with concept maps is more effective than conventional learning models in the learning process with Fcount 4.112 greater than Ftable, namely 4.05. Similar research was also conveyed by Siahaan et al. (2021), who said that there were differences in student interest and achievement between classes using the quantum learning model through the collaborative method of throwing snowballs using the class model compared to conventional learning, as evidenced by the Asymp scores. Sig. (2-tailed) of 0.000 resulting from the Mann-Whitney U test. In addition, there are differences in students' understanding of concepts, as evidenced by the average normalized gain of the overall value of 0.80 compared to the experimental class using conventional learning models of 0.35.

The quantum teaching-learning model has several stages in learning that can be implemented in students, including growing, experiencing, naming, demonstrating, repeating and celebrating. In the application of quantum teaching-learning, students are more active in the learning that is taught because, in the learning process, the teacher fosters students' learning interest by providing a problem in the form of an experiment or associated with the daily life of students, this can help students to develop their knowledge effectively. Deep because students learn by observing a process themselves through an experiment, students solve problems by searching for information related to

problems independently, then present their ideas in solving them (Nurlaela et al., 2021).

CONCLUSION

Based on the objectives of class action research (action research) to improve the quality of learning that occurs in class, and based on the research results that have been presented for three cycles, the results of all discussions and analyses that have been carried out can be concluded as follows; first, learning Quantum Teaching can improve the quality of students' Fiqh Learning. Second, Quantum Teaching Learning positively impacts student achievement in class, marked by an increase in student learning completeness in each cycle, namely cycle 1 47.2%, cycle 2 61.1% and cycle 3 86.1%. Third, students can work independently or in groups and take responsibility for all individual and group assignments.

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