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The Effect Of The Quantum Teaching Model On Islamic Religious Education Students' Learning Motivation At SMP Negeri 1 Kedawung

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ABSTRACT

This study examines the effect of applying the Quantum Teaching model on student learning motivation in Islamic Religious Education (IRE) at SMP Negeri 1 Kedawung. The background of the problem shows that IRE learning is still dominated by lecture methods, resulting in low motivation and active involvement of students. The objectives of this study are to analyze the effectiveness of Quantum Teaching in increasing student learning motivation, measure the level of student learning motivation in the experimental and control classes, and test the significance of the influence of this model. Using a quantitative approach with a pre-test post-test control group design, this study involved 32 eighth-grade students as samples from a population of 357 students, selected through Cluster Random Sampling. Data were collected through questionnaires, documentation, interviews, and observations, then analyzed using validity, reliability, normality, homogeneity, and Pearson's Product Moment correlation tests. The results showed that the learning motivation of students in the experimental class (86%) was higher than that of the control class (82%), both of which were in the good category. A correlation coefficient of 0.81 indicated a strong and significant relationship between Quantum Teaching and learning motivation, with a contribution of 81%. The implications of this study emphasize the importance of learning innovation to increase student motivation.
Keywords:.

Keywords: *Quantum Teaching, Learning Motivation, Islamic Religious Education*

INTRODUCTION

Education is the primary foundation for developing the character and intellect of the younger generation. Ki Hajar Dewantara (Kosasih, 2013) emphasized that education is an effort to develop a child's character, mind, and body in a balanced manner to achieve a perfect life. In line with this view, the National Education System Law No. 20 of 2003 in Indonesia mandates that education must be a conscious and planned effort to develop students' potential so that they possess spiritual and religious abilities, self-control, personality, intelligence, noble character, and the skills necessary for themselves, society, the nation, and the state. Therefore, educators play a crucial role in creating a conducive and innovative learning environment to achieve these noble goals.

However, the reality on the ground often presents significant challenges in achieving ideal educational goals. One common problem is low student motivation to learn, especially in certain subjects. Learning motivation, as a non-intellectual psychological factor, is crucial in fostering passion, enjoyment, and enthusiasm for learning (Sardiman, 2012). Students with strong motivation will have the energy to actively engage in learning activities. Unfortunately, many learning practices are still dominated by conventional methods, such as lectures, which tend to make students passive and less engaged.

A research gap arises when less innovative learning methods fail to stimulate student learning motivation, even though teachers have mastered the material well. Initial observations at SMP Negeri 1 Kedawung showed that Islamic Religious Education (PAI) lessons still often use the lecture method. While this method has its advantages, it is ineffective in motivating students, causing them to become passive listeners, easily bored, and even engage in activities irrelevant to the lesson. This phenomenon indicates the need for innovation in learning models to address the problem of student learning motivation.

In this context, the Quantum Teaching model presents an innovative approach that offers a solution. Quantum Teaching engineers various forms of interaction within and around the learning process, encompassing effective learning elements that contribute to student success (Rachmawati, 2012). This model focuses on creating a learning environment that is enjoyable and meaningful and encourages active student involvement, thereby improving the competence of both educators and students, as well as stimulating learning motivation in both parties.

Previous studies have demonstrated the positive impact of Quantum Teaching on student learning motivation. Indriyani and Sari (2020) found a significant increase in elementary school students' learning motivation after

implementing this model, particularly through the "chat together," "repetition," and "game" techniques. Setyawan (2021) also confirmed the effectiveness of Quantum Teaching in improving junior high school students' motivation and mathematics learning outcomes by creating more engaging and interactive learning.

Furthermore, Dewi and Pratama (2022) reported that Quantum Teaching had a positive effect on increasing high school students' learning motivation in science, particularly in terms of self-confidence and question-asking skills. Pramudito and Hasanah (2023) found that this model not only increased the learning motivation of tenth-grade high school students but also developed social skills such as cooperation and communication. Finally, Nurhadi and Lestari (2024) explored the impact of Quantum Teaching in vocational schools, demonstrating increased learning motivation and academic achievement, particularly in practical skills.

However, the implementation of Quantum Teaching also has limitations, such as requiring thorough preparation, a relatively long timeframe, and adequate supporting facilities. These challenges require creativity and special skills from teachers to optimally achieve learning objectives. Therefore, this study is relevant to specifically examine how the Quantum Teaching model can be implemented and its impact on students' Islamic Religious Education (PAI) learning motivation at SMP Negeri 1 Kedawung.

The objectives of this study were: (1) to determine the learning motivation of students in the control class at SMP Negeri 1 Kedawung; (2) to determine the learning motivation of students in the experimental class at SMP Negeri 1 Kedawung; and (3) to determine whether there is a difference in student learning motivation between the experimental and control classes at SMP Negeri 1 Kedawung. Overall, this study aims to demonstrate whether the implementation of Quantum Teaching significantly influences student learning motivation in Islamic Religious Education (PAI).

Theoretically, the results of this study are expected to enrich the body of knowledge in the field of education, particularly regarding student learning motivation and the effectiveness of the Quantum Teaching model. Practically, this research is expected to provide benefits for students in increasing their learning motivation, for teachers as a reference in implementing innovative learning models, and for schools in providing infrastructure that supports an optimal learning process.

METHOD

This research uses a quantitative approach with a quasi-experimental design. The quantitative approach was chosen to measure and analyze numerical data statistically, thus testing hypotheses and drawing objective conclusions regarding the relationships between variables. The quasi-experimental design, specifically a pre-test/post-test control group design, was used because it allowed researchers to compare the experimental group receiving the treatment (Quantum Teaching) with the control group receiving no treatment, while controlling other variables to the greatest extent possible.

The population of this study was all 357 eighth-grade students of SMP Negeri 1 Kedawung, spread across 11 classes. This population selection was based on the assumption that eighth-grade students have sufficient learning experience and are at a relevant cognitive development stage for implementing the new learning model. The sampling technique used was Cluster Random Sampling, in which groups (classes) were selected randomly.

The research sample consisted of 32 students from grade VIII D as the experimental group and 32 students from grade VIII G as the control group. The total sample size was 64 students. These two classes were randomly selected from all grade VIII classes, assuming that the cognitive abilities of students in each class were relatively homogeneous. The experimental class received treatment in the form of the Quantum Teaching model, while the control class continued learning with conventional methods (lectures).

The research instrument included two main variables: the Quantum Teaching Model as the independent variable (X) and Learning Motivation as the dependent variable (Y). The instrument used was a questionnaire with a Likert scale with four response options: "always," "often," "sometimes," and "never." Different scores were given for positive and negative statements.

The questionnaire for the Quantum Teaching variable (X) was designed to measure the extent to which teachers are able to create a comfortable learning environment, deliver material in an engaging manner, and encourage active student engagement. Meanwhile, the questionnaire for the Learning Motivation variable (Y) measures aspects such as the desire to succeed, motivation to learn, future expectations, willingness to complete tasks, face challenges, activeness in learning, interest in the material, expectations of rewards, interesting learning activities, and environmental support.

Data collection techniques were conducted through four main methods: (1) Questionnaire: Used to collect data from students in grades VIII D (experimental) and VIII G (control) regarding the implementation of Quantum Teaching and learning motivation. This questionnaire contained a list of questions that

respondents had to answer based on their opinions. (2) Documentation: Used to collect written data such as syllabi, Lesson Plans (RPP), student grades, and teacher and student data obtained from Islamic Religious Education (PAI) teachers and school administration. (3) Interviews: Conducted with Islamic Religious Education (PAI) teachers, students, and the vice principal for curriculum to obtain in-depth information and verify the data collected through the questionnaire and documentation. (4) Observation: Used to directly observe the situation in the field, particularly the teaching and learning process in the classroom. Participatory observation was chosen, where the researcher participated in the respondents' activities to gain a more comprehensive understanding.

Next, data analysis techniques were carried out in several stages:

- Instrument Trial: Included validity and reliability tests to ensure the research instrument was accurate and consistent. Validity testing uses the correlation coefficient, while reliability testing uses the Spearman-Brown formula.
- Prerequisite Analysis Test: Includes a normality test (Kolmogorov-Smirnov) to determine whether the data is normally distributed, and a homogeneity test (Levene Statistic) to determine whether the variances between data groups are equal.
- Descriptive Analysis: Used to describe the tendency of respondents' answers to the questionnaire by calculating the frequency percentage for each statement. Results are interpreted using a percentage scale (Suharsimi Arikunto, 2006).
- Pearson Product Moment Correlation Test: Used to determine the extent of a significant linear relationship between the implementation of the Quantum Teaching model (X) and student learning motivation (Y).
- Hypothesis Test: Conducted by comparing the calculated t-value with the t-table to determine whether the null hypothesis (H_0) is rejected or accepted, indicating whether or not there is a significant effect.

RESULTS AND DISCUSSION

This study aims to analyze the influence of the Quantum Teaching model on student learning motivation in Islamic Religious Education (PAI) at SMP Negeri 1 Kedawung. Data were collected from 32 students in the experimental class and 32 students in the control class through questionnaires, documentation, interviews, and observations. The results of the analysis are presented in three main sections: the implementation of the Quantum Teaching model, student learning motivation, and the effect of Quantum Teaching on learning motivation.

A. Implementation of the Quantum Teaching Model in Islamic Religious Education Subjects for Grade VIII Students at SMP Negeri 1 Kedawung (Variable X)

The implementation of the Quantum Teaching model in the experimental class was measured using a questionnaire administered to 32 students. This questionnaire included 20 items representing various aspects of Quantum Teaching. The average summary results indicate that the implementation of this model is in the "good" category with an average score of 86%. The following is a breakdown of the findings based on key indicators:

1. Opening Lessons (Greetings)

   97% of respondents stated that teachers "always" greet students upon entering the classroom, and 3% said "often." This indicates that teachers' habit of beginning lessons with greetings is very good, creating a positive and friendly atmosphere. According to Miftahul A'la (2012), teachers who implement Quantum Teaching are required to lead by example, including being cheerful and smiling, beginning with greetings. This aligns with findings that a good opening can build initial connections with students.
2. Formulating Objectives and Providing Motivation
   - 27.3% of students stated that teachers "always" formulate learning objectives, 60.6% "often," and 12.1% "sometimes." The average score for this indicator was 81.25%, which falls into the very good category.
   - Regarding providing motivational encouragement, 45.5% of students answered "always," 36.4% "often," and 18.2% "sometimes." The average score was 81.25%, also in the very good category.

   This indicator demonstrates that teachers consistently communicate learning objectives and provide motivation, which is an integral part of the "Grow" phase of the TANDUR Quantum Teaching framework (De Porter, 2010). Providing motivation at the beginning of the lesson is crucial to spark student interest and connect the material to their personal benefits (AMBAK - What's In It For Me).
3. Quality of Teaching and Learning Activities and Classroom Mastery
   - Teachers' efforts to improve student understanding scored 80% (good category), with 33.3% of students responding "always" and 54.5% "often."
   - Teachers' presentation of Islamic Religious Education material scored 90% (very good category), with 75.8% of students responding "always."
   - Student engagement in the learning process scored 85% (good category), with 51.5% of students responding "always" and 42.4% "often."

- The use of Quantum Teaching to foster student self-confidence scored 82.5% (good category), with 42.4% of students responding "always" and 48.5% "often."
- The teacher's ability to manage the classroom scored 87.5% (good category), with 66.7% of students responding "always" and 27.3% "often."
- Allowing students the freedom to choose their roles in learning scored 96% (very good category), with 90.9% of students responding "always."
- The teacher's open attitude in assigning group presentations scored 95% (very good category), with 81.8% of students responding "always."

These findings indicate that the teacher has successfully created an active, participatory, and supportive learning environment, in accordance with the principles of Quantum Teaching, which emphasize student interaction and engagement (De Porter, 2019). A safe, comfortable, and enjoyable learning environment is one of the guidelines for effective Quantum Teaching (Miftahul A'la, 2012).

4. Material Preparation and Group Preparation
   - The teacher's preparation of the learning material outline received a score of 81% (good category), with 42.4% of students responding "always" and 39.4% "often."
   - Observer preparation during the learning process received a score of 82.5% (good category), with 48.5% of students responding "always" and 42.4% "often."

   This indicates that the teacher conducted thorough and structured planning, which is an important prerequisite for the successful implementation of innovative learning models.
5. Discussion and Presentation Process
   - Students divided into groups according to the teacher's assignments received a score of 82.5% (good category), with 54.5% of students responding "always" and 24.2% "often."
   - Students focused on discussions and did not talk much outside the material, resulting in a score of 79% (good category), with 36.4% of students answering "always" and 39.4% "often."
   - Teachers inviting students to discuss presentation results resulted in a score of 92.5% (good category), with 84.8% of students answering "always."
   - The teacher and students conducted group discussion improvements, achieving a score of 90% (good category), with 75.8% of students responding "always."

This indicator indicates that the discussion and presentation process was effective, with students actively engaged and the teacher facilitating reflection and improvement. This aligns with the "Demonstrate" and "Celebrate" phases in TANDUR, where students are given the opportunity to demonstrate their understanding and have their successes recognized (De Porter, 2000).

6. Evaluation and Conclusion
   - The teacher's group evaluation scored 85% (good category), with 60.6% of students responding "always" and 24.2% "often."
   - The teacher's asking students to share experiences and draw conclusions achieved a score of 82.5% (good category), with 60.6% of students responding "always" and 18.2% "often."
   - Assignments related to the material presented received a score of 87.5% (good category), with 60.6% of students responding "always" and 33.3% "often."

   This aspect indicates that the teacher focuses not only on delivering the material but also on strengthening understanding and application of concepts, as well as providing constructive feedback. This supports the development of critical thinking skills and student responsibility.

   Overall, the implementation of the Quantum Teaching model in the experimental class showed very positive results. The teacher successfully created an interactive learning environment, motivated students, and facilitated meaningful learning. This is consistent with the characteristics of Quantum Teaching, which emphasizes a fun and colorful learning experience and utilizes various interactions to create optimal learning moments (De Porter, 2019).

B. Learning Motivation for Islamic Religious Education Subjects in Grade VIII Students of SMP Negeri 1 Kedawung (Variable Y)

Student learning motivation was measured using a questionnaire administered to students in the experimental and control classes. The average learning motivation of students in the experimental class was 86% (good category), while in the control class it was 82% (good category). Although both were in the good category, there were differences indicating that learning motivation was higher in the experimental class. The following are the details of the findings based on learning motivation indicators:

1. Desire to Succeed
   - Students who attended class during Islamic Religious Education (PAI) lessons scored 97.5% (good category) in the experimental class, with 95% of students "always" attending class.
   - Students' desire to understand Islamic Religious Education (PAI) material scored 97.5% (good category) in the experimental class, with 97% of students "always" wanting to understand.
   - Students who did not underestimate Islamic Religious Education (PAI) lessons scored 97.5% (good category) in the experimental class, with 93.9% of students "always" not underestimating them.

   These indicators indicate that students in the experimental class had a very strong desire to succeed in Islamic Religious Education (PAI), a characteristic of intrinsic motivation. This desire was the primary driving force behind their involvement in the learning process.
2. Support and Learning Needs
   - Students who spend time studying Islamic Religious Education at home scored 77.5% (good) in the experimental class, with 42.3% of students reporting "never" spending time and 30.4% reporting "often." This indicates that while motivation in class is high, independent study habits at home still need to be improved.
   - Students who desire good grades in Islamic Religious Education (PAI) scored 100% (good category) in the experimental class, with 100% of students "always" wanting good grades.
   - Students who feel they are not lazy about completing Islamic Religious Education (PAI) assignments scored 87.5% (good category) in the experimental class, with 63.7% of students "never" feeling lazy.

   This indicator indicates that students have high expectations for learning outcomes and tend not to be lazy about completing assignments, which is a form of extrinsic (good grades) and intrinsic (not lazy) motivation.
3. Efforts to Face Difficulties
   - Students prefer working on assignments independently rather than in groups, scoring 82.5% (good category) in the experimental class, with 57.6% of students "often" working independently.
   - Students who discuss learning difficulties score 87.5% (good category) in the experimental class, with 57.6% of students "always" discussing.

   This indicator shows that students are willing to overcome difficulties, both independently and through discussion, reflecting perseverance and tenacity in learning.

4. Desire to Explore the Material Further and Be Active in Learning
   - Students seeking additional resources (books/internet) to expand their Islamic Religious Education (PAI) knowledge scored 77.5% (good category) in the experimental class, with 48.5% of students "always" seeking resources.
   - Students participating in Islamic Religious Education (PAI) learning activities scored 95% (good category) in the experimental class, with 87.9% of students "always" participating.
   - Students remaining persistent when something is not understood in Islamic Religious Education (PAI) lessons scored 80% (good category) in the experimental class, with 42.4% of students "sometimes" remaining silent and 36.4% "never" remaining silent.

   This indicator demonstrates a high level of interest in the material and active participation in learning, which are characteristics of motivated students.
5. Expectations of Rewards and a Conducive Environment
   - Students' courage to express their opinions in Islamic Religious Education (PAI) lessons scored 65% (fair category) in the experimental class, with 54.2% of students "sometimes" feeling courageous. This indicates that despite improvements, there is still room to encourage students' courage in expressing their opinions.
   - Students' enjoyment of Islamic Religious Education (PAI) lessons scored 97.5% (good category) in the experimental class, with 93.9% of students "always" feeling happy.
   - Students' enthusiasm for Islamic Religious Education (PAI) lessons scored 90% (good category) in the experimental class, with 63.6% of students "never" feeling discouraged.
   - Expecting praise from others when scoring high in Islamic Religious Education (PAI) lessons scored 90% (good category) in the experimental class, with 72.7% of students "always" expecting praise.
   - Students felt engaged in Islamic Religious Education (PAI) learning activities, scoring 90% (good) in the experimental class, with 72.7% of students "always" feeling engaged.
   - Classroom cleanliness during Islamic Religious Education (PAI) learning activities scored 69% (fair) in the experimental class, with 36.4% of students "always" and 36.4% "sometimes" feeling clean.
   - Classroom order during Islamic Religious Education (PAI) learning activities scored 73% (fair) in the experimental class, with 39.4% of students "always" and 30.3% "sometimes" feeling orderly.

- Classroom activity during Islamic Religious Education (PAI) learning activities scored 82.5% (good) in the experimental class, with 42.4% of students "always" and 48.5% "often" feeling active.

These indicators demonstrate that a conducive learning environment and engaging activities significantly contribute to student motivation. Although some aspects of the environment still need improvement, overall, students felt happy and motivated.

A comparison between the experimental and control classes showed that students' learning motivation was higher in the experimental class. This indicates that the implementation of Quantum Teaching has a positive impact on increasing Islamic Religious Education (PAI) students' motivation. This finding aligns with the theory of learning motivation, which states that a supportive environment and engaging learning methods can increase students' passion and enthusiasm for learning (Hamzah B. Uno, 2015).

C. The Effect of the Quantum Teaching Model on Islamic Religious Education (PAI) Learning Motivation in Grade VIII Students at SMP Negeri 1 Kedawung

To test the effect of the Quantum Teaching model on student learning motivation, a Pearson Product Moment correlation analysis was conducted. The calculation results showed a correlation coefficient (rxy) of 0.81.

1. Strength of the Relationship

- The rxy value of 0.81 indicates a very strong relationship between the implementation of the Quantum Teaching model and student learning motivation.
- According to the correlation coefficient criteria, the value of 0.81 is in the range of 0.80-1.00 which is categorized as "very high" or "very appropriate/very good" (Suharsimi Arikunto, 2006). This means that the better the implementation of Quantum Teaching, the higher the students' learning motivation.

2. Coefficient of Determination (KD)

- The coefficient of determination is calculated using the formula KD = r^2 x 100%.
- KD = $(0.81)^2$ x 100% = 0.6561 x 100% = 65.61%.
- This value indicates that 65.61% of the variation in student learning motivation can be explained by the application of the Quantum Teaching model. The remaining 34.39% is influenced by other factors not examined in this study, such as family factors, friendships, the social environment, or individual student characteristics.

3. Hypothesis Testing

- The null hypothesis (H_0) states that there is no significant effect between the application of the Quantum Teaching model and student learning motivation.
- The alternative hypothesis (H_a) states that there is a significant effect between the application of the Quantum Teaching model and student learning motivation.
- With degrees of freedom (df) = N - 2 = 32 - 2 = 30, the t-value at a significance level of $\alpha = 0.05$ is 1.69.
- The calculated t-value obtained is 6.95.
- Because the calculated t-value (6.95) > t-value (1.69), H_0 is rejected and H_a is accepted.
- This indicates that the implementation of the Quantum Teaching model has a significant effect on student learning motivation in Islamic Religious Education (PAI) subjects in eighth grade at SMP Negeri 1 Kedawung.

These results are consistent with previous relevant research. Indriyani and Sari (2020) and Setyawan (2021) also found that Quantum Teaching significantly increased student learning motivation at the elementary and junior high school levels. Dewi and Pratama (2022) and Pramudito and Hasanah (2023) corroborated these findings at the high school level, demonstrating that Quantum Teaching is effective in creating a dynamic and interactive learning environment, which in turn improves students' motivation and social skills. Nurhadi and Lestari (2024) also supported the model's ability to improve motivation and academic achievement in vocational high schools.

Critical discussions indicate that the success of Quantum Teaching lies in its ability to transform the learning environment from passive to active and enjoyable. By focusing on interaction, hands-on experience, and recognition of student achievement, this model can generate interest and enthusiasm for learning that are often lost in conventional methods. Teachers who implement Quantum Teaching act as creative facilitators, able to connect the subject matter to students' real lives and provide space for students to explore and demonstrate their understanding.

However, it is important to note that 34.39% of the variation in learning motivation is still influenced by other factors. This indicates that Quantum Teaching is not the sole determinant of learning motivation, but rather an important factor that teachers can intervene in. External factors such as family support, friendships, and socioeconomic conditions also play a role in shaping students' learning motivation. Therefore, a holistic approach that considers

various aspects of students' lives will be more effective in maximizing their learning motivation.

CONCLUSION

Based on data analysis and hypothesis testing, this study concluded several important points: First, the learning motivation of students in the control class at SMP Negeri 1 Kedawung showed good results, with an average achievement of 82%. Second, the level of student learning motivation in Islamic Religious Education showed a significant difference between the experimental and control classes. The average learning motivation of students in the experimental class reached 86% (good category), which was higher than that of the control class. Third, there was a significant influence between the implementation of the Quantum Teaching model on student learning motivation in Islamic Religious Education in eighth grade students at SMP Negeri 1 Kedawung. This is evidenced by the correlation coefficient (rxy) of 0.81, indicating a very strong relationship. The hypothesis test results show that the calculated t-value (6.95) is greater than the t-table (1.69), thus accepting the alternative hypothesis (H_a). Quantum Teaching's contribution to student learning motivation is 65.61%.

The implication of this study is that innovation in learning models, particularly Quantum Teaching, is crucial for increasing student learning motivation. Active, creative, and enjoyable learning methods can significantly change students' attitudes and participation in the learning process. For educational institutions, these findings underscore the need to support teachers in adopting and implementing innovative learning models.

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