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THE EFFECT OF THE TALKING STICK TYPE COOPERATIVE LEARNING MODEL ON THE LEARNING OUTCOMES OF STUDENTS IN THE SUBJECT OF AQIDAH AKHLAK

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ABSTRACT

The background of this research is the low learning activity of MI Mathla'ul Anwar students, which is caused by teacher-centered learning, so that students are less active. The purpose of this study is to improve student learning outcomes in the subject of Aqidah Akhlak class V. The research method uses quantitative experimentation with two groups: one model using a cooperative teaching model with a *Talking Stick* method and the other using the same as in general (conventional). The pretest-posttest research design was one group with a sample of 14 students. Data were collected through questionnaires and documentation, then analyzed by normality and homogeneity tests. The results showed that in the experiment (76.78) the height of the control class was only (68.21), which means that the Alternative Hypothesis was accepted. In conclusion, the application of the Talking Stick-type cooperative learning model can improve student learning outcomes in the Aqidah Akhlak class V subject of MI Mathla'ul Anwar.
Keywords: Cooperative learning, Talking stick, learning outcomes

ABSTRACT

The background of this research is the low learning activity of students at MI Mathla'ul Anwar, caused by teacher-centered learning, which makes students less active. The aim of this study is to improve student learning outcomes in the subject of Aqidah Akhlak for grade V. The research uses an experimental method with two groups: one using the cooperative learning model of Talking Stick and the other using conventional learning. The research design is a one-group pretest-posttest with a sample of 14 students. Data were collected through questionnaires and documentation, then analyzed using normality and homogeneity tests. The results showed that the learning activity in the experimental class (76.78) was higher than in the control class (68.21), indicating that the Alternative Hypothesis is accepted. In conclusion, the application of the cooperative learning model of Talking Stick can improve student learning outcomes in the subject of Aqidah Akhlak for grade V at MI Mathla'ul Anwar.
Keywords*: Cooperative learning, Talking Stick, learning outcomes.*

INTRODUCTION

In the era of increasing globalization, the impact on society can be both positive and negative. If you don't use your time wisely, you may suffer losses and perish. On the contrary, if we make good use of it, we can become successful people in this life and the hereafter. Therefore, it is very important to provide quality education to every individual, especially students. Education that should be prioritized is Aqidah Akhlak education which aims to form identity and realize personal maturity. Our top priority is to instill moral values in our students so that they do not experience confusion in mind and soul when solving problems and looking for solutions. Imam al-Ghazali in his book *Ihya ul-Muddin* emphasized the importance of moral education as a serious and continuous effort to instill noble moral values in humans. It helps to develop good character and morals in a person. A good education requires leaders who are able to teach students and guide them to bring about positive change until they develop commendable moral character. This leader is called a teacher. In terms of educational activities, the teacher's job is not limited to providing

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information, but also has the responsibility to promote the overall development of character throughout the students. We must be able to create a learning atmosphere that can encourage active student participation so that the educational process becomes more active and interesting. Quality formation requires guidance with the ability to guide and guide students to achieve positive change and create respectable moral character. The guide in this context is the teacher. The role of teachers in the context of the educational process is more than just knowledge transfer, but they also play a role in the development of students' overall personalities. The instructor should create a learning atmosphere that encourages students to participate in all learning activities and makes the learning atmosphere engaging and energetic. This type of learning model was chosen because it encourages students to discuss more actively and learn more fun things. We hope that this approach will allow the moral learning process to be implemented more effectively and will significantly improve student learning outcomes. Therefore, the right learning methods are needed to achieve the improvement in learning outcomes that may exist in cooperative learning. Collaborative Learning is an organized group work method with five key elements (Johnson, 1993). That is, positive dependence, personal responsibility, interpersonal interaction, collaboration skills, and group dynamics.

In cooperative learning, students work together in groups to complete group tasks and solve problems to achieve a common goal. Education researchers have conducted a lot of research on cooperative learning. In general, the researchers came to the same conclusion. The learning model has a positive influence on teaching and learning activities and ensures good communication between teachers and students. From the description above, it can be concluded that cooperative learning is an approach where students learn together with their peers, which not only increases the understanding of the subject matter, but also increases the sense of social interaction between students. This way, all students can achieve their learning goals on an ongoing basis. Researcher Slavin believes that cooperative learning is effective. In fact, some studies have shown that this approach not only improves academic performance, but also the ability to build social relationships, develop acceptance of one's own and others' shortcomings, and increase self-esteem. In addition, cooperative learning allows students to develop thinking skills, solve problems, and integrate knowledge and skills. In this learning model, students not only play the role of learners, but also as teachers for their peers. Collaborative learning reinforces a sense of belonging among students from diverse backgrounds, including racial, ethnic, and cultural backgrounds, thus enriching the learning experience. The objectives of cooperative learning include several important aspects, including improving academic learning outcomes. Cooperative learning can improve student learning outcomes and lead to better academic achievement. This model has proven to be effective in improving students' understanding of the material. In addition, cooperative learning emphasizes acceptance of individual differences. Through collaboration in a group of students from different backgrounds, students are taught that they are interdependent when completing academic assignments.

Through a cooperative-based pricing system, students learn to respect and respect their differences, which reinforces mutual respect and cooperation. This model can be successfully implemented when students have a good knowledge base. In this learning, a stick is used as a tool to mark speaking contributions. Students or students who hold a tool such as a stick are given a question and must answer it. The tool is then given to other

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students so that each student has the opportunity to answer. Therefore, the talking stick learning model is an effective way to achieve the desired learning goals because it can activate students. In addition, this model requires students to be more independent and not depend on their classmates to provide answers or complete assignments. The steps in the Talking Stick Cooperative Learning Model begin with students forming groups of four or five people. Then the main material is taught to be edited. and students are prepared to study the material under the guidance of the teacher to ensure that they have mastered the material before starting to use the stick. The teacher then explains the tasks that need to be done while students listen carefully. The next step begins with the Speaking Stick method where the student holding the stick is responsible for providing answers to questions asked by the instructor. If students have difficulty responding, colleagues from other groups can provide support. After that, both students and teachers gather to come to a conclusion about the discussion material. The next step is evaluation. Students measure their comprehension based on the teacher's assessment. At the end of the training, a reflection session was held to evaluate the learning process experienced by students. The Talking Stick learning model has a number of advantages and disadvantages that need to be considered. One of the advantages is testing student readiness, because each student must be ready to answer questions. In addition, this model also trains students to read and understand the material quickly, as they have to answer in a limited time. This learning model increases students' enthusiasm for learning because they actively participate in each discussion session. In addition, the talking stick learning model can also increase tolerance between students, as they learn to listen to each other and respect each other's opinions. However, this model also has its drawbacks. One of them is that some students feel nervous and uncomfortable when it is their turn to hold a stick and answer the teacher's questions. This can hinder the smooth learning process. To overcome this, teachers can use certain techniques to relieve tension in students, such as singing songs together or other light activities that can relieve tension. Another disadvantage of this model is that it takes longer than the usual method or known as the usual conventional method. Therefore, teachers must be able to manage their time effectively and efficiently so that learning runs smoothly without reducing the quality of the material taught. However, learning difficulties often manifest as deviant behaviors such as yelling in class, harassing friends, fighting, skipping school often, or even running away from school. Two things that cause learning difficulties, internal factors include physical disabilities or limitations that students have, such as cognitive problems (e.g. low mental performance or student intelligence), emotional problems (e.g. unstable emotions or attitude problems), and psychomotor problems (e.g. visual or hearing impairments). Meanwhile, environmental conditions and situations that hinder learning become external factors. It covers several aspects such as a conflict-filled home environment, the family's poor economic status, living conditions in slums, and the influence of misbehaving playmates. In addition, the school environment can also be an influential external factor, such as poor condition of school buildings, school locations close to the market, poor quality of teachers and learning facilities.

Teachers can overcome students' learning difficulties in several ways. However, before choosing the right option, teachers must take some important steps to ensure that the solution provided is the best for them. The first step is to analyze the diagnostic results. In doing so, teachers need to carefully examine the parts of the problem faced by the

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students and the relationship between them. The goal is to develop a clear and in-depth understanding of students' learning difficulties. Through proper analysis, teachers can find the cause of problems that hinder the student learning process. The second step is to identify and define specific areas of competence that need improvement. Teachers should be able to identify specific skills or aspects that require improvement, such as material understanding, social skills, or technical skills related to learning. This allows teachers to focus on the areas that will have the greatest impact on student learning. After identifying problems and areas that need improvement, the next step is to develop a repair program, especially in the form of a more targeted and specific mentoring program. The program should be designed based on the results of previous analysis and research and tailored to the needs of individuals or groups of students.

Once all these steps are implemented, teachers can carry out the planned improvement program. At this stage, the teacher implements the plan that has been prepared using various strategies and methods that are tailored to the characteristics of the students and the type of difficulties they face. This process requires careful monitoring to evaluate the effectiveness of the actions taken and make adjustments if necessary. The goal of this systematic and structured approach is to help students overcome their learning difficulties and improve their learning performance. Aqidah akhlak is a combination of two major concepts, namely aqidah and akhlak which have a very deep meaning in the life of a Muslim. Aqidah itself is related to faith and a strong belief in God, namely Allah SWT. The faith in question not only acknowledges the existence of Allah, but also believes in all His teachings. And this must be accompanied by a strong commitment to live according to monotheistic principles. This belief provides a solid basis for a Muslim's attitude and behavior in his interactions with others and in life. Morality, on the other hand, has to do with a person's manners, temperament, character, and behavior. Morality encompasses how a person acts and behaves in his personal life, in his social life, and in his relationship with God. In Islam, morality has a very high priority. This is because a person's moral values are very influential on his good and bad deeds. Good morals known as "Mahmuda Morals" are highly recommended morals and must be practiced in daily life. On the other hand, moral decency is a despicable trait or behavior that must be avoided.

The study of moral beliefs not only regulates the relationship of a servant with Allah, but also regulates his relationship with fellow humans and the universe. As part of Madrasah Aliyah education, the subject of Aqidah and Akhlak helps to provide students with a deep understanding of how to incorporate the values of Aqidah and Akhlak into their lives. By learning moral and ethical beliefs, students are not only taught to understand and memorize religious teachings but also to practice these values in the form of good habits. The goal is for a person to be able to practice good morals such as honesty, patience, humility, and consideration for others, as well as avoid bad morals such as envy, arrogance, and other bad behaviors. Therefore, Aqidah and Akhlak education plays an important role in fostering the personality of students, so that they grow into individuals who are not only devoted to Allah SWT, but also able to make positive contributions to society and maintain harmony with the universe. According to Muhammad Alim, the scope of aqidah and morals includes all the teachings of Islam itself. This teaching is not only limited to the understanding of the divinity, but also covers various aspects of human life that concern relationships with God, fellow humans, and the surrounding environment. The discussion

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in Aqidah and Akhlak is sometimes very broad and detailed, covering various aspects of life that can shape a person's character in terms of religion and behavior.

Godliness as one of the realms of moral beliefs, is the affairs of everything related to Allah SWT, including His existence, His attributes, and His deeds. In this context, Muslims are taught to know Allah better by truly understanding His uniqueness and His perfect attributes, such as the Most Compassionate, the Most Compassionate, and the Most Just. The goal is to develop a strong relationship with God that is characterized by fear and love in all our actions and daily lives. Nubuwat, or the discussion of the prophets and apostles, is another very important part of the moral creed. This includes knowledge of prophets and apostles sent by God to guide mankind to the truth. Furthermore, the scriptures that Allah revealed as a guide for life and the miracles that He bestowed upon the Prophets to support their da'wah are also discussed in this context. Prophethood, if understood correctly, will lead to the belief that the Prophet is a Messenger who brings revelation as a guide for the life of mankind. Sam'iyat is a discussion of the postulates of naqri, namely everything that can only be known through the revelations revealed by Allah through the Qur'an and Hadith. It includes things that cannot be directly reached by human reason, such as the realm of Barza, the afterlife, the torment of the grave, the signs of the hereafter, heaven and hell. This discussion of Sam'iyat is very important for aqidah and morals, because it can strengthen the belief in the existence of life after death and invite Muslims to always do righteous deeds in the world in order to obtain happiness in the hereafter.

Morality towards Allah SWT is an integral part of moral belief. It tells me how I should behave towards my Creator. This includes the obligation to perform prayers solemnly, carry out Allah's commands sincerely, and stay away from sins that can damage the relationship with Allah. Morality towards Allah is the most important foundation in the life of every Muslim. Because the happiness of this world and the hereafter lies in a good relationship with Allah. Morality towards others is also an important part of moral beliefs. Islam teaches its followers to develop relationships that are expressed through mutual respect, gratitude, mutual help, and good advice. Muslims are encouraged not to hurt the feelings of others in social situations, avoid arrogance, and always be forgiving when conflicts occur. Good morality towards others leads to a loving and peaceful social life, which in turn improves the quality of coexistence. Environmental morality is also an important part of moral beliefs. In Islam, the environment encompasses everything that is around humans, including animals, plants, and inanimate objects. Islam teaches that humans are the caliphs on earth who are responsible for maintaining, protecting, and preserving nature and all living things in it. As a Caliph, humans are obliged to protect nature, love it, and not destroy it. This concept teaches that all living things have the right to live and develop according to the purpose of their creation. Therefore, maintaining the balance of nature and avoiding environmental damage is a morality that must be applied in daily life.

RESEARCH METHODS

In this study, the author used a quantitative experimental research method. This is an approach in which experiments are carried out to measure the effect of an independent variable (treatment) on a bound variable (outcome) under controlled conditions. The aim of this study was to test the extent to which nursing or the interventions applied can affect the desired outcomes. The researchers compared the results of the pretest and posttest to

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determine the effect of treatment on the dependent variable. This design can be explained through measurements at two different time points: before treatment (O1) and after treatment (O2). In terms of population and research samples, the population in this study refers to a group of people who have certain characteristics that are relevant to the research being conducted. The subjects of this study are 14 students in class V of MI Mathla'ul Anwar Pamungguan. The sampling method used is the saturated sampling method, where all members of the existing population are used as research samples. The data sources for this study are divided into two types: primary data sources and secondary data sources. Good learning requires teachers who are able to guide students and direct them to bring positive changes to the creation of good moral character. Teachers who become teachers are called instructors. Teachers must be able to create a learning environment that allows students to be actively involved in the teaching and learning process and make the learning environment active and fun. This learning was chosen because it can motivate students to be more active in discussing and participating in learning more fun. Thus, it is hoped that the learning of moral beliefs can run more effectively and student learning outcomes can increase significantly. Therefore, a learning strategy is needed to improve learning outcomes. One of them is cooperative learning.

In fun learning, students work together in groups to complete group assignments and discuss problems to achieve common goals. Education analysts have done a lot of research on collaborative learning. In general, analysts have come to the same conclusion. This learning model has a positive impact on teaching and learning activities and allows for good communication between instructors and students. From this explanation, we can draw the conclusion that engaging learning is an approach for students to learn together with friends. This approach not only improves the understanding of the material, but also strengthens the social connections between students. This way, all students can achieve their learning goals equally and effectively. Analyst Slavin believes that fun learning works. This can happen because some studies have shown that this approach not only improves academic performance, but also the ability to build social relationships, create recognition of one's own and others' shortcomings, and increase self-esteem. In addition, fun learning allows students to develop thinking skills, understand problems, and coordinate information and skills. In this learning, students not only play the role of students but also as teachers for their friends. Fun learning reinforces a sense of belonging among students from a variety of backgrounds, including racial, ethnic, and social backgrounds, thus enhancing the learning experience.

Fun learning objectives include several important perspectives, including ever-evolving academic learning outcomes. Fun learning can improve student learning outcomes and provide much better academic achievement. This performance has been shown to be effective in improving students' understanding of the material. In addition, fun learning emphasizes the recognition of individual differences. Students learn to appreciate and appreciate each other's differences, thereby strengthening a mindset of mutual respect and participation. Talking Stick can be a collaborative learning show based on constructivist learning hypotheses. These performances can be effectively actualized if students have a good information base. In this lesson, a stick is used as a tool to mark a discourse commitment. Therefore, the cane speaking learning method is an effective way to achieve the specified learning targets because it can motivate students. In addition, this method

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requires students to be more independent and not dependent on their classmates in giving answers or completing assignments.

The stages in the Talking Stick Agreeable Learning Model begin with students forming groups of four or five people. The core material is then taught and students are asked to ponder the material under the teacher's direction to ensure they have mastered the material before starting to use the Talking Stick. The teacher then explains the task that must be completed while the students listen carefully. The next stage begins with Talking Stick, where students holding sticks answer questions from the teacher. If students have difficulty answering, other group members can provide assistance. Students and teachers then draw conclusions from the subject matter. The next stage is evaluation. Students measure their comprehension based on the teacher's assessment. At the end of the training, a reflection session was held to evaluate the learning process that students have experienced. The talking stick learning model has several advantages and disadvantages that must be considered. One of the advantages is testing student readiness because each student must be ready to answer questions. In addition, this model also trains students to read and understand the material quickly, as they have to answer in a limited time. This learning model increases students' enthusiasm for learning because they actively participate in each discussion session. The active participation of students makes the teaching and learning process more dynamic and produces better learning outcomes. In addition, talking sticks can also increase tolerance between students as they learn to listen to each other and respect each other's opinions.

Testing the validity of a test is an important step to ensure that the test used actually measures what will be measured. The reason for this validity test is to determine the extent to which each thing tested really meets its estimated target. One of the strategies used to test the validity of the test in this case is the use of moment-product relationships. This relationship can be used to calculate the relationship between two factors, in this case the result score and the total score obtained by the test takers. After calculating the value of the relationship rxyr {xy}rxy, compare the results with the value of the table R. The r-value in this table is determined based on the base minute value of rrr at the significance level a = 0.05a = 0.05a. If the value of the calculated relationship rxyr{xy}rxy is greater than the value of the rrr table, the survey is considered substantial. This implies that the address is appropriate for measuring the perspective that the test will measure. In this way, the information obtained becomes clearer and easier to analyze. If something is substantial, it can still be included in the test, but invalid things must be changed or evacuated from the test to guarantee that the estimate obtained truly reflects the student's information and understanding. The validity of the test is calculated by comparing the value of the relationship of the matter calculated at a significance level of 0.05 or 95%. In this case, the r-value of the table used was 0.4575 for 14 respondents. Each address is tested for validity by comparing the value of rxy with the r table. If the value rxy is greater than the r of the table, then the address is declared valid. For example, the main question has an rxy value of 0.59 which is greater than the table rvalue of 0.4575. Thus, the main question is considered valid. The same goes for all other questions. The results of the validity test showed that the rxy value of each question in the question was greater than the r-value of the table, which was 0.523, 0.511, and 0.510, respectively, all of which exceeded 0.4575. As a result, based on the comparison, it can be concluded that the 20 questions tested all have good validity,

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because each question has a significant and reliable correlation value in measuring students' abilities in this study.

Reliability testing is an important step in assessing the quality of the measurement instruments used in the research. This test aims to ensure that the measurement instrument used provides consistent and reliable results even when used repeatedly. In other words, reliability shows how stable or consistent the results obtained by a measurement instrument are when measuring the same variable. One way to test reliability is to use the Kuder-Richardson equation (KR-20) which was developed specifically to test the reliability of objective tests. The equation includes several components, including the number of test participants, the percentage of respondents who responded correctly (P), the percentage of respondents who responded incorrectly (Q), the number of P Multiply, and the number of multiplication calculations. Q (∑pq) and standard deviation test. After receiving these values, we calculated the reliability (R_11) using the KR-20 equation and classified it on a scale that describes the level of consistency. In this study, the 0.856 test was performed using the KR-20 equation, showing that this test is very reliable. This value falls into the category of "very high reliability". This shows that this test is highly consistent and reliable for measuring the variables being tested. Therefore, we ensure that the results of these reliability calculations are of high quality for the tests used and that consistent data can be produced. This is very important to achieve valid and accurate results in research.

Good questions balance the level of difficulty. To measure the difficulty of a question, an equation that combines the total number of test-takers with the percentage of students who answered correctly is used. The expression used is p = b / js. Where P is the percentage of correct students, B is the correct number of students, and JS is the total number of test takers. Based on this equation, the value of P, the more difficult the problem, and the greater the value of P, the easier it is to be. To determine the level of difficulty of a question, there is a classification that divides the question index into three categories. If the p-value is between 0.00 and less than 0.30, the question is classified as a difficult question. If the P value is between 0.30 and less than 0.70, the question is classified as a question with a medium level of difficulty. The question is classified as an easy question if the P value is between 0.70 and 1.00. For example, the difficulty level of the question for question number 1 can be calculated by dividing the number of students who answered correctly by the total number of students, resulting in P = 7/14 = 0.5. This P value is in the range of 0.30 to 0.70, After doing the same calculation for all the questions tested, we found that the 20 questions tested were all classified as questions with a medium level of difficulty. To determine the differentiating power of a question, you must first rank the score from highest to lowest. Then, 50% of the participants with the highest scores were put into the top group, and 50% of the participants with the lowest scores were put into the bottom group.

PA and PB are the proportion of participants in the upper and lower groups who answered correctly, respectively. To calculate the differentiating power of a question, for example in question number 1, the calculation result is D = 5/7 - 2/7 = 3/7 = 0.4286. By comparing the results of the calculation with the differentiating power category, it was found that the differentiating power of question number 1 was included in the "good" category because the differentiating power index was in the range of 0.40 to 0.69. After a similar calculation was carried out for all the questions tested, it was found that of the 20 questions tested, 19 questions were in the "good" category, while 1 question was in the

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"very good" category, which shows that most of the questions have sufficient and effective differentiating power in distinguishing the participants' abilities. The data analysis in this study uses two main types of statistics, namely descriptive statistics and inferential statistics, each of which has different but mutually supportive objectives to draw valid conclusions. Descriptive statistics are used to describe and summarize the available data in a concise and easy-to-understand manner. One of the measures used in descriptive statistics is the mean or average, which is calculated by adding up all the data values and dividing them by the amount of data. In this study, mean is used to describe the average value of student learning outcomes, both before and after the application of a certain learning model. The median is also used to show the average of the data that has been sorted, regardless of whether the data is odd or even. For data with a specific frequency, modes are calculated to find out the values that appear most often. This will help to know the most common level of understanding among students in the subject of Aqidah Akhlak. This provides information about the degree of variation or distribution of the data. Frequency distribution can be used to describe how data is distributed in specific groups or intervals. This can be done by arranging the data in a regular order and calculating the frequency of each value or interval. Cumulative frequencies are also calculated to provide an overview of the overall distribution of data. Visualizing the distribution of data using histograms and bar charts can also be very useful in classifying data distribution patterns, such as whether the data is distributed normally or skewed to a specific value. Frequency distributions and histograms can be used to better understand data patterns and provide broader insights into the characteristics of data related to student learning outcomes.

It considers the use of inferential measurements to test speculation regarding the effect of Redestock's collaborative learning demonstration on student learning outcomes. The reason for this test is to decide if there is a critical difference in student learning outcomes after carrying out a learning demonstration. It starts with a uniformity test to decide whether the information on student learning outcomes is conveyed regularly. If such information is distributed regularly, supporting analysis can be performed using parametric tests. The uniformity test uses the Liliefors test, which includes the calculation of a standard number for each student's test score, as well as the calculation of the odds and contrast between the results of this calculation. The largest difference from this calculation will be used as a count value, viewed the difference and compared to the L'table value at an importance level of 0.05 to decide if the information is distributed regularly. Furthermore, a homogeneity test was carried out to test whether the change in student learning outcomes in the group given the same treatment was carried out or not. For this reason, the Levene and Bartlett tests can be used, and the homogeneity of fluctuations is very important so that the comparison of learning outcomes between different groups can be considered substantial. After the data meets the assumptions of uniformity and homogeneity, the next step is to conduct a theoretical test to decide the influence of the learning model on student learning outcomes. The t-test is used to compare the average student learning outcomes some time ago and after the application of the learning model if the data is disseminated periodically and the fluctuations are homogeneous. The theory tested was whether there was a significant difference between the learning outcomes of students who used the talk stick type fun learning model and students who used conventional learning strategies. In the t-test, the calculated t-value obtained will be compared with the t-value of the table, and

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if the t-value of the calculation is greater than the t-value of the table, the invalid hypothesis (Ho) will be rejected, which shows that the learning model has an effect on student learning outcomes.

RESULTS AND DISCUSSION

In this study, a posttest was conducted to evaluate student learning outcomes after the talking stick was used by the collaborative learning model. The first step in data analysis is to describe data that includes an understanding of student learning outcomes achieved from the pretest and posttest. Data Press refers to student learning outcomes before treatments are available. This helps to find the initial conditions for students before using the talking stick collaborative learning model. Meanwhile, posttest data is collected after using the learning model to assess whether student learning outcomes have changed. Data analysis and post-test data analysis use descriptive statistics to provide a general picture of the data obtained. This descriptive statistic includes the measurement of data concentration measures such as mean, median, mode, and data distribution such as: B. Variance and standard deviation. This will allow for a deeper understanding of the distribution of student learning outcomes on both tests. For example, a pretest was conducted in a test and control class on May 23, 2022, and the initial conditions were determined for students before being treated with a specific learning model.

In the analysis of the pretest data, a frequency distribution calculation was carried out using a formula to determine the range, class category, and interval. The range is obtained by subtracting the maximum score (70) by the minimum score (20), which results in a number of 51. This shows that the scores in the pretest data are spread between the numbers 20 to 70, with 51 possible values that could appear in that range. Then, the calculation of class categories was carried out with the formula 1 + 3.3 log n, where n is the sum of student data (14), which resulted in a number of 4.7818, which was rounded into 5 class categories. Next, the class interval is calculated by dividing the range (51) by the number of class categories (5), resulting in a value of 10.6654, which is rounded to 11. This indicates that the frequency distribution of the pretest data will be divided into 5 categories of classes, each with an interval width of 11 score units. In this way, pretest data that is initially spread over a large range of grades can be grouped into class categories that are easier to analyze, providing a clear picture of the pattern of score distribution and allowing for further analysis of how student learning outcomes are spread out initially.

The reference in this study adapts the formula proposed by Sturges to determine the number of class categories, namely k=1+3.33 log nk = 1 + 3.33 \log nk=1+3.33 log n, where n is the number of students. Based on these provisions, the number of class categories was obtained of 4.7818, which was rounded into 5 class categories. In addition, the score range is calculated as 51, and the class interval is calculated as 10.6654, which is rounded to 11. The frequency distribution of pretest scores for this class can be seen in a table that includes five different class intervals, namely 20–31, 32–42, 43–53, 54–64, and 65–75. In the distribution of the frequency of pretest results, in the first interval (20–31), there were 7 students who obtained scores in this range, which contributed 50% of the total students who took the pretest. At the second interval (32–42), no students obtained a score, which means this range was not achieved in the pretest results. The third interval (43–53) shows that there are 2 students who obtained scores in this range, with a frequency of 14%.

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The fourth interval (54–64) had 3 students who obtained a score, with a percentage of 22%. Meanwhile, in the last interval (65–75), there were 2 students who obtained a score, with a percentage of 14%. Overall, the total frequency recorded was 14 students, which included all pretest participants, and the percentage reached 100%. From this frequency distribution, it can be concluded that most students obtained scores at the first interval (20–31), indicating a higher concentration of scores in the lowest score range. Other interval ranges show a more dispersed distribution and lower frequencies. Thus, this frequency distribution provides a clear picture of how student learning outcomes on the pretest are spread among the various score ranges that exist. The absence of frequency at intervals of 32–42 indicates that no student obtained a score within that score range during the pretest. This gives an idea of the distribution of pretest scores that are focused at different intervals. Thus, this distribution provides clearer information about how pretest scores are distributed among participants.

The table that presents the statistical description of pretest scores reveals that the number of students who took the pretest was 14 people. The lowest score obtained by students is 20, the highest is 70. The average pretest score for all students is 40.71429. This value indicates that the average student's performance is around that number. This recorded average score illustrates that most students are in that grade range. The range of scores recorded, between a minimum score of 20 and a maximum of 70, reflects a considerable variation in the results of the pretest. Although there is a fairly wide range of scores, with a 50-point difference between the minimum and maximum scores, a lower average score indicates that many students may obtain a lower score than the average number. reflecting that the overall performance of students on the initial test tends to be lower. Frequency distribution graphs depicting pretest results can also provide a clearer visual picture of students' grade distribution, show the concentration of grades in a given range and provide further understanding of students' overall pretest results.

In posttest data, the frequency distribution of learning outcome scores is calculated by first determining the score range. This range is calculated by subtracting the maximum score (95) by the minimum score (65), then adding 1, which results in a range value of 31. Once the range is calculated, the next step is to define the many class categories that are used to divide the score distribution. To determine the many class categories, the same formula as in the pretest is used, This calculation results in a number of about 4.7818, which is rounded into 5 class categories. Then, the class interval is calculated by dividing the range (31) by the many class categories (5), which results in a value of about 6.48, and rounded to 7. Thus, the frequency distribution of the posttest will be divided into 5 class categories, with each class category having an interval width of 7 score units.

The distribution of posttest frequencies can be seen in the table that presents the score intervals, the number of frequencies (the number of students in each interval), and the percentage of students in each interval. Based on the frequency distribution table, there were 14 students who took the posttest. In the first score interval, which is 65–71, there is only 1 student who obtains a score in this range, which contributes 7% of the total students. The second interval, which was 72–78, was filled by 2 students, who contributed 14% of the total students. The next interval, which is 79–85, is filled by 3 students with a percentage of 21%. The 86–92 interval recorded 4 students, who contributed 29% of the total students. Finally, at the last score interval, which was 93–99, there were 4 students who obtained a

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score in this range, which also contributed 29% of the total students. Overall, all frequencies recorded in the table amounted to 14 students, which means that 100% of the posttest participants were covered in this distribution. Looking at this frequency distribution, it can be concluded that student scores are relatively evenly distributed at several intervals, with the greatest concentrations being in the intervals 86–92 and 93–99, each recording 4 students or 29% of the total students. This shows that most students receive higher scores on the posttest compared to the supporters. The table that displays the statistical description of the posttest scores contains information about the low, highest, and average learning outcomes of students after using the model. In this case, there were 14 students who took part in the posttest, with a minimum score of 65, with the highest number of points being 95. This means that the number of points achieved by students in the 65-95 range is the lowest of 65, with the highest score of 95. average

The number of posttests recorded was 85.71. This average provides a general image of student results after learning with a collaborative learning model. This average score shows that most students receive a fairly good score in the posttest, with a score of almost 85.71. This high average can be interpreted as a sign of a significant improvement in student learning outcomes after using the learning model. Comparing the lowest, highest and average rankings reveals that the grades obtained from students are very different. It is between 65 and 95. It shows differences in student learning outcomes, but the most average scores reflect students who receive satisfactory grades. To make it easier to understand the distribution of posttest scores, the frequency distribution can be illustrated using a bar chart. This bar chart will help depict the distribution of student scores more clearly, so that the distribution pattern of student learning outcomes can be seen visually. This graph can show how many students scored in different grade intervals, as well as make it easier to see if there is a concentration of certain grades or if the score is more evenly distributed across the grade range.

Data normality testing is an important step in statistical analysis to ensure that the data used in the study follows a normal distribution. If the data is normally distributed, then further analysis can be performed using parametric statistical methods, such as t-tests. In the pretest normality test, a calculation is performed for each pretest value by calculating the Z-score, which describes the extent to which each value deviates from the mean in standard deviation units. A Z-score greater than or less than 0 indicates how far a value is from the average. For example, for a pretest value of 20, the calculated Z-score is -1.14365, which means that this value is 1.14365 standard deviation below the mean. The cumulative distribution of Z, known as the symbol FZ, indicates the proportion of data that falls below that value. For example, for a value of 20, the FZ is 0.126385, which means that about 12.64% of the entire data lies below the value of 20. In addition, the cumulative average value or SZ is also calculated which shows the median value of the cumulative distribution Z at each data point. The difference between the cumulative distribution Z (FZ) and the cumulative average Z (SZ) is calculated to assess the extent to which the data distribution corresponds to the normal distribution. A smaller FZ - SZ value indicates that the data is more in line with the normal distribution. For example, at a value of 70, the difference between FZ and SZ is 0.052952, which indicates that the data distribution at this value is very close to the normal distribution. This calculation is performed for all pretest values to get an overall picture of the extent to which the data follows a normal distribution.

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The results of this normality test show that the value of L Calculation obtained from the statistical calculation of normality is 0.222921, and this value is compared to the critical value of Table L which is 0.227 at a significance level of 0.05. In other words, the pretest data can be considered following a normal distribution. This conclusion allows the researcher to continue further analysis using statistical techniques that require assuming normal distributions. This normality test provides a solid basis for continuing the analysis process with the right method, as the normal distribution of data allows for more effective use of parametric tests. The results of the normality test for the posttest data showed that the distribution of experimental data followed the normal distribution. The steps used in this normality test are similar to the normality test performed on the pretest data. Each value in the posttest data is calculated as a Z-score, which indicates how far it is from the average in standard deviation units. For example, for a score of 65, the calculated Z-score is -2.29265, which indicates that the value is well below average. After that, the cumulative distribution of Z (FZ) is calculated based on the Z-score value. For a score of 65, the FZ obtained was 0.010934, which means that about 1.09% of the data is below this value.

In addition, a cumulative mean value (SZ) is calculated for each value, which indicates the average of the cumulative distribution of Z on that value. The difference between FZ and SZ (FZ - SZ) is used to measure the compatibility between the data distribution and the normal distribution. A smaller FZ - SZ value indicates a distribution that is closer to the normal distribution. For example, at a value of 95, the difference between FZ and SZ is 0.15203607, which indicates that the distribution of data at that value is very close to the normal distribution. In the calculation of the normality test, the L Count was obtained as 0.152, while the L value of the Table was 0.227 at a significance level of 0.05. Since the value of L Calculated is smaller than the value of Table L, it can be concluded that the posttest data does not show a significant difference from the normal distribution. Thus, these results show that the experimental data for the posttest are normally distributed, which makes it possible to proceed with further statistical analysis that requires normal distribution assumptions. The results of the variance homogeneity test aim to verify whether the comparison between different groups (before and after the application of the model) is valid or not. In this test, the F-test was used to compare the variance of two existing samples, each of which consisted of 14 observations. The calculation results show that Variable 1 has an average of 67.5 with a variance of 160.5769231, while Variable 2 has an average of 85.71 and a variance of 87.91208791.

The F-value calculated in this homogeneity test is 1.8265625, which is the ratio between the variances of the two groups. The value of F is calculated by dividing the larger group variance (160.5769231 for Variable 1) by the smaller group variance (87.91208791 for Variable 2). Usually, an F value greater than 1 indicates a difference in variance between the two groups. Furthermore, the P(F value <= f) obtained is 0.1451, which represents the probability of getting an F value that is less than or equal to the F value calculated based on the null hypothesis. In the context of hypothesis testing, the null hypothesis (H_0) assumes that the variance of the two groups is homogeneous, while the alternative hypothesis (H_1) states that the variance of the two groups is not homogeneous. The Critical F value of the one-tail used in this test is 2.576927084, which is the limit value for the single-sided test at a significance level of 0.05. This value is used to decide whether the calculated value of F is greater than the specified critical value. If the calculated F-value is greater than the critical

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F-value, then the null hypothesis will be rejected, which means that the variance of the two groups is not homogeneous. Conversely, if the calculated value of F is smaller than the critical value of F, then the null hypothesis will not be rejected, and it can be concluded that the variance of the two groups is homogeneous. The calculated F-value (1.8265625) is smaller than the critical F-value (2.576927084), and therefore the P-value (0.1451) is greater than the significance of 0.05, so the feedback hypothesis cannot be rejected. Therefore, we can draw the conclusion that the variants between the two groups are uniform. This means that there is not enough evidence to determine that the variants between the two groups are significantly different. 444 After conducting the data requirement test, the next step is to conduct a hypothesis test and to create a cooperative embroidery type topic of a learning model to improve the learning outcomes of students in the subject of Aquida Acrak in Class V MI. Mathla'ul. The hypothesis test is carried out by comparing the pretest and post-test scores. Based on the calculations made, I received the following results: In the post-test class, the average (x_1) was 85.714, the variance (s^2_1) was 87.91 and the number of students (n_1) was 14.

The calculation was done using a formula to calculate the combined variance (S^2), which is a combination of the variances of the two groups based on the sample size and variance of each group. With this calculation, the value of S = 15.81 was obtained. After that, the calculated t-value is calculated using a formula that compares the mean difference of the two groups, divided by the root of the combined number of variances and the sample size of the two groups. The average difference between the two groups was 46,786. With the combined variance value that has been calculated, t is obtained as 151.020. This very large t-value suggests that the difference between the mean of the two groups is significant. Furthermore, based on the analysis of the difficulty level of the questions, all questions are categorized in medium difficulty. This indicates that the questions are adjusted to the student's ability level, not too easy or too difficult, so that they can provide challenges that are in accordance with the student's competence. In addition, the results of the question differentiating test showed that 19 questions were in the good category, while 1 question was categorized as very good. This means that the questions have the ability to clearly distinguish between students who have high and low ability levels, which is an indicator of the quality of good questions in the evaluation process.

After conducting a test of the questions, this study continues to the next stage, which is to provide an initial ability test or pretest to find out the extent of students' basic understanding before being given treatment. This pretest is given in an experimental class that follows the Talking Stick-type cooperative learning model. The Talking Stick type cooperative learning model is one of the approaches that prioritizes interaction and collaboration between students in small groups. In this model, students take turns answering questions or giving opinions, using sticks as symbols to determine their turn of speech. The main goal of this model is to increase students' active participation, strengthen their understanding of the subject matter, and increase their involvement in the teaching and learning process.

After taking the initial test and introducing the talking stick cooperative learning model, students take a final skills test or final test that uses the same questions as the initial test. This is done to measure the change in students' abilities after treatment. The posttest results showed a significant improvement with students obtaining a score of 85.714 points

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compared to the average pretest score of only 38.92 points. This significant improvement clearly shows that Talking Stick's collaborative learning model has a positive impact on student learning outcomes. The t-test is performed to ensure that the difference between the pretest and posttest results is significant. Based on statistical calculations, the accepted number is 151.02, and the t-value table is 2.144, with a level of importance of 5 ° N. 2.144) Therefore, since hypothetical studies have been accepted. The results of this study show that the use of the collaborative learning model with collaborative learning staff has a very important effect on improving learning performance among students in the subject of Aqidah Akhlak in Grade 5 Mi Mathla'ul.

Overall, this study concludes that the collaborative learning model conversation model has a significant impact on improving student learning outcomes. This significant improvement not only proves the effectiveness of the learning model, but also shows that it has succeeded in improving students' understanding of the student's material and increasing participation in the teaching and learning process. Therefore, the application of the collaborative learning model from the talking stick seems to be a very useful approach to improve student learning outcomes, especially in the subject of Moral 5 Mi Mathla'ul Anwar. The results of this study provide strong evidence that the use of this learning model not only improves material understanding, but also encourages students to become active participants in the learning process.

CONCLUSION

Based on the results of the research conducted, we can draw the conclusion that the use of the collaborative learning model of the talking stick has a significant impact on student outcomes in the morality of Class V Mi Mathla'ul Anwar. The results of the pretest test, which showed an average of 38.91, provided an overview of the initial state of student competency before treatment, during the average test score of 85.71 after using the learning model. The improvements noted in this posttest show that the talking stick cooperative learning model is successful in increasing students' understanding and participation in moral learning of Aqidah Akhlak. Hypothesis testing is done using a t-test to ensure that differences in plastering and posttest values do not occur by chance. Based on statistical calculations, the value of the number of the number T is 151.02, which is clearly greater than the t-table, which is only 2.144, with a significant rate of 5%. Therefore, the research hypothesis states that the use of the talking stick cooperative learning model has a positive effect on student learning outcomes. This shows a significant difference between students' skills before and after using the learning model. Overall, the results of this study provide strong evidence that the talking stick collaborative learning model can significantly improve student outcomes. The use of this model not only positively affects the understanding of the material of the moral Aqidah, but also increases the active participation of students in the learning process. Therefore, the cooperative learning model of the type of embroidery can be seen as an effective method used to learn in the moral subject of class V Mi Mathla'ul Anwar.

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