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THE INFLUENCE OF THE INTEGRATED INQUIRY LEARNING MODEL (SCIENCE AND THE QUR'AN) ON STUDENTS' COGNITIVE LEARNING OUTCOMES

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ABSTRACT

This research is motivated by the lack of use of a variety of learning models, teachers only rely on books, so the learning process mostly takes place only using the lecture method, so students are not actively involved in learning. Science learning does not display the typical characteristics of the integration of science and the Koran as conveyed in the 2013 curriculum, there is still no formal implementation of this in the learning process. This research aims to determine whether there is an influence of the integrated inquiry learning model (science and the Koran) on students' cognitive learning outcomes in Integrated Science learning on the subject of the Solar System. The type of research is quantitative research with a quasi-experimental approach method. The research design used was a control group pretest and posttest design. The population in the research were all students of class VII SMPN 12 Bengkulu City and sample in this study was 60 students consisting of 30 control class students (class VII C) and 30 experimental class students (class VII D). Data collection techniques in this research used observation, interviews, test questions and documentation. The instrument used in the research was a multiple choice test with a total of 40 questions. The results of the research show that there are differences in the cognitive learning outcomes of experimental class students with those in the control class with a posttest score of 82.08 > 75.08 and with a significance level (2 tailed) < 0.05 with a value of 0.01.

Keywords: Inquiry learning; integration; science; Al-Qur'an; cognitive learning outcomes; solar system

INTRODUCTION

Learning innovations can use various learning approaches, strategies and learning models to achieve learning goals. Changes to the old learning process with a new learning pattern that is more effective and efficient, namely by using a learning model. It is hoped that innovative learning models will enable students to develop their potential and abilities for the development of society, nation and state.

Based on the results of observations that researchers have made at SMPN 12 Bengkulu City by interviewing science teachers and several class VII students, it is known that teachers in delivering material still lack the use of a variety of learning models, teachers only rely on books, so the learning process mostly takes place using only lecture method, so that students are not actively involved in learning. SMPN 12 Bengkulu City teachers also still use science learning which does not display the typical characteristics of the integration of science and the Qur'an as conveyed in the 2013 curriculum. The teaching and learning process that occurs at the SMPN even though it uses the K13 curriculum which is mandated to make students who have

spiritual powers, there is still no formal application of this in the ongoing learning process.

Several studies show that integrating Al-Quran verses in science learning at school has a good influence on students' cognitive learning outcomes. As research conducted by (Azmar & Nurhilaliati., 2021) stated in their research that using a guided inquiry learning model based on the implementation of Islamic values on student learning outcomes in science subjects, there was a significant influence using the learning model. This is in line with research (Asysyifa et al., 2017) which developed teaching materials based on complementing Koranic verses on solar system material which also stated that complementing Al-Quran verses in science learning can increase students' knowledge. Using the inquiry learning model in learning also has a good influence on student learning outcomes, such as research conducted by (Rawa et al., 2019) entitled The influence of the inquiry learning model on mathematics learning outcomes in fourth grade elementary school students. And other researchers also say that the influence of this inquiry learning model can improve students' thinking abilities, such as research conducted by Nurdiansyah et al., 2021 and research by Ulandari et al., 2019.

Based on this, there is no learning that uses an integrated inquiry learning model (science and Al-Qur'an) which improves students' cognitive learning outcomes, so in this research learning uses an integrated inquiry learning model (science and Al-Qur'an) an) is used in an effort to produce students who have spiritual cognitive.

The use of learning models needs to be implemented. By implementing the learning process through organization or managing the environment as best as possible and getting closer to students so that not only learning leads to mastery of knowledge but can also result in mastery of development methods, skills, character, etc. In science learning, integration is carried out with the aim of avoiding spiritual gaps in education so that students do not fall into lessons that conflict with religious beliefs and beliefs.

The inquiry learning model is learning with steps that emphasize students to think creatively, critically, responsibly and confidently in searching for and finding solutions to problems. As is the case with the scientific approach used in the 2013 curriculum, the learning method uses a scientific process. The scientific mind and five senses play a role in the process of learning and acquiring knowledge. Thus, scientific and analytical processes enable students to develop their intelligence. The inquiry learning model requires mastery of facts, concepts, generalizations, and even theories, including applying constructive and analytical thinking patterns.

According to Kuntowijoyo (2018), it is stated that the essence of the concept of integration is the unification (not just unification) between God's revelation and the discovery of human reason. Albert Einstein, stated "science without religion is blind, religion without science is lame." This statement can be interpreted to mean that there is a split in the binary opposition that must be examined at the same time. The first refers to the importance of religion in the application of science, and the second to the need for knowledge in the application of religion.

Learning with an integrated inquiry learning model (science and Al-Qur'an) is expected to improve students' cognitive learning outcomes. Not only does it produce students who are only smart

academically, but it can also produce students who are also strong in their faith. The use of different learning strategies and models is very important because it determines whether learning will take place well in the future, so that it can produce cognitive results for students who have academic knowledge of religion in integrated science learning. Therefore, researchers offer learning by integrating an inquiry learning model integrated with science and the Koran. So that there is a balance between general science and religious knowledge which can produce students who are good at natural sciences and can also be students who understand religion at the same time.

METODE

Research Design

The type of research used is quantitative research. This research method is quasi-experimental. Researchers use this approach for several reasons. First, because this research aims to provide an overview of the impact of learning using an integrated inquiry learning model (science and the Koran) on students' cognitive learning outcomes. The research process begins with extensive research followed by data collection and analysis methods. The research design includes a pretest and posttest control group. The research was conducted with a group consisting of two groups. The first group received treatment X, the second group did not. The group that was given treatment was called the experimental group, namely class VII C, and the group that was not given treatment was called the control group, namely class VII D

Context and Participants

Population is the entire object under study, including people, objects, events, values, etc. Thus, the population of this study consisted of all class VII students at SMP N 12 Bengkulu City, totaling 149 students, consisting of 5 classes.

Table.1.1 Total population

NO	Population	Many students
1	VII A	33
2	VII B	29
3	VII C	30
4	VII D	30
5	VII E	31
	Total Population	149

A sample is a portion of a population whose numbers and characteristics are considered representative of the entire population. Non-probability sampling is a method used in this research, namely selecting samples from a population where not every member of the sample group is given the same opportunity to be selected. From class VII, two classes were taken which will be used as research objects, namely the experimental class and the control class. Random sampling technique was used to take samples in this research. The samples in this research are:

Table.2.1 Number of samples

Kelas	Sampel	Many students
VII C	Class Ekperimen	30
VII D	Class Control	30
	Total sampel	60

Data Sources

The data collection technique used is: a) Observation or observations. b) test sheet. a question that is used to measure the ability, knowledge, or provisions that a person or class has to obtain information. The form of test used in this research is a pre-test and post-test with 40 multiple choice questions. c) documentation method. namely data collected or obtained through documents or files at the school. Related to research conducted at SMP N 12 Bengkulu City.

Data Analyses

The data analysis technique for this research is: a) Normality test aims to find out whether the data is normally distributed. Normality test with Shapiro Wilk and the SPSS 26 program. b) Homogeneity test. The homogeneity test determines whether two groups have the same mean. The homogeneity test used in this research is the SPPS 26 dispersion test. c) Hypothesis testing. This research process shows how much influence the independent variable has on the dependent variable. To test the differences in student cognitive learning outcomes between the experimental class (which uses an inquiry-based learning model integrated with science and the Koran) and the control class (which uses conventional methods), a difference test (t-testis) was carried out out.

RESULTS AND DISCUSSION

The differences in treatment in each class showed that the mean value of the experimental class was greater than that of the control class, namely 82.08>75.08. The difference in results in the two classes is due to the different treatments given during the learning process. Both classes have a normal population with significance for each class > 0.05 and have homogeneous data diversity.

From the post-test value data for the experimental class and control class, it is known that the significance level (2-tailed) is <0.05 with a value of 0.01. So from the calculation results there is a significant influence from the experimental class post-test. This can be clearly seen in the increase in post-test scores after using the inquiry learning model (integrated science and the Koran).

In this research, the average student cognitive learning outcomes increased when an inquiry-based learning model linked to science and the Koran was used in learning. This is because learning with an inquiry-based learning model provides opportunities for students to actively participate in searching for information independently or in groups to find answers or solutions to questions or problems posed by the teacher, thus enabling students to think and work. They can be stimulated independently and are objective, honest and open and provides opportunities for students to learn independently to develop ideas that can expand students' knowledge.

This happens because there are several advantages of inquiry, namely as follows: (1) It is a learning strategy that emphasizes the balance of development of cognitive,

affective and psychomotor aspects so that learning through this strategy is considered more useful. (2) Can provide space for students to learn according to their learning style. (3) Is a strategy that is in accordance with modern developments in learning psychology which views learning as a process that changes behavior through experience.

Actionable learning processes invite students to solve teacher-inspired problems and encourage students to seek information, data, and evidence. This can direct students to find out what the teacher recommends by looking for scientific research and the arguments of the Al-Qur'an, so that students are enthusiastic about proving the truth, so that it can make students able to think actively. This can help students to find the truth in scientific books such as Integrated Science books and encyclopedias to prove that this has been stated clearly in the Al-Qur'an, which shows students that everything is explained clearly in the Al-Qur'an. an, which can lead to that, to create feelings. trust between students. Therefore, the use of an inquiry-based learning model that is integrated with science and the Koran makes learning active, interesting and fun. Students receive information that is more transparent, accessible and sustainable, resulting in better learning outcomes.

According to Nazariah et al. (2017) concluded that inquiry-based learning models can improve student learning outcomes in integrated science subjects. This success was because students were trained to be more active, cooperative and confident using survey methods. within their abilities. Integrating science and the Koran in learning can also improve science learning outcomes because research (Muhammad Irwansyah, 2012) shows that integrating science and the Koran shows better results. The results of this research show that the investigative learning model combined with the integration of science and the Koran can improve student learning outcomes.

The importance of integrating science and the Koran into science learning is to create a balance between general science and religious knowledge so that it can produce students who are good at science and understand religion. As (Chanifudin, C., & Nuriyati, T., 2020), the importance of combining science and Islam today is to instill in students knowledge, understanding, appreciation, faith, piety and noble morals through the practice of scientific teachings. for teaching and Islam. Islam is based on its main source, namely the holy book Al-Quran. And (Minarno E.B., 2017) added that scientific education based on the Koran can encourage Muslims to become loyal and faithful individuals in accordance with the goals of national education. The Qur'an commands humans to interpret natural events in the way determined by Allah. Therefore, the Qur'an can be used as a source to explain scientific theories.

The inquiry learning model has a significant impact on increasing knowledge. The inquiry learning model emphasizes the thinking process that builds experiences that involve students actively in the learning process (Kuhlthau & Todd, 2007). This model involves students in the scientific learning process like a scientist; they collect data carefully and accurately, solve problems, and generate deeper understanding of the concepts they study (Stave, 2013). Inquiry-based learning is when students are involved in learning, formulating problems, investigating thoroughly, and then gaining

understanding, interpretation and new knowledge to apply to solve different problems (Yuliati et al., 2018). All stages of the inquiry learning model, including making explanations and conclusions, are carefully planned and monitored. This process complements and encourages students to experience freedom in their learning (Kuhlthau & Todd, 2007), and helps them improve their thinking knowledge so that they can improve learning outcomes (Arends, 2012; Suardana et al., 2018; Artayasa et al., 2018).

CONCLUSION

Based on the post-test results of the experimental class in the learning process which used an integrated inquiry learning model (science and the Qur'an) had a higher score than the control class whose learning process was only conventional with an average score of 82.08>75, 08. These results are further supported by data analysis carried out with the help of SPSS version 26.0, which shows a significance level (2-tailed) < 0.05 with a value of 0.01. So from the calculation results with a significance level (2 tailed) < 0.05, there is a significant influence from the experimental class post-test. So based on these data it can be said that there is an influence of students who use the integrated inquiry learning model (science and the Koran) on the cognitive learning outcomes of class VII students at SMPN 12 Bengkulu City.

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