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RELATIONSHIP BETWEEN NATURAL KNOWLEDGEAND QURAN INTERPRETATION AN INTERDISCIPLINARY STUDY

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ABSTRACT

This study discusses the relationship between basic natural sciences and Qur'anic interpretation through an interdisciplinary approach. The Qur'an as a guide to human life, especially Muslims, contains many verses that encourage humans to pay attention to and reflect on the universe, which is a manifestation of the greatness of the Creator. With the advancement of science, the scientific interpretation approach emerged as a method for understanding the verses of the Qur'an in the context of modern scientific findings. This approach combines physics, chemistry, and biology in interpreting many verses in the Qur'an that are directly related to natural phenomena. The results of this study indicate that the use of a scientific perspective in interpretation provides a more comprehensive and contextual understanding, while enriching Muslims' insight into the greatness of God through the universe. This interdisciplinary approach also has the potential to develop an integrative Islamic education curriculum, combining science and religion to improve students' understanding and faith.

INTRODUCTION

Law are often the objects of in-depth study, both by scholars and scientists. This tendency has paved the way for efforts to understand the verses of the Qur'an using a scientific-based knowledge perspective or what is called "scientific interpretation Bahri, MS(2022:8).

Scientific interpretation or scientific approach in understanding the Qur'an is a form of interpretation that tries to link the verses of the Qur'an with many modern scientific findings and descriptions. This approach aims to explain that the Qur'an is in line with scientific reality and even contains clues about phenomena that have only been understood by humans in the modern era. Although this approach is quite popular, its use often raises debate regarding the accuracy and sustainability of the interpretation, especially when it relates to scientific theories that are still developing.

On the other hand, the development of natural science has made a major contribution to understanding the laws that govern the universe. Natural science, or basic science, focuses on the systematic study of nature through observation, experimentation, and empirical analysis. In Islamic teachings, science is seen as a means to understand God's creation, thus deepening a Muslim's faith in the Creator. Thus, science is not just a tool for exploration, but also a medium for appreciating the signs of God's greatness that are manifested in natural phenomena.

Through this perspective, an interdisciplinary approach that combines Qur'anic interpretation and basic natural sciences becomes increasingly relevant. An interdisciplinary approach in Qur'anic studies aims to deeply understand the verses of the holy book by utilizing knowledge from various fields of knowledge, especially science. This not only broadens the perspective on the meaning of the verses of the Qur'an, but also integrates science and religion in a harmonious synthesis. This approach allows Muslims to understand their holy book with structured and evidence-based scientific insight.

The research aims to conduct a study on how the relationship between basic natural knowledge and Qur'anic interpretation through an interdisciplinary approach, with a focus on relevant scientific concepts and scientific interpretation methods. This study will discussion of the forms of Qur'anic interpretation, especially scientific interpretation. Furthermore, it will also explain how an interdisciplinary approach can be an effective tool for combining scientific insights with religious teachings, thus producing a more comprehensive understanding.

METHOD RESEARCH

Methodology is a step that can be used in order to conduct investigations and studies on a problem through a scientific approach carefully and cautiously. This

process includes data collection, processing, analysis, and drawing conclusions in a systematic and objective manner, aimed at solving problems or testing a hypothesis. Thus, this research can provide useful knowledge for human life. In this study, the author chose the library method as the research method used. Library method. It itself is explained by Asmendri and Milya Sari, is a study that collects information and library data, such as several theory books, scientific articles containing both general studies and reports on a scientific practice. This stage is carried out systematically in order to find data and is collected to be processed with data research techniques to find answers to the problems to be studied Sukardi (2013: 89).

RESULT AND DISCUSSION

RESULT

DraftNatural Basics Basics Reviewed in Terms of Definition and Characteristics

According to Sujalu's opinion followed by Puspita Sari, Where Basic Natural Science (IAD) is another language in order to mention Natural Science (IPA), which has been known since the elementary level in the Indonesian Education system. If based on English, IAD is called natural science, which is studying natural events as a basis for building more concrete scientific concepts and principles. By studying IAD, we can understand how various processes of the universe take place and gain knowledge about it Abubakar, H.R. (2021: 89).

In another sense put forwardby Tasmuji, Basic Natural Science is a discipline that studies phenomena in nature. Referring to English, this science is known as science or natural science, while in Arabic, this term comes from the words 'alima, ya'lamu, and 'ilman, which have the meaning of knowing deeply. Thus, Basic Natural Science is a science that studies various events in the universe, which then produces scientific concepts and principles.

A similar thing was explained by Wahyudi & Suardana, who provided a similar view to the previous explanation, by stating that IAD can also be understood as a scientific discipline that focuses its study on knowledge about nature, specifically regarding natural phenomena to develop scientific concepts and principles.[7]IAD invites us to observe and analyze the phenomena of the universe from various perspectives, so that we can develop a more systematic and structured understanding

of how the physical world functions. Thus, IAD has a focus on the scientific study of the universe, but not limited to the above, where IAD also plays a role in the development of technology to improve the quality of human life.

Then Maskoeri Yasin quoted from Bramianto Setiawan defines IAD as a science that studies the phenomena that occur in this universe, including the processes that form the earth. In its study, IAD uses basic concepts and scientific principles that aim to understand how these natural phenomena occur and how the relationship between these phenomena can be explained with existing scientific theories.

Where according to Maskoni Basic Natural Science (IAD) has a very important role in the development of basic knowledge related to the phenomena of the universe. Furthermore, Maskoeri Yasin explained that IAD is not only observing natural phenomena, but also trying to formulate scientific concepts that can be used to understand and explain various natural processes. This leads to a deeper understanding of the principles that govern the universe, starting from the structure of the materialfrom the smallest to the largest processes involving the solar system and even galaxies Aly, A., & Rahma, E. (2006: 89).

On the other hand,According to Abdulah Aly and Eny Rahma in their work, IAD is seen as a body of knowledge that focuses on basic concepts in the fields of Natural Sciences (IPA) and Technology. In this context, IAD can include various interrelated disciplines, such as physics, chemistry, biology, geology, and astronomy, all of which contribute to providing scientific explanations of phenomena that occur in nature.[10]IAD aims to provide a broader and deeper understanding of the principles underlying various natural phenomena, as well as providing a basis for the development of technologies that depend on this scientific knowledge.

Aisyah emphasized that humans are the main subject in the study of IAD, where humans as living beings with a higher level of status have an important role in understanding and managing this science. As beings who have the ability to think and conduct research, humans can formulate more complex and in-depth scientific concepts based on observations of natural phenomena. Humans are not only objects of study, but also actively play a role in the development of science related to the universe and technology.

In general, Basic Natural Sciences (IAD) has a broad scope and covers many

disciplines. Where IAD not only aims to understand natural phenomena, but also provides a basis for the development of technology and its application in everyday life. By understanding the basic concepts in IAD, we can better appreciate the relationship between natural science, technology, and human life.

As a science that studies natural phenomena, IAD basically has characteristics that distinguish it from other disciplines such as social sciences and other sciences that are considered as a discipline. Referring to Nurdiana's opinion, IAD has the following characteristics:

1) Natural science describes reality based on aspects that allow direct registration of sensory data.

   In the natural sciences, “sensory registration” refers to the way we obtain data through the five senses, which can be directly observed and measured. For example, in the observation of sound, the natural sciences study it as a phenomenon that can be directly measured through the properties that are sensed, such as loud, soft, high, low, and so on. In this case, the data produced is direct and objective, reflecting the nature of the observed phenomenon without further interpretation. In contrast, in the social sciences or humanities, sensory data is often understood as signs or symbols that represent something more abstract or more complex meaning, rather than just a phenomenon that can be detected directly.

2) Natural Science isthe existence of an assumption of determinism in the object being studied.

   This means that in natural science, every particular action or phenomenon will produce a specific and predictable reaction. This means that nature has a deterministic nature, where natural objects will always react in a consistent way if given the same conditions. Therefore, experiments in natural science can be repeated with the same results, provided the conditions and procedures are similar. Natural science focuses on the discovery of natural laws that are universal and can be applied to various similar situations or experiments.

In his opinion, one of the important aspects of this scientific approach is

experimentation. In natural sciences, experiments are conducted to test hypotheses or theories using concrete objects that can be measured and observed.[12] The focus of this experiment is not just on the object itself, but on how the object can be described in terms of various interacting factors. For example, natural objects have specific properties that can be measured, such as shape, hardness, density, and melting point. All of these properties are factors that influence how the object behaves or reacts under certain conditions. In the experiment, the concrete object is considered as an "instance" that represents these various factors, which together determine how the object functions or reacts. Natural sciences also have a very specific and structured nature, which makes them difficult to understand for people who are not experts in the field.[13]Although natural sciences discuss very concrete and directly observable phenomena, the concepts used in natural sciences are often very technical and require in-depth understanding. This makes natural sciences different from social sciences or humanities which are more accessible and understandable to the general public. Although the data obtained in natural sciences is objective and can be proven experimentally, the process of understanding the data requires a more specialized background knowledge. Rubini, B., (2017:78)

This situation can be considered paradoxical, because although natural science studies the most concrete things in the world of experience—namely phenomena that can be directly observed with the five senses and explained objectively—the understanding of these phenomena often requires deep technical and theoretical expertise. In other words, although the data obtained is very clear and objective, a deep understanding of the data requires knowledge and skills that are not possessed by lay people

DISCUSSION

DraftThe Basis of Scientific Interpretation as a Pattern of Contemporary Interpretation

Interpretation is a human work that functions to explain the understanding of the verses of the Qur'an as the Word of God. In order to Interpret the Qur'an, it means that someone tries to produce an idea and deep meaning in the verses of the Qur'an. Interpretation of the Qur'an is a human work, therefore the interpretation of the Qur'an is influenced by many perspectives from its interpreters. The interpreter's opinion on the verses of the Qur'an will describe what is in his mind. In generaletymology, the

word interpretation is originally a Masdar from the word "tafhīl" which is taken from "al-fasr," which means to reveal, or provide an explanation of an abstract meaning. In this case the verb pattern follows the words "dharaba-yadhribu" and "nashara-yanshuru," then forms into "fasara-yafsiru/yafsurufasr(an)" which means "to explain" or "to reveal." Thus, interpretation means to explain and reveal something hidden, such as the meaning of a phrase that is difficult to understand.[15]

Basically, the meaning of interpretation has been expressed by several experts, including as quoted by Hasanuddin and Zulaiha:[16]

1) According to Asy-Syaikh Al-Jazairi, interpretation is an attempt to explain the words in the Qur'an that are difficult to understand by providing an explanation of the meaning contained in the words. This explanation can be done by showing equivalent words or meanings that are closer to the original meaning of the words.
2) According to 'Ali Hasan Al 'Aridl, tafsir is a scientific discipline which essentially studies how to understand the words of the Qur'an well, whether on their own or when they are arranged in the form of verses or surahs, as well as the meanings that emerge when these words are combined in a broader context
3) In Imam Abu Hayan's view, tafsir is a science whose focus is the study of how to understand the Qur'an, both separately (ifrad) and in sentence structure (tarkib), which includes explanations of the in-depth understanding in its contents. Tafsir also includes analysis of various important elements such as nasakh (abolition of law), the reasons for the revelation of verses (cause of nuzul), as well as explanations of the history of Islamic civilization or other understandings contained in it.
4) Referring to the opinion of Imam Al-Syuyuthi, interpretation is a discipline of knowledge that explains the origins of the revelation of the verses of the Qur'an (nuzul), matters related to the verses, and events that underlie the revelation of the verses. Interpretation also discusses aspects such as the laws related to the verses (halal and haram).

Then in the KBBI it defines interpretation as notes containing information

regarding explanations of verses of the Qur'an with the aim of making them easier to understand.This understanding, although it provides a fairly clear picture of interpretation, is actually a narrowing or simplification of a broader and more complex meaning.

In general, tafsir is not only limited to mere explanation, but rather refers to the process of deep interpretation and interpretation of the meaning, context, and laws contained in the Qur'an. Tafsir itself has been known for a long time, even since the Prophet was still alive, which was then passed down to the companions to the tabi'in. In the Qur'an, tafsir itself is something that has been explained as described in the Qur'an Surah Al-Furqan: 33

> Meaning: They will not come to you (bringing) anything strange, unless We bring you the truth and the best explanation. (QS Al-Furqan: 33)

The interpretation itself consists offrom the types and methods, one of which is scientific interpretation. Scientific interpretation (tafsir 'ilmy) is an approach to interpreting the Qur'an by utilizing the principles and findings of modern science studies. In this context, the initial interpretation is fassara, which means revealing meaning, while 'ilm means science or knowledge.[18]Therefore, scientific interpretation refers to the attempt to explain the verses of the Qur'an with a scientific approach, to encompass various disciplines, such as physics, biology, astronomy, and other sciences and disciplines.

Referring back to KBBI, interpretation is a description in the form of an explanation which can also be said to be information about verses of the Qur'an which aims to provide a deep understanding of the contents of the Qur'an, both in terms of language, law, and other information that Allah wants to convey as the one and only God. Muhammad Husain al-Dzahabi defines scientific interpretation as an effort to explore and understand the scientific aspects of the Qur'an. In al-Dzahabi's view, scientific interpretation tries to explain the verses of the Qur'an through a scientific approach, both inductively (based on data or observations) and deductively (based on existing theories or principles). This approach aims to explore knowledge in the Qur'an, which is not only relevant to the historical or social context, but also to modern scientific discoveries.

Yusuf al-Qaradhawi, as quoted by Mufakhir Muhammad, also explained that

scientific interpretation is an interpretation that uses modern science, scientific theory, and current scientific reality to explain the meaning and purpose of the verses of the Qur'an. In scientific interpretation, the interpretation of the verses of the Qur'an is not only based on the text and context, but also tries to connect the texts of the Qur'an with relevant scientific discoveries, thus providing a broader and contextual understanding of Divine revelation.

Thus, scientific interpretation is not merely an explanation of the meaning of the text, but also bridges the Qur'an with modern science to show the relevance and absoluteness of the information in the Qur'an in the context of the development of the era and scientific discoveries that continue to grow. This approach helps enrich Muslims' understanding of revelation by utilizing the results of the latest scientific studies and findings.

2. Interdisciplinary Approach to Understanding the Qur'an through the Perspective of Basic Natural Sciences

According to Wahyudi, Basic Scientific Knowledge consists of several aspects of discussion which are described as follows:

1) Physics

Physics is the science that studies inanimate objects and how these objects interact, both at rest and in motion. Physics focuses on natural phenomena that occur in the form of changes.

temporary changes, such as movement, heat, light, sound, and waves. Mechanics: The study of the motion of objects and the forces that affect them.

2) Chemistry

Chemistry is a science that studies the composition of matter, composition, and changes that occur in the matter. The main focus of chemistry is on changes that are permanent or fixed, such as chemical reactions and changes in the structure of atoms and molecules. Chemistry is divided into two main branches

3) Biology (Biological Science)

Biology is the science that studies living things and all the phenomena that occur in life. Biology studies aspects of life starting from structure, function, growth, to interactions between living things and their environment.

The scope of the IAD is a branch of scientific discipline that is the reference point in efforts to interpret the Qur'an based on an interdisciplinary approach that is based on Basic Natural Sciences. The interdisciplinary approach itself is an approach to solving problems or answering questions that involves the use of various perspectives of related and relevant sciences in an integrated manner. This approach involves combining concepts, methods, and analysis from various different disciplines, both those that are directly related and those that are not, to gain a more comprehensive understanding of a phenomenon or problem.

According to Munirom, the interdisciplinary approach has two main elements: first, the use of complementary and relevant related sciences in solving a problem, and second, cooperation between different disciplines to create more comprehensive methods and solutions. This approach is important for solving problems.

CONCLUSION

The relationship between natural knowledge and Qur'anic interpretation reflects an attempt to combine scientific insight with religious teachings, so as to produce a more comprehensive understanding of the universe as God's creation. The Qur'an contains many verses that invite humans to reflect on natural phenomena as signs of the greatness of the Creator. Through the scientific interpretation approach, the exegetes try to relate these verses to modern scientific concepts and findings, so that Muslims can see the harmony between science and revelation.

This scientific interpretation approach aims to show that the messages of the Qur'an are not only spiritually relevant, but also in line with scientific principles. Natural sciences that focus on the empirical study of natural phenomena can provide more concrete and structured insights into studying verses that describe the universe. This, for example, is seen in the verses of the Qur'an that talk about the creation of the

heavens and the earth, the structure of life, and other natural phenomena that can be analyzed through physics, chemistry, and biology.

Interdisciplinary approachit is important to explore deep and comprehensive thinking on the verses of the Qur'an. By integrating science and interpretation, Muslims can interpret the holy text in a more modern and scientific context. Physics, for example, helps explain the phenomenon of light as a metaphor for God's power, while chemistry provides an overview of the process of human creation from natural elements, and biology explains the mechanisms of life described in the verses of the Qur'an.

This approach not only deepens the understanding of religion but also strengthens faith through scientific evidence that can be observed in the universe. Understanding that science can be a means to recognize the greatness of God helps enrich the insight of Muslims and increases appreciation for science as a medium that supports the teachings of the Qur'an. Thus, basic natural science plays a role not only as a source of knowledge, but also as a bridge connecting faith and logic. The integration of natural knowledge and Qur'anic interpretation through an interdisciplinary approach opens up opportunities to develop an Islamic education curriculum that combines the study of science and religion. This approach allows the younger generation of Muslims to understand the universe as a sign of the greatness of God while building a solid scientific foundation, so that they can grow as critical-thinking and faithful individuals.

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