





#### Cendekia: Jurnal Kependidikan dan Kemasyarakatan

Vol. 21 No. 2 (2023): 224-235

Available online at <a href="https://jurnal.iainponorogo.ac.id/index.php/cendekia">https://jurnal.iainponorogo.ac.id/index.php/cendekia</a>

# Pattern Analysis of the Relationship Profile of Students' Curiosity and Internalization-Interconnection of Qur'an and Science

# Wirawan Fadly

Institut Agama Islam Negeri Ponorogo, Indonesia

#### ARTICLE INFO

#### RTICLE INFO

# **Article History:**

Received: September 11, 2023 Revised: November 26, 2023 Accepted: November 30, 2023

### **Keywords:**

curiosity; internalizationinterconnection; Qur'an and science This study aims to analyze the profile of curiosity and the pattern of linkages of students' curiosity at all levels of Madrasah Ponorogo to the internalizationinterconnection of science material with Qur'anic values. This research employed qualitative research with a naturalistic design. The sampling technique was carried out by purposive sampling of seven people spread across every level of education. Data were collected through interviews, observation, documentation. Then the data was analysed through descriptive quantitative and qualitative. The results of the research on the curiosity profile of students at each level tend to be associated with events in the observed surroundings, develop according to experience and age, can internalize-interconnect the context of natural events with verses of the Qur'an when they have reached the stage of exploring (adventures) and the pattern of linkages between students' curiosity towards the internalization-interconnection of science material with Quranic values creates the ability for Spiritual-Scientific Accommodation due to stimulation in the form of incentives, attention, scientific dogma, and spiritual interpretation.

**ABSTRACT** 

# Corresponding Author.

Wirawan Fadly

Email: wira1fadly@iainponorogo.ac.id

#### How to Cite:

Fadly, Wirawan. "Pattern Analysis of The Relationship Profile of Student's Curiosity and Internalization-Interconnection of Qur'an and Science." *Cendekia: Jurnal Kependidikan dan Kemasyarakatan* 21, No. 2 (2023): 224-235.

https://doi.org/10.21154/cendekia.v21i2.7263

# **INTRODUCTION**

The scientific attitude developed in science learning is the expected character in the learning process. Adolescents aged 13-15 tend to have high curiosity, like to ask questions, have strong imaginations, have lots of interests, are not afraid of mistakes, dare to take risks, think freely, and like things that have never been known. In general, students who have high curiosity can be seen from the questions asked to the teacher, and to answer them the teacher uses logic by associating the material being taught with phenomena that students often encounter.

The questions that students ask are one of the passions of their curiosity about learning. Students' understanding of curiosity stems from needs and peculiarities. The curiosity that arises because of a need is related to efforts to seek explanations and then look for solutions to problems so that they can produce products or findings that many people can use.<sup>3</sup> Meanwhile, the curiosity that arises because of strangeness is related to one's way of interpreting phenomena whose purpose is limited to description and explanation so that it is only understanding. Therefore, curiosity is a character that has a vital role in the learning process to explore how enthusiastic they are in the learning process and the extent to which they capture the material through learning activities.

The results of a preliminary study to observe curiosity and the ability to internalize the interconnection of the Qur'an and Science at three levels of madrasas show that the level of student curiosity and internalization-interconnection of Qur'an values in material science at each level has a different score. At the MI (Madrasah Ibtidaiyah) level, students' curiosity level is at a low level ( $\bar{x}$ =0.32; Sd=11.4), while at the MTs (Madrasah Tsanawiyah) level, it is at a medium level ( $\bar{x}$ =0.68; Sd=7.6), and the MA (Madrasah Aliyah) level. Students are at a high level ( $\bar{x}$ =0.76; Sd =3.2). Meanwhile, the curiosity indicator level at the MI level is still at the questioning stage, while at the MTs level, it is at the discover stage, and at the MA level it has reached the Adventure stage. The indicator of internalization or appreciation of values shows that students at the MTs and MA levels can appreciate the values of knowledge contained in the Qur'an and vice versa.

In contrast, at the MI level, students can still not appreciate them, and finding the values of knowledge in the Qur'an is just the opposite. Meanwhile, students can connect indicators or connect science material with the Qur'an. Still, the scores obtained from various levels show the lowest scores at the MI level, while at the MTs level, the understanding is quite good. The relationship between science material and the Qur'an and at the MA level, students can genuinely connect science material with the Qur'an. This initial assessment shows that the madrasah has shown good progress in preparing its students to be curious and internalize the interconnection of the Al-Qur'an and science. Concerning the character

<sup>&</sup>lt;sup>1</sup> Robert E. Slavin, Educational Psychology: Theory and Practice (Boston: Allyn and Bacon, 2019).

<sup>&</sup>lt;sup>2</sup> Jennifer L. Weible and Heather Toomey Zimmerman, "Science Curiosity in Learning Environments: Developing an Attitudinal Scale for Research in Schools, Homes, Museums, and the Community," *International Journal of Science Education* 38, no. 8 (2016): 1235–55.

<sup>&</sup>lt;sup>3</sup> L D Handoyo, Paidi, and P Suparno, "Application of Service-Learning for Developing Curiosity, Responsibility, and Honesty of Biology Education's Students, Sanata Dharma University," in *Journal of Physics: Conference Series*, vol. 1097 (IOP Publishing, 2018), 012040.

of student curiosity, the teacher must be able to provoke or explore this student's character.<sup>4</sup> Curiosity is a characteristic that a seeker of knowledge must own. So, with the character of high curiosity, *hamasah*, and *laa taiasuu* will always be carried by a student wherever they are. Many events in nature are written in the Qur'an. Some scientific phenomena are often integrated with verses of the Qur'an in several letters.<sup>5</sup> Right now, the essential thing is wrapping science values integrated with the Al-Qur'an and conveying them to students. Of course, it is hoped that this will align with implementing the Merdeka curriculum, which tries to give equal attention to religious and general education.

In integrating science values with the Qur'an, teachers, students, and schools must support them.<sup>6</sup> It is because the internalization of Qur'an values in science material is significant to still confidence in students that everything in nature is none other than the power of Allah. Internalization is a process of understanding from individuals that involves an idea, concept, or action that stimulates an individual's mind to accept a value as a norm and view an action to be taken.<sup>7</sup> Previous studies show that the internalization of Qur'an values in science will not reduce the scientific level of science itself.<sup>8</sup> It will allow students to live up to the religious values contained in science.<sup>9</sup> So, science and Qur'anic values have necessary interconnections to still spiritual values in students. Interconnection is an action that someone takes because of an understanding that is obtained or captured from the outside by connecting to a context or an event that is aligned or has similarities that can be linked to one another.<sup>10</sup>

Another research conducted by Purwati showed that the average value of student learning outcomes in science learning integrated with Islamic values was higher than in science learning, which was not integrated with Islamic values from the Qur'an and hadith. <sup>11</sup> Integrating Islamic values into science learning can be done using various strategies, such as incorporating relevant Qur'an verses and hadith into it—integration of Islamic values into science. Learning science at Madrasah has become more accessible because of its uniqueness. Madrasahs are Islamic educational institutions that aim to form a healthy generation, have faith, love science, and have a global view to obtain happiness in the world and hereafter. By integrating Islamic knowledge and science, students have factual, cultural, and learning

<sup>&</sup>lt;sup>4</sup> Joanna Higgins and Azra Moeed, "Fostering Curiosity in Science Classrooms: Inquiring into Practice Using Cogenerative Dialoguing," *Science Education International* 28, no. 3 (2017): 190–98.

<sup>&</sup>lt;sup>5</sup> Wirawan Fadly and Fatkul Jannah, "Diagnostic Skill of Internalization-Interconnection Qur'ani With Science in Three Levels of Madrasah," *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan* 18, no. 2 (2020): 267–80

<sup>&</sup>lt;sup>6</sup> Murtono, "Pendidikan Sains Dalam Al-Qur'an," *Jurnal Pendidikan Agama Islam* II, no. 02 (2005): 163–74.

<sup>&</sup>lt;sup>7</sup> Ahmadi , Basuki, and Edi Irawan, "The Internalization of Attitude and Values: Comparison Study in PTKIN and PTKIS," *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan* 18, no. 1 (2020): 17–32.

<sup>&</sup>lt;sup>8</sup> Fadly and Jannah, "Diagnostic Skill of Internalization-Interconnection Qur'ani With Science in Three Levels of Madrasah."

<sup>&</sup>lt;sup>9</sup> Osman Titrek and William W. Cobern, "Valuing Science: A Turkish-American Comparison," *International Journal of Science Education* 33, no. 3 (2011): 401–21.

<sup>&</sup>lt;sup>10</sup> Fantika Puspitasari, "The Integration-Interconnection Discourse of Islamic Education and Science in Indonesia," *Tarbani: Jurnal Pendidikan Islam* 2, no. 8 (2020): 153–62.

<sup>&</sup>lt;sup>11</sup> Nining Purwati et al., "Increasing Islamic Junior High School Students Learning Outcomes through Integration of Science Learning and Islamic Values.," *International Journal of Instruction* 11, no. 4 (2018): 841–54.

experiences that correlate with the miracles of the Qur'an. 12

Appreciation of scientific values in the Qur'an needs to be done as early as possible with the hope that there will be spiritual values that will later be brought by students as provisions, especially in understanding and interpreting the connection between science material and Qur'anic values, so that in addition to scientific values obtained in learning at the same time spiritual values can be instilled in students.<sup>13</sup> Curiosity and internalization-interconnection of Qur'anic values in science material are spiritual aspects that need to be intensified in education, especially in science.<sup>14</sup> These two aspects need to be applied in the educational environment to support educational innovation towards a competitive national character in the scientific and spiritual fields.

From previous research, science learning, integrated through internalization and interconnection with Islam, has increased curiosity and influenced the learning process. Still, it has yet to describe the pattern of connection explicitly. The novelty of this research is to explore patterns of interrelationship between curiosity and internalization-interconnections, which can make it easier to teach students' curiosity and internalize the relationship between the Al-Qur'an and science so that the patterns obtained from findings in the field can be developed into technical steps in carry out learning. With the facts obtained and the hopes or goals to be achieved from the researcher's observations, the researcher is interested in conducting a study entitled "Pattern Analysis of The Relationship Profile of Student's Curiosity and Internalization-Interconnection of Qur'an and Science." The novelty of this research is to explore patterns of interrelationship between curiosity and internalization of -interconnections, which can make it easier to teach students' curiosity and internalization-interconnections internalize the relationship between the Al-Qur'an and science at the same time so that the patterns obtained from findings in the field can be developed into technical steps in carry out learning.

# **RESEARCH METHOD**

The researcher employed a qualitative approach, and the type of research was field study. Qualitative research reveals certain social situations by correctly describing reality, formed in words based on data collection techniques and analysis of relevant data obtained from natural situations.<sup>17</sup> This type of research is a field study, a method of collecting data in research that does not require in-depth knowledge of the literature used and the specific abilities of the researcher.<sup>18</sup> The research subjects were student schools in Ponorogo from

<sup>&</sup>lt;sup>12</sup> E. F. Fahyuni et al., "Integrating Islamic Values and Science for Millennial Students' Learning on Using Seamless Mobile Media," *Jurnal Pendidikan IPA Indonesia* 9, no. 2 (2020): 231–40.

<sup>&</sup>lt;sup>13</sup> M. Solahudin, "Pendekatan Tekstual Dan Kontekstual Dalam Penafsiran Al-Quran," *Al-Bayan: Jurnal Studi Ilmu Al-Qur'an Dan Tafsir* 1, no. 2 (December 30, 2016): 115–30.

<sup>&</sup>lt;sup>14</sup> Asep Sunarko, "Iptek Dalam Perspektif Al- Qur'an," Manarul Qur'an 14, no. 1 (2015): 1–14.

<sup>&</sup>lt;sup>15</sup> E. F. Fahyuni et al., "Integrating Islamic Values and Science for Millennial Students' Learning on Using Seamless Mobile Media."

<sup>&</sup>lt;sup>16</sup> Solahudin, "Pendekatan Tekstual Dan Kontekstual Dalam Penafsiran Al-Quran."

<sup>&</sup>lt;sup>17</sup> Jack R. Fraenkel, Norman E. Wallen, and Helen H. Hyun, *How To Design And Evaluate Research In Education 8th Ed.* (New York: McGraw-Hill, 2012).

<sup>&</sup>lt;sup>18</sup> John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (Sage Publications, 2016).

primary school, intermediate, and high levels. In this study, there were 7 informants. For crucial information, researchers used a purposive sampling system. This research was in MI Ma'arif Setono, MTs N 2 Ponorogo, MAN 2 Ponorogo. Data collection techniques used were observation, interviews, and documentation. Data collection techniques used were observation, interviews, and documentation. In contrast, according to Milles and Huberman, the data analysis includes data condensation, data presentation, and conclusion.<sup>19</sup>

Data condensation was obtained from notes obtained while in the field and simplified to make it easier for researchers to understand the data. So that in analyzing the researcher will remove data that is considered unnecessary so that the data presented is more appropriate. In this study, data condensation was carried out by collecting data in the form of interviews with students who were the research sample. In collecting data in the form of interviews, it is necessary to have documentation in the form of recordings. Also, it pictures as evidence that the research has been carried out.

After the data has been classified or sorted, the data can be presented in the form of matrices, tables, graphs, or something else so that the information collected will allow conclusions and actions to be drawn. When carrying out the process of presenting data, the thing that must be considered is describing the research results in general and then describing their relationship to the focus of the research. The presentation of data in this study was carried out in the first several stages, namely making interview transcriptions where the results of the data processing can be made in written form from the interviews that have been conducted. Second, scoring or assessing the results of interviews takes students' average curiosity and internalization-interconnection and then makes it in Excel format. The third is interpreting and grouping several student statements, including unique, interesting, and general statements to be presented in the form of sense, initial code, and category. Fourth, make a matrix of research results from the first to the third stages. Then, a meaning is taken, and a supporting theory is given to reinforce the theory found.

The final step is to draw the conclusions. The data that has been 228nalysed is then drawn conclusions or verification. From this initial conclusion, it is still temporary if strong, valid, and consistent evidence is not found to support the data collection stage. The data analysis used in this study is descriptive qualitative and quantitative analysis obtained from the field. In this study, verification was done to answer the specified problem formulation. A matrix of findings is interconnected with grounded theory so that the circulatory system material obtains a pattern of interrelationship between curiosity and internalization-interconnection of Qur'anic values .

# RESULT AND DISCUSSION

### Student's Curiosity Profile

From the research conducted, the results of the average character of student curiosity and the ability of internalization-interconnection have been obtained in the table below.

<sup>&</sup>lt;sup>19</sup> Fraenkel, Wallen, and Hyun, How To Design And Evaluate Research In Education 8th Ed.

Table 1. The Average Score of Students' Curiosity Scores

Indicator	Score	Std. Dev
Questioning	76.7	8.6
Explorer	63.4	7.5
Discover	67.9	9.3
Adventurous	72.3	10.5

**Table 2.** The Results of the Average Score of Internalization-Interconnection of Natural Sciences Material with Quranic Values

Ability	Score	Std. Dev
Internalization	70.9	8.8
Interconnection	66.6	7.2

The following results were obtained from the analysis of the researchers' findings. The first indicator is Questioning. This indicator reveals that curiosity can arise from various aspects. Curiosity can arise in someone by asking friends, family, teachers, or other people related to the phenomenon that occurs. Based on what was delivered by Prahastiwi, the curious character in this case is the ability of students to ask questions, express opinions or read, and answer questions given by the teacher. It shows that curiosity in students is greatly influenced by the environment in which they are and what phenomena are found.

The next indicator is Explorer. In this indicator, curiosity can arise because of the response given due to stimulation from the five senses, both known and unknown, thus encouraging oneself to find answers or look for in-depth answers to phenomena in daily life. According to Prahastiwi, the development or improvement of students' curiosity can be seen from the development of aspects of curiosity that as asking, answering questions that arise during the learning process, responding, paying attention to teacher explanations, having initiative and enthusiasm, having a creative attitude, contributing students in discussion/learning projects, and enrichment.<sup>21</sup>

The third is Discover. In this indicator, the object of the image presented or produced will encourage someone to try to find the meaning or purpose of the image by translating the meaning contained therein. This curiosity drives a person to respond scientifically to the purpose of the image presented. According to Padilla, observing is the most fundamental science process skill that uses the senses to gather information about an object or event.<sup>22</sup>

The fourth is Adventurous. In this indicator, in exploring or exploring science, students look enthusiastic about understanding Science material in the Qur'an by applying

<sup>&</sup>lt;sup>20</sup> Rima Buana Prahastiwi, "Penerapan Pendekatan Saintifik Untuk Meningkatkan Karakter Rasa Ingin Tahu Dan Prestasi Belajar Siswa Kelas X MIA 3 SMA Negeri 6 Malang" (PhD Thesis, Universitas Negeri Malang, 2014).

Noviana Dewi and Purwati Purwati, "Menumbuhkan Karakter Ingin Tahu Pada Siswa Dengan Metode Pembelajaran Sains Kimia Tentang Bahan Tambahan Makanan," in *Prosiding Seminar Nasional Psikologi Unissula*, 2018.

<sup>&</sup>lt;sup>22</sup> Ahmad Alfian Risydan Yasin, Aditya Marianti, and Ely Rudyatmi, "Kontribusi Tingkat Rasa Ingin Tahu Terhadap Kualitas Aktivitas Siswa Dalam Pembelajaran Respirasi Berbasis Pendekatan Saintifik," *Journal of Biology Education* 6, no. 2 (2017): 195–205.

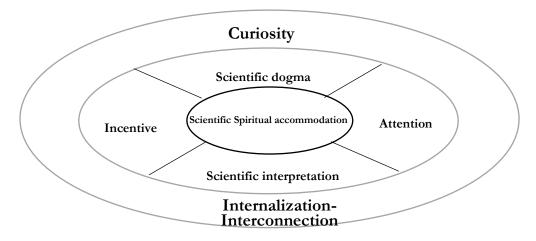
meaning or content in the Qur'an to science material then applied in daily life. Applying learning with integrating science and religion approaches can increase student attention. It is because learning using an integrated approach to science and religion, displaying verses of the Qur'an relating to learning material can attract students' attention to the lesson so that students are motivated to understand and do the stages of learning properly and correctly.

Internalization from the findings of students' ability to assess and appreciate science with the Qur'an at every level is that at the MI level, the level of appreciation of the Qur'an's value tends to be new students knowing science material related to the Qur'an. While at the MTs level students have begun to know and understand and can imitate attitudes based on the discovery of scientific values in the Qur'an. At the MA level, students are already at a manipulative level where students can instill the values of science in the Qur'an by imitating and inviting others to instill the values of science contained in the Qur'an. It is in line with what was conveyed by Novan Ardy, that education at every level must be held regularly.

Interconnection in students' understanding of the relationship between science material and the Qur'an: students at all levels have different understandings. At the basic level, understanding the connectedness of scientific material in the Qur'an still tends to be in the textual dimension. At the intermediate level, understanding the connectedness of scientific material in the Qur'an is in the contextual dimension. Whereas at the high level, the level of understanding of science material in the Qur'an is already in the structured contextual dimension; students can classify the relation of science to other subjects and policies in the verses of the Qur'an that are interconnected one to another.

# The Pattern of the Linkage of Curiosity and Internalization-Interconnection of Qur'an and Science

The following patterns are related to Curiosity and Internalization-Interconnection of the Qur'an and science.



**Figure 1.** The Pattern of the Linkage of Curiosity and Internalization-Interconnection of Qur'an and Science

First, incentives have the same meaning as motivation, which is an impetus owned by someone to do or find something good because of internal and external factors. In this case,

it is related to the curiosity of someone who can arise because of an internal or external incentive. It is revealed by the following participants.

Motivation is because of friends, because when other friends work, then I also have to do it and finish first because later it will be left behind and left behind, so it tends to be individually finished or not finished up.<sup>23</sup>

The informant's statement shows that the informant was motivated to work on the problem because of the deadline and the existence of an individual attitude in doing the task. It is based on the findings of Steven Rahardja. <sup>24</sup> Curiosity attracts someone to recognize and explore the surrounding environment, and fear can evolve to pay attention to possible problems that arise from curiosity. It means that in recognizing and exploring something, the environment becomes an external motivation or incentive to bring up one's curiosity. <sup>25</sup>

Second, attention aspects have the same meaning as interests. Interest is one aspect that makes someone like or not to new things, known or unknown. Attention in a person mostly comes from within oneself and has a tiny shaky scale from external factors. Interest can change depending on one's needs, experience, and developmental trends, not innate. Factors that affect a person's interests also depend on physical, social, emotional, and experience needs so that they will encourage how much one's curiosity. It is consistent with the respondent's statement viz.

Yes, half measures. Yes, I wanted to convert to a religion, but then I was persuaded to enter science. Finally, I was accepted, and it can be lived, and eventually it can.<sup>26</sup>

The informant's statement shows that the informant majored in Natural Sciences because the seduction persuaded him of a friend, not his desires. It is in line with what is delivered by Noviana Dewi. Curiosity usually develops when looking at one's condition or interesting surroundings. It means that someone will like something when someone is already in the environment, so it creates a separate attention where the attention arises because of habits and choices that have been made.<sup>27</sup>

Third, aspects of scientific dogma that have the same meaning as a belief or scientific belief in natural phenomena that a person encounters. It shows that a person believes that the existence of scientific phenomena does not escape from cause and effect, so that everything that happens is not without reason and not because it is not intentional. Still, everything is God's work to show His greatness to all nature. It is consistent with the respondent's statement as follows.

<sup>&</sup>lt;sup>23</sup> Az-Zahra CA, Interview about the reason for the Emergence of Curiosity, February 08, 2020.

<sup>&</sup>lt;sup>24</sup> Steven Raharja, Martinus Ronny Wibhawa, and Samuel Lukas, "Mengukur Rasa Ingin Tahu Siswa," *Polyglot: Jurnal Ilmiah* 14, no. 2 (2018): 151–64.

<sup>&</sup>lt;sup>25</sup> Raharja, Wibhawa, and Lukas.

<sup>&</sup>lt;sup>26</sup> Elma Zuhria M, Interview about the factors that influence curiosity, February 08, 2020.

<sup>&</sup>lt;sup>27</sup> Dewi and Purwati, "Menumbuhkan Karakter Ingin Tahu Pada Siswa Dengan Metode Pembelajaran Sains Kimia Tentang Bahan Tambahan Makanan."

Man was created from the essence of the land specifically for the Prophet Adam because the first man, Eve, was created from his ribs. Humans created from a clot of blood are humans after the Prophet Adam or humans afterward.<sup>28</sup>

The informant's statement shows that the informant believes that humans were created from the ground, a blood clot, and men's ribs, with a different explanation. In exploring scientific material related to the verses of the Qur'an, students will be able to absorb the explanation of verses about the creation of humans in the Qur'an relating to scientific material such as the reproductive system and the digestive system, so that beliefs or dogmas will be embedded scientific as well as spiritual soul in students.

It is in line with the statement of Murtono, that the importance of science until the first verse came down is so that we learn. Humans are instructed to read not just to read but must understand why, how, and what is happening. Then, He orders us to understand human creation from a blood clot. The more important is how to process a blood clot into a whole human being. It is where science comes into play. Scientific dogma is related to science in the Qur'an, where someone will be curious about what God has said in the Qur'an so that it will encourage someone to find and learn other scientific phenomena written in the Qur'an either implicitly or explicitly.<sup>29</sup>

Fourth, aspects of spiritual interpretation according to statements made by students indicate that students from the basic level to the top level have different spiritual understandings. It is evidenced by the analysis of in-depth answers to indicators of internalization or appreciation of the values of the Qur'an in science, as the expression below.

The heart, in the sense of a psychologist, affects our mentality, for example, when fear or nervousness is different. The physical heart is a blood-bleeding system to circulate blood. Heart spiritually, which is the heart of a believer's heart, is good. Many do good and have faith so that the blood carried is clean blood because the food is also halal. The heart of the disbeliever is because the food that is eaten is unclean. The blood that flows is dirty so that his heart makes it difficult to accept Allah's orders.<sup>30</sup>

The informant's statement shows that the heart has different meanings in a physical and spiritual sense. It is in line with what was conveyed by Siti Zulaekhah and Yuli Kusumawati, halal and haram food significantly influence one's life, morals, the life of the heart, answered by prayer, etc. People who always fill themselves with halal food, their morals will be good, their hearts will live, and their prayers will be granted. Conversely, those who fill themselves with illicit food will have bad morals, their hearts will ache, and their prayers will not be answered. Spiritual interpretation or understanding of religion is needed for

<sup>&</sup>lt;sup>28</sup> Mahila Tahta Aunillah, Interview on understanding of internalization of the Qur'an and science, February 08, 2020.

<sup>&</sup>lt;sup>29</sup> Murtono, "Pendidikan Sains Dalam Al-Qur'an."

<sup>&</sup>lt;sup>30</sup> Mahila Tahta Aunillah, Interview on understanding of internalization of the Qur'an and science, February 10, 2020.

someone to practice the values contained in religious teachings to help someone develop themselves intact by creating possibilities in applying positive values.<sup>31</sup>

In the aspect of curiosity of the internalization of the interconnection of science material with the Quranic value, that is incentive or motivation. Aslant argues that curiosity is an urge or desire to understand better something that was previously lacking or unknown. Curiosity will arise because of encouragement or motivation from within oneself and external factors such as the surrounding environment. A surrounding environment that attracts attention will make someone interested in exploring curiosity. So attention aspects in a person will appear when someone does not or does not know a thing. The existence of dogmas or scientific beliefs about natural phenomena will trigger someone to continue to discover an event's cause and effect. Scientific dogma is used to explain the substantial relationship between science and truth to ordinary people who used to think simply in a simple way but are constructive based on the rules of science. In contrast, spiritual interpretation or understanding of religion is needed for someone to practice the values contained in the teachings of religion that help someone to develop themselves intact through the creation of possibilities in the application of positive values. These four aspects will affect the existence of a "Spiritual-Scientific Accommodation." Accommodation is changing existing schemes or creating new schemes in response to new information that is scientifically or spiritually new.

Spiritual accommodation, in this case, can be interpreted as a response to the influence of the surrounding environment as an effort to sustain life employing a more profound approach and understanding of religion. In comparison, scientific accommodation is defined as the response given in solving a problem with scientific procedures or efforts to respond to the influence given by the surrounding environment. So, spiritual-scientific accommodation is a response to the influence of internal and external factors with a spiritual approach realized through religious deepening and scientific approaches systematically arranged through predetermined procedures.

In the view of Islam, science and nature are sustainable with religion and God. This relationship implies the sacred aspect of pursuing the scientific knowledge of Muslims, because nature itself is seen in the Qur'an as a collection of signs pointing to God. Normatively, since the beginning of the revelation of the Koran through Surah Al-Alaq 1-5, it has been illustrated that the construction of knowledge in Islam is built on monotheistic values. The effort to insert religious values in science learning is a genuine endeavor to realize the science learning objectives so that students glorify and believe in the Creator, namely Allah SWT. According to Baiquni, religious values must be fostered and nurtured in the environment of children/students. So, The connection between Curiosity and Internalization-Interconnection of Natural Sciences material with Qur'ani values is an essential asset for the millennial generation in the future. The research implies that the existence of this pattern of connection in the form of spiritual scientific accommodation can make it easier for educators/teachers to develop curiosity and internalization-interconnection of the Qur'an and science through learning activities oriented to four aspects, namely incentives, attention, scientific dogma, and spiritual interpretation.

<sup>&</sup>lt;sup>31</sup> Siti Zulaekah and Yuli Kusumawati, "Halal Dan Haram Makanan Dalam Islam," *Suhuf* 17, no. 01 (2005): 25-35.

# **CONCLUSION**

Profile of students' findings on Questioning indicators, namely the surrounding environment, initial knowledge and abilities, age, internal drive, and the five senses. The Explorer indicator is the senses' response and an event's analysis. The Discover indicator is the object image, cognitive abilities, affective and psychomotor. In the Adventures indicator, that is the deepening of the verses of the Qur'an and connecting the context of events with verses of the Qur'an. The indicator of internalization-interconnection varies in each level of education. The pattern of the interrelationship between students' curiosity about the internalization-interconnection of science material with the Quranic values creates scientific, spiritual accommodation due to stimuli in the form of Incentives, Attention, Scientific Dogma, and Spiritual Interpretation.

#### REFERENCES

- Ahmadi, Basuki, and Edi Irawan. "The Internalization of Attitude and Values: Comparison Study in PTKIN and PTKIS." *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan* 18, no. 1 (2020): 17–32.
- Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. Sage publications, 2016.
- Dewi, Noviana, and Purwati Purwati. "Menumbuhkan Karakter Ingin Tahu Pada Siswa Dengan Metode Pembelajaran Sains Kimia Tentang Bahan Tambahan Makanan." In *Prosiding Seminar Nasional Psikologi Unissula*, 2018.
- Fadly, Wirawan, and Fatkul Jannah. "Diagnostic Skill of Internalization-Interconnection Qur'ani With Science in Three Levels of Madrasah." *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan* 18, no. 2 (2020): 267–89.
- Fahyuni, E. F., W. Wasis, A. Bandono, and Moch Bahak Udin By Arifin. "Integrating Islamic Values and Science for Millennial Students' Learning on Using Seamless Mobile Media." *Jurnal Pendidikan IPA Indonesia* 9, no. 2 (2020): 231–40.
- Fraenkel, Jack R., Norman E. Wallen, and Helen H. Hyun, *How To Design And Evaluate Research In Education 8th Ed.* (New York: McGraw-Hill, 2012
- Handoyo, L D, Paidi, and P Suparno. "Application of Service-Learning for Developing Curiosity, Responsibility, and Honesty of Biology Education's Students, Sanata Dharma University." In *Journal of Physics: Conference Series*, 1097:012040. IOP Publishing, 2018.
- Higgins, Joanna, and Azra Moeed. "Fostering Curiosity in Science Classrooms: Inquiring into Practice Using Cogenerative Dialoguing." *Science Education International* 28, no. 3 (2017): 190–98.
- Murtono. "Pendidikan Sains Dalam Al-Qur'an." *Jurnal Pendidikan Agama Islam* II, no. 02 (2005): 163–74.
- Prahastiwi, Rima Buana. "Penerapan Pendekatan Saintifik Untuk Meningkatkan Karakter Rasa Ingin Tahu Dan Prestasi Belajar Siswa Kelas X MIA 3 SMA Negeri 6 Malang." PhD Thesis, Universitas Negeri Malang, 2014.
- Purwati, Nining, Siti Zubaidah, Aloysius Duran Corebima, and Susriyati Mahanal.

- "Increasing Islamic Junior High School Students Learning Outcomes through Integration of Science Learning and Islamic Values." *International Journal of Instruction* 11, no. 4 (2018): 841–54.
- Puspitasari, Fantika. "The Integration-Interconnection Discourse of Islamic Education and Science in Indonesia." *Tarbani: Jurnal Pendidikan Islam* 2, no. 8 (2020): 153–62.
- Raharja, Steven, Martinus Ronny Wibhawa, and Samuel Lukas. "Mengukur Rasa Ingin Tahu Siswa." *Polyglot: Jurnal Ilmiah* 14, no. 2 (2018): 151–64.
- Slavin, Robert E. Educational Psychology: Theory and Practice. Boston: Allyn and Bacon, 2019.
- Solahudin, M. "Pendekatan Tekstual Dan Kontekstual Dalam Penafsiran Al-Quran." *Al-Bayan: Jurnal Studi Ilmu Al-Qur'an Dan Tafsir* 1, no. 2 (December 30, 2016): 115–30.
- Sunarko, Asep. "Iptek Dalam Perspektif Al- Qur'an." Manarul Qur'an 14, no. 1 (2015): 1–14.
- Titrek, Osman, and William W. Cobern. "Valuing Science: A Turkish-American Comparison." *International Journal of Science Education* 33, no. 3 (2011): 401–21.
- Weible, Jennifer L., and Heather Toomey Zimmerman. "Science Curiosity in Learning Environments: Developing an Attitudinal Scale for Research in Schools, Homes, Museums, and the Community." *International Journal of Science Education* 38, no. 8 (2016): 1235–55.
- Yasin, Ahmad Alfian Risydan, Aditya Marianti, and Ely Rudyatmi. "Kontribusi Tingkat Rasa Ingin Tahu Terhadap Kualitas Aktivitas Siswa Dalam Pembelajaran Respirasi Berbasis Pendekatan Saintifik." *Journal of Biology Education* 6, no. 2 (2017): 195–205.
- Zulaekah, Siti, and Yuli Kusumawati. "Halal Dan Haram Makanan Dalam Islam." Suhuf 17, no. 01 (2005): 25-35.