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INTEGRATED LEARNING MODEL OF ISLAMIC RELIGIOUS EDUCATION WITH SCIENCE

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Abstract. One element that is directly related to the process of education and learning in schools is material integration. This issue was addressed and developed in this post. Material integration here is the integration of Islamic religious education materials with the eyes scientific subjects such as biology, physics, and chemistry. The research method is based on library research by seeking references from various sources, such as research articles, journals, books, online news, and related internet sources depending on the research topic being analyzed. We analyzed the topics and subject matter of Islamic Religious Education (PAI) and Natural Sciences Subject Group (IPA) subjects consisting of physics, chemistry and biology. In addition, topics for PAI courses that can be integrated into ILMU courses have been identified.

Keywords: Integrative, PAI, Science

INTODUCTION

Islamic Religious Education (PAI) is a compulsory subject at all levels of elementary school (SD), junior high school (SMP), high school (SMA), and higher education. PAI is one of the most pressing challenges in shaping the personality and character of school students and is still believed to be the breakwater of their faith and devotion to Allah SWT. In Chapter 1 of the National Education System Law Number 20 of 2003, the general provisions of Article 1 state the following. Strength, self-control, personality intelligence, noble personality and skills needed by oneself, society, nation and state.

One element that is directly related to the education and learning process in schools is material integration (Farikah et al., 2019). This issue was addressed and developed in this post. Material integration here is the integration of Islamic religious education materials with scientific subjects such as biology, physics, and chemistry.

Please note that Islamic religious education has a lot of material that requires a rational, broad and detailed explanation. For this reason, as an Islamic religion teacher, you are required to expand your horizons of knowledge beyond Islamic religious education. The question is whether educators, especially Islamic religious teachers, can combine Islamic religious education materials with other subjects, especially science.

Therefore, teachers need to apply an integrated learning model for PAI and IPA. Integrated Religion and Science Learning is learning that aims to integrate and link religious and science subjects into the learning process activities. As an alternative, he said that integrated learning of religion and science, i.e. promoting integration in a certain tension atmosphere and integrating two or more different disciplines, is not necessary in the long term, but cannot be ruled out, it is also possible. Indeed, it can be reduced by dialogue, cooperation and even transparency to create a sense of mutual gratitude and mutual respect. Others have a more humble attitude (a measure of self-awareness), humility (*humility*), and humanity (*humanity*). (Amril, 2016).

Integrated learning between religion and science aims to keep the teacher-mediated learning process intact and not separate one science from another. Being not alone, PAI can be integrated into science. Science is a field consisting of natural sciences and life sciences. We think

of science specifically as natural science or natural science . Science is a system for understanding the universe through controlled observations and experiments (Sunhaji, 2013b).

Learning about religion cannot be separated from science, because science grows and develops for religion. The critical attitude that great civilizations such as Greece, Rome and Islam in the end not only can see everything in a summary, but also proves and makes the summary concrete with scientific evidence supported by the beliefs it grows.

The latest syllabus, K13, is known for its core competencies. There are several aspects of this core competency. Namely, aspects of divine attitudes, social attitudes, knowledge, and skills. These four aspects cannot stand alone, because basically these four aspects must exist, develop and support each other in students. This proves that through the development of the 2013 curriculum, the integration and collaboration of religion and science has actually begun with caution. As an implementation of the aspects of knowledge and skills acquired in the school environment, students need sacred attitudes and good social attitudes (Sunhaji, 2018).

Integration and coordination of religion and science in the learning process is a success in the implementation of education and learning in the classroom, one of which can improve students' thinking skills to be more critical. This is in line with Permendikbud Number 24 of 2016 Paragraph 40 concerning Islamic Religious Education and Core and Basic Character Skills for SMA/MA/SMK/MAK, in the direction of religion and science. critical thinking ability of a student.

And according to Sunhaji (2014), namely, integrated learning of religion and science further strengthens students' understanding in the minds of subjects, learning is a more active process, and learning outcomes are based on other knowledge. The end result of learning is that students' knowledge is more authentic and far from verbal expression, because it is received separately in their environment. In addition, Margustam Siegaretal. The integration and connectedness applied by PAI and science teachers (rational science) is slowly understood by the minds and emotions of students, allowing students to critically analyze a given problem. Students in the department can provide concepts from different presentation angles and answer with factual evidence so that their friends can easily digest and understand it (Siregar et al., 2020).

The opinion above is that the integrated learning of religion and science allows students to analyze problems in the learning process, connect and connect subjects, and get used to giving new ideas and ideas. so that critical thinking is realized (Sunhaji, 2013a). With the emergence of new ideas, students are expected to be able to think critically in the learning process and connect religious concepts with scientific evidence with the science that surrounds them.

The formulation of the problem in this research is how is the integrative learning model of PAI with Science? The purpose of this study is to describe the integrative learning model of PAI with Science.

RESEARCH METHODS

Based on the target, the research method used in this study is qualitative with the type of *library research* , namely research conducted where the object of research is explored through various library information such as books, encyclopedias, scientific journals, newspapers, magazines and documents (Zed, 2008) . The approach used is a qualitative approach by categorizing. The exposure in this study leads to a descriptive explanation as a characteristic of qualitative research. Qualitative research is research that is intended to understand the phenomenon of what is experienced by research subjects holistically and descriptively in the form of words and language in a special context that is natural and utilizes various scientific methods. (Moleong, 2014). The object of this research is an integrative learning model of Islamic religious education with science.

The research data collection technique carried out by the researcher is the documentation method. This documentation is reading, analyzing, observing, and describing information about the focus of research through data relating to the integrative learning model of Islamic religious education with science. Through this document, objective information will be obtained. The data analysis in qualitative research is related to the process of systematically searching and compiling research data by organizing data into categories, breaking it down into units, synthesizing, compiling into patterns, and making conclusions so that they are easily understood by readers. (Bogdan &

Biklen, 2006). The data analysis focuses on the description, clarification, and placement of data in the context described in words with the aim of generating and expressing new meanings and theories (Faisal, 2010; Ratna, 2011). In this context, the data analysis technique used in this study uses an analytical model that includes data collection (which has been explained in the previous subsection), data reduction, data presentation, and drawing conclusions or verification (Mattew B. Milles & A. Michael Hubberman, 1992).

RESULTS AND DISCUSSION

The integrated learning model can be described by a cobweb plot. The learning model is integrated with PAI science. This image shows a cobweb of integrated science and PAI learning in high school (Sunhaji, 2014).

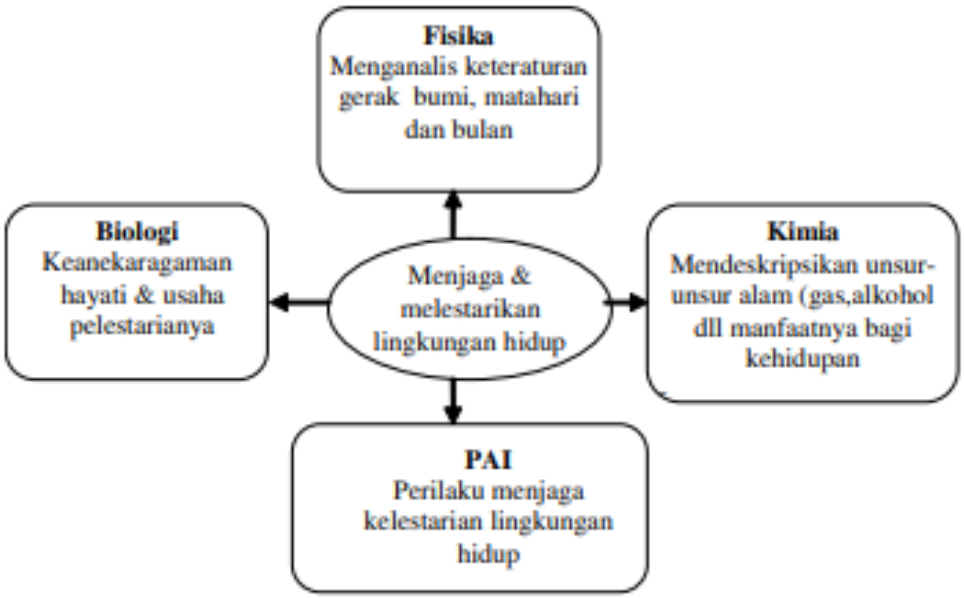

Figure 1 . The Cobweb of Integrative Learning PAI with Science

We analyzed the topics and subject matter of Islamic Religious Education (PAI) and Natural Sciences Subject Group (IPA) subjects consisting of physics, chemistry and biology. In addition, topics for PAI courses that can be integrated into ILMU courses have been identified. The following table shows the substance of the topic of PAI subjects.

Table 1. Materials for PAI Curriculum 2013

Class	Theory
7 SMP/MTS	1. Closer to Allah SWT. whose name is very beautiful. a. Faith in Allah SWT b. Meaning of Asmaul Husna c. The Wisdom of Faith in Allah SWT 2. Live Peacefully with Honesty, Trust, and Istiqamah a. Let's Be Honest b. Let's Be Faithful c. Let's Behave Istiqomah 3. All Clean Live So Comfortable. a. Taharah b. How to do Taharah c. Taharah's wisdom

Class	Theory
	4. The Beauty of Togetherness with Congregational Prayer a. Congregational Prayer b. Procedure for praying in congregation c. Congregational Prayer Habituation 5. Welcome to the Prophet Muhammad SAW. My darling a. The Presence of the Beloved b. Prophet Muhammad SAW Appointed as Apostle c. Prophet Muhammad's Da'wah in Mecca 6. With Science Everything Becomes Easier a. Reading Surah Ar-Rahman b. Read Surah Al Mujadallah c. Contents of Surah Ar-Rahman d. Contents of Surah Al-Mujlah e. Behavior of People who Love Science 7. Want to imitate the obedience of Allah's Angels. a. Who is the Angel? b. Angel Names and Duties c. Behavior of Faith in Allah's Angels 8. Empathy is Easy, Respect is Beautiful. a. Empathy attitude b. How to Respect Parents c. How to Respect Master 9. Cultivating a Sense of Unity on the Day We Wait For a. Friday Prayer b. Friday Prayers c. Performing Friday Prayers 10. Islam Provides Ease Through Plural and Qasar Prayers a. Provisions for Jama' Prayer b. Qasar Prayers c. Intention to pray Jama' and Qasar 11. Hijrah to Medina A Proud Story a. Causes of the Prophet's Hijra b. The Prophet's Hijrah c. Prophet Muhammad's Da'wah in Medina 12. Al-Khulafaur Ar-Rasyidun The Successor of the Struggle of the Prophet Muhammad SAW a. Abu Bakr As-Siddiq b. Umar bin Khattab c. Usman Bin Affan d. Ali bin Abi Talib 13. Life Becomes More Peaceful with Sincerity, Patience, and Forgiving. a. Understanding the Law of Reading Nun Sukun/Tanwin b. Applying the Breadfruit Noodle Reading c. Sincere, Patient and Forgiving Behavior
8 SMP/MTS	1. Believing in Allah's Books, Loving the Quran 2. Avoiding Liquor, Gambling, and Quarrel 3. Prioritizing Honesty and upholding Justice 4. The Soul is Calmer by Doing A Lot of Prostrations 5. The Growth of Science in the Umayyad Period 6. Humble, thrifty, and simple make Life More Noble 7. Imitating the Glory and Honesty of Allah's Apostles 8. Respect and Obey Parents and Teachers 9. Decorating Yourself with Good Thoughts and Good Deeds

Class	Theory
	10. Fasting Worship Forms a God-fearing Person 11. Consuming Halal Food and Drinks and Staying away from Haram 12. The Growth of Science in the Abbasid Period 13. Healthy Living with Halal and Nutritious Food and Drinks
9 SMP/MTS	1. Optimistic, endeavor, and trust 2. Tolerance and respect for differences 3. Believe in the last day 4. Believe in Qadha and Qadar 5. Honest behavior and keep promises 6. Dutiful and obedient behavior to parents and teachers 7. Manners, manners, and shame 8. Zakat fitrah and mal 9. Hajj and Umrah 10. Terms of Slaughter of Animals 11. Qurban and Aqiqah 12. History of the Development of Islam in the Archipelago 13. The history of the Islamic tradition of the Archipelago
10 SMA/MA	1. I'm always close to Allah SWT 2. Dress Muslim and Muslimah 3. Maintaining Honesty as Personality Mirror 4. Al-Quran and Hadith is the Guide of My Life 5. Following the Struggle of the Prophet's Da'wah in Mecca 6. Living Life with Glory 7. Angels Always With Me 8. The Wisdom of Hajj, Zakat and Waqf in Life 9. Following the Struggle of the Prophet's Da'wah in Medina 10. The pleasure of seeking knowledge and the beauty of sharing knowledge 11. Maintaining Human Dignity by Avoiding Promiscuity
11 SMA/MA	1. Believe in the Books of Allah SWT a. Al-Qur'an and other books of Allah SWT b. The essence of the Qur'an 2. Dare to Live Honestly a. The Importance of Having the Nature of Syaja'ah b. The Importance of Being Honest c. Must Dare To Be Honest 3. Carrying out the Management of the Body a. Obligations of Muslims to the Corpses b. Body Care c. Melaying (Ta'ziah) d. Grave pilgrimage 4. Advising each other in Islam a. Definition of Sermon, Tabligh and Da'wah b. The Importance of Khutbah, Tabligh and Da'wah c. Provisions for Khutbah, Tabligh and Da'wah 5. The Golden Age of Islam a. Periodization of Islamic History b. The Golden Age of Islam c. Figures in the Golden Age of Islam 6. Obedient Behavior, Competition in Kindness, and Work Ethic a. The Importance of Obeying the Rules b. Competition in Kindness

Class	Theory
	c. Work ethic
	7. The Apostles are the Beloved of Allah
	a. Understanding Faith in Allah's Apostles
	b. The Attributes of Allah's Apostle
	c. The Duties of Allah's Apostle
	d. The Wisdom of Faith in Allah's Apostles
	8. Respect and Love Parents and Teachers
	a. The Importance of Respect and Obedience to Parents
	b. Respect and Obedience to Master
	9. Principles and Practices of Islamic Economics
	a. Definition of Mu'amalah
	b. Kinds of Mu'amalah
	c. Shirkah
	d. Banking
	e. Sharia Insurance
	10. Islamic Update
	a. Modern Islam (1800-present)
	b. Figures of Islamic Reform in the Modern Period
	c. The Effect of the Renewal Movement on the Development of Islam in Indonesia
	11. Tolerance as a Unifying Tool for the Nation
	a. The Importance of Tolerant Behavior
	b. Avoiding Violent Behavior
12 SMA/MA	1. The Spirit of Worship by Believing in the Last Day
	2. Believing in Qada and Qadar
	3. Living Conscience with Critical Thinking
	4. United in Diversity and Democracy
	5. Worshiping Allah SWT as an Expression of Gratitude
	6. Grabbing Allah's Love with Ihsan
	7. The Beauty of Building a Household Mahligai
	8. Reaching Blessings with Mawaris
	9. The Mercy of Islam for the Archipelago
	10. Islam's Mercy for the Universe
	11. Maximizing Your Potential To Be The Best

Based on the PAI materials presented in Table 1, the PAI materials that can be integrated with SCIENCE which can later be implemented by teachers in PAI learning activities are as follows:

1. Class X PAI material on "Living with Glory"

One of the topics discussed in this material is about brotherhood (ukhuwwah) *where* the hadith about brotherhood is narrated from Nu'man bin Basyir ra. that the Messenger of Allah said:

عَنِ النُّعْمَانَ ابْنِ بَشِيْرٍ رَضِيَ اللهُ عَنْهُمَا قَالَ: قَالَ رَسُوْلُ اللهِ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ : مَثَلُ الْمُؤْمِنِيْنَ فِيْ تَوَادِّهِمْ وَتَرَاحُمِهِمْ وَتَعَاطُفِهِمْ مَثَلُ الْجَسَدِ إِذَا اشْتَكَى مِنْهُ عُضْوٌ لَهُ سَائِرُ الْجَسَدِ بِالسَّهَرِ وَالْحُمَّى (رَوَاهُ مُسْلِم)

The parable of the believers who love one another, love one another, and take care of one another is that of one body. When one organ of the body feels sick, it will spread to all organs of the body: insomnia and fever. (HR Muslim)

The explanation of the hadith regarding brotherhood which is analogous to one body can be integrated into the perspective of Science where in Science, especially in the field of Biology, studies the organs of the human body which are correlated and interconnected between one organ and another. Every organ of the human body works together in carrying out the functions of life so that it is certain that if one organ is sick, it will also have an impact on other organs of the body so that it will cause the function of the organs of the body to be disturbed and will cause a symptom or disease. Diseases suffered by humans will cause pain in humans themselves so of course it is difficult to sleep because they bear the pain.

2. PAI material for grades 7-11 about "Honesty"

PAI material for grades 7, 8, 9, 10 and 11 is about honesty where the teacher can integrate the honesty values learned in PAI subjects with Science, namely the teacher can provide an example of the application of honesty based on a SCIENCE perspective. Science (physics, chemistry and biology) studies scientific attitudes that must be possessed by scientists or researchers, one of which is honesty. Behavior that describes an honest scientific attitude towards the facts of the research results that have been carried out is to avoid data manipulation even though the data is not as desired. A scientist should have a scientific attitude in conducting research. An example of a scientific attitude is being honest, meaning that it corresponds to the actual situation without being manipulated. A scientist must also have an honest attitude towards facts. When measuring, writing, and analyzing the facts must be conveyed as they are. In conducting research, you must submit data without anything being engineered or replaced because sometimes experiments do not match predictions, but still must be conveyed as is or honestly.

3. PAI material for grades 7 and 10 about "Faith in God“

PAI's material on Faith in God is believing that God exists and is the creator of everything in the universe, including humans. Teachers in teaching material about Faith in God can provide an overview of the phenomenon of the greatness of God as the creator by incorporating elements of science. The following is an example of the integration of PAI material "Believe in Allah" based on the perspective of Science, especially in the field of Biology (Surahman, 2020).

Camel Creation

Figure 1. Camels in the Desert

55 degrees Celsius. It was the heat of the desert and it spread endlessly. There are sandstorms in the desert, which can engulf everything in its path and make breathing extremely difficult. Desert means the inevitable death of , whose guardian has not yet been arrested. Only special vehicles can survive in this desert situation. Navigating the scorching desert heat, vehicles are designed to withstand the heat and pressure of sandstorms and require to travel long distances with less fuel and less water. The most resistant machine in this difficult situation is not a car, but a "camel" animal. Camels are the only large animals that can live there. Allah turns our attention to the creation of the camel in the following poem:

أَفَلَا يَنظُرُونَ إِلَى ٱلْإِبِلِ كَيْفَ خُلِقَتْ ١٧

Meaning: "The camel was created, so they do not pay attention to the camel." (Al-Ghaasyiyah: 17)

It seemed impossible to find something to eat or drink on the sand stream. Camels can survive up to 8 days at 50 degrees without eating or drinking. A camel that can go a long time without drinking will save it when it finds a water source. A camel can drink a third of its body weight in 10 minutes. This means 130 liters per cup. And his barn is the camel's hump. About 40 kilograms of fat is stored here. This allows camels to walk in the desert without eating for days.
Most of the food in the desert is dry and full of thorns. However, the digestive system, teeth and mouth of animals are designed to easily eat sharp spines. The stomach has a special design and is strong enough to digest almost any plant in the desert.

Desert winds that usually come and go is a sign of a sandstorm coming. The grains of sand suffocate and blind your eyes. Camel eyelids protect your eyes from dust and grains of sand. However, these eyelids are also transparent or see-through. In other words, camels can be seen forever even with their eyes closed. Long, thick eyelashes are specially designed to prevent dust from getting into your eyes. The camel nose also has a special design. When a sandstorm broke out, he covered his nose with a certain epilogue.
One of the greatest dangers for vehicles traveling in the desert is sinking in the sand. I didn't come. Its wide feet prevent it from sinking in the sand and look like snowshoes. Her long legs kept her body away from the scorching surface of the sand. The camel's body is covered with thick, thick fur. Protects from the sun and sub-zero desert temperatures after sunset. From birth, the body is covered with a thick layer of skin. This thick layer is placed where it touches the ground and sits on top of the hot sand. This will prevent Camel Hide from burning.

Let's look at all the features of the camel. Special system to quench thirst, hump that can move without food, leg structure to prevent drowning in sand, see-through eyelids, eye protection to protect eyes from sand, nose, mouth, strong against sandstorms Lips, tooth structure says: Digestive system which can eat thorns and desert plants and digest everything, a thick layer of skin protects the skin from the heat of the burning sand, hairs on the surface of the skin Protects the skin from heat. It's cold when it's done. All of this reveals the true truth about God's existence and greatness. Allah says this in the poetry of the Qur'an:

إِنَّمَآ إِلَٰهُكُمُ ٱللَّهُ ٱلَّذِي لَآ إِلَٰهَ إِلَّا هُوَ ۚ وَسِعَ كُلَّ شَيْءٍ عِلْمًا ٩٨

Meaning: Verily your Lord is Allah, and there is no god but Allah. His knowledge covers everything. (Toha: 98)

The creation of the camel animal to survive in the desert is one proof of the real truth of the existence and greatness of Allah. An explanation of the greatness of God in creating the Camel with all its uniqueness in terms of Science, namely the interconnectedness or integration of PAI science and Science where based on Science, especially Biology, it is known that the camel is morphologically, anatomically and physiologically formed based on the power of Allah SWT. to carry out their lives and to adapt to the very arid and hot environment in which they live. Deserts as a place to live or habitat for camels are also studied in the branch of Biology, Ecology. Ecology studies the interrelationships between living things and their environment, in this case the camel and its habitat, namely the desert.

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Faith in God includes 1) faith in God's existence (existence), 2) faith in God's urhiya (worship), and 3) faith in Asmaul husnaa (name) God. Asmaul Husna, as we know, is a name that describes the attributes of Allah, which consists of 99 names, including Arkalyk. All these names and attributes we must believe in by understanding, memorizing, acknowledging, and worshiping God. Faith can also grow and be strengthened by taking lessons from the creation of the heavens and the earth and all their beauties and wonders.

And in His sign of power is the creation of the heavens and the earth and different languages in your language and the color of your skin. Verily in it are signs for those who know. Exist." (Line: 22).

God means the alkaline God, all living things and all Creators. Angels, gin, humans, animals, plants, sun, moon, stars, and everything in this world were created by God. God created all living things in perfect form, in the most accurate way, and in the best way. The word of God:

هُوَ ٱللَّهُ ٱلْخَٰلِقُ ٱلْبَارِئُ ٱلْمُصَوِّرُ لَهُ ٱلْأَسْمَآءُ ٱلْحُسْنَىٰ يُسَبِّحُ لَهُۥ مَا فِى ٱلسَّمَٰوَٰتِ وَٱلْأَرْضِ ۖ وَهُوَ ٱلْعَزِيزُ ٱلْحَكِيمُ ٢٤

Meaning: "He is Allah, who created, regulates, shapes his appearance, has Asmaul Husna. All heaven and earth praises him, and he is mighty and wise." (AlHashr: 24).

A servant who imitates Allah in his nature as a Creator is endowed with the ability to produce creations or new and useful things for the benefit or welfare of his creatures according to his will. A Muslim who appears as Arkalyk, endowed with knowledge, skill, and Allah, so that he can see the universe reflected in him (microcosm) From there he can know everything around him (the universe), not only he knows himself, but also the nature created by God. From now on, we will grow a sense of gratitude for the blessings that have been received and used according to their function and proportional to what was created, received, and bestowed upon him by Allah.

4. PAI class XII material on "Maximizing Your Potential to Be the Best"

This material discusses the behavior of working hard and being responsible. Teachers can integrate PAI material, especially hard-working and responsible behavior by providing examples based on a science perspective. In the following, a review is presented as an illustration to open the recesses of the heart to cultivate hard-working behavior from the perspective of Religion and Science:

> *The question we face is how big it is. How much fertile land is wasted because young people are reluctant to cultivate it. A large number of companies went out of business because of the laziness of their workers. Meanwhile, you can see the pages of history of people who were able to fill their time with hard work and responsibility for their religion in previous generations.*
>
> *When Ibn al-George finished his lesson, one of his students suddenly said, "Let's talk casually." If so, stop the sun for a while and Ibn al-George replied.*
>
> .
>
> *In contrast to Ibn Aqill, who wrote a total of 800 large books, "al Funun", which was the largest book since Prophet Adam may have been until the day of the referee. "I'm 80 years old, but I have the same passion, determination and desire to make the most of my time, as I did when I was 20," he said. I don't eat like you, he said. How do you eat? I sprinkle the water until the cake melts. After that it's done right away, so it doesn't take long.*

In addition, the integration of hard-working and responsible behavior in science can also be described through the behavior that is often carried out by ants. Ants are the object of study in

Science, especially Biology. The following will give an example of the presentation of "Learning from Ants" which can be applied by teachers in order to foster an attitude of working hard and being responsible in PAI subjects to students from a science point of view:

Learning from Ants

The phrase "where there is sugar there are ants" is not entirely true!
Why? Ants are still active everywhere, so it doesn't matter if there is sugar or not. Even though the ant is small, the Qur'an has the word "ant" because there are many positive things that can be learned from the behavior and habits of ants. There are several lessons that can be learned from Ali's life journey, including:

1. Ants never give up
   Try stretching your arms to block the path of the ants. Ants will not give up, let alone stop but continue to walk looking for another route.
2. Hard working ants
   Have you ever seen ants sleeping or relaxing? Ants are always diligent, actively working to transport food without getting bored because they are hard workers.
3. Ants are strong
   Ants can lift loads that are much larger than their bodies. Ants do not complain and mean it and do not get discouraged let alone give up.
4. Social soul ants
   What do ants do when the food they want to lift is too heavy, ants do not have a selfish nature, want to win alone, they will help to lift it together. Ants are quick to see opportunities; The fast ant comes when he knows an opportunity to get food. Ants will not waste opportunities, because ants know that opportunity only comes once.

5. PAI class XII material about ''Achieving God's Love with *Ihsan* ''

In this material, one of the topics discusses *ihsan* to the surrounding environment as follows:

> The universe and its contents were created for the benefit of mankind. For the sake of the preservation of nature and human life, nature must be used responsibly. Allah SWT. Said: "... and do (others) better than Allah SWT. Do good and do not expose evil (earth). Definitely Allah SWT. I hate people who do harm" (Surah Al/28:77).

Based on the material, PAI is known to have scientific links, especially those related to the environment. The emergence of ecology is the result of regular studies (Snatura) of various natural phenomena themselves. The regularities that exist in nature allow humans to predict what will happen based on the facts, and humans can predict. This natural order is proof that this nature does not occur without purpose in itself, but is clearly created by the Almighty for certain purposes and purposes for human understanding (Isnaeni, 2016) .

The guidance of natural phenomena is organized and balanced so that we can meditate on the Oneness of the Creator, guide the human mind, and increase our faith and piety to Him. The universe and its contents are fully surrendered to be preserved and used wisely for the needs of human life so that we can fulfill God's mandate as well as possible (Isnaeni, 2016) .

The abiotic environment, which includes everything that is not living in the form of inanimate objects that are indirectly related to the existence of life, such as water, soil, light, humidity, air, pH, the state of the soil where living things are located. Reality shows that living things cannot live alone, there is interdependence between living things with each other and with their environment. In addition, the activities of living things, including humans, are greatly influenced and affect the environment in which they live, both abiotic and biotic environments. For example, integrating the value of imtaq into environmental materials in a learning process (Isnaeni, 2016).

6. 8th grade PAI material on "Avoiding Liquor"

This article is about the prohibition of alcohol consumption. Allah strictly forbids believers from drinking unlawful food and drink. Among them, Allah forbids alcohol (kamul). The prohibition of khamr has also been confirmed in the following hadith of the prophet.

عَنِ ابْنِ عُمَرَ أَنَّ رَسُوْلَ اللهِ صَلَّى اللهُ عَلَيْهِ وَسَلَّمَ قَالَ كُلُّ مُسْكِرٍ خَمْرٌ وَكُلُّ مُسْكِرٍ حَرَامٌ (رَوَاهُ مُسْلِمٌ)

Meaning: " *From Ibn Umar, that the Messenger of Allah. said: "Every intoxicant is khamr and every intoxicant is haram* ." (HR Muslim).

PAI material regarding the prohibition of drinking alcohol can be integrated with Science because in Science it examines Addictive Substances that are very harmful to the body. Based on this, the teacher can implement PAI material based on the point of view of Science by providing an explanation or explanation as follows:

> Addictive substances are substances that you may depend on when you are ingested (addiction), or substances that you wish to consume permanently (addiction). In addition to narcotics and psychotropic substances, there are other substances or drugs which if misused or ingested in large quantities can interfere with the function of the central nervous system and cause adverse effects on the body. Examples of psychotropic drugs other than narcotics and psychotropic drugs such as alcohol, nicotine, and caffeine. The most common type of alcohol is ethanol (C2H5OH). This substance can be obtained naturally through the fermentation of glucose with yeast (Saccharomyces cerevisiae). When a person drinks alcoholic beverages, the concentration of alcohol in the blood increases, causing hangovers and loss of consciousness. Therefore, drunk people should not drive a car. One type of alcohol other than ethanol is methanol which is widely used in industry as a solvent for certain substances. In everyday life, methanol is also called spirit. This substance is highly toxic and when ingested can amputate the optic nerve, blind people and even cause death. The negative impact is that people are not allowed to drink alcohol or intoxicating liquor.

7. 7th grade PAI material on "Taharah"

In this material, it is discussed about taharah, including performing ablution and obligatory bathing using water. Teachers can integrate with SCIENCE where water is studied in Science with physical and chemical properties so that it can be said that the water can purify.

CONCLUSION

We analyzed the topics and subject matter of Islamic Religious Education (PAI) and Natural Sciences Subject Group (IPA) subjects which consisted of physics, chemistry and biology. In addition, topics for PAI courses that can be integrated into ILMU courses have been identified. PAI material can be integrated into science such as class X PAI material on "Living Life with Nobility", class 7-11 PAI material on "Honesty", class 7 and 10 PAI material on "Faith in God", PAI material for class XII on "Maximizing Your Potential to Be the Best", class XII PAI material on "Achieving Allah's Love with *Ihsan* ", class 8 PAI material on "Staying away from Alcohol", and class 7 PAI material on "Tharah".

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