Islamic values in class VII science textbooks for SMP/MTs with the theme of energy in life systems

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Abstract

Moral education must be based on the foundation of faith. Without a foundation of faith, all human behavior will tend to lead only to worldly pleasures without a strong moral basis. Science learning should be a means of cultivating faith values. However, there are still discrepancies between laws and learning practices in the field. The learning objectives contained in the textbook only contain aspects of knowledge and skills, while the inculcation of values is not included in the learning objectives. The purpose of this study was to evaluate Islamic values in science textbooks used in a SMP-IT whether they met the values to be achieved from national learning outcomes. This study uses the library research method which is carried out by scientifically analyzing science learning material in the Natural Sciences Interactive Book for SMP/MTs Class VII Semester 1 which is published by publisher PT. Intan Pariwara. Of the four categories of values to be achieved, the Islamic values in the theme of energy in life systems are: moral values for oneself and others; Pancasila character values; and the value of science and technology. It can be concluded that this book has attempted to instill Islamic values, but there has been no attempt to instill the value of faith in Allah and understanding the teachings of Islam.

Keywords: Islamic values; text book; natural science

Abstrak

Pendidikan akhlak (karakter) harus berpijak pada landasan keimanan. Tanpa landasan keimanan, semua perilaku manusia akan cenderung mengarah pada kesenangan duniawi semata tanpa basis moral yang kuat. Pembelajaran IPA sepatutnya dapat menjadi sarana penanaman nilai keimanan. Namun pada praktiknya, masih terdapat ketidaksesuaian antara undang-undang dengan praktik pembelajaran di lapangan. Pada tujuan pembelajaran yang tertuang pada buku teks hanya memuat aspek pengetahuan dan keterampilan, sedangkan penanaman nilai-nilai tidak dicantumkan pada tujuan pembelajaran tersebut. Tujuan penelitian ini adalah mengevaluasi nilai-nilai Islam pada buku teks ajar IPA yang digunakan pada sebuah SMP-IT apakah sudah memenuhi nilai-nilai yang ingin dicapai dari capaian pembelajaran nasional. Penelitian ini menggunakan metode riset kepustakaan yang dilakukan dengan menganalisis

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secara ilmiah materi pembelajaran IPA dalam Buku Interaktif Ilmu Pengetahuan Alam untuk SMP/MTs Kelas VII Semester 1 yang diterbitkan oleh penerbit PT. Intan Pariwara. Dari keempat kategori nilai yang ingin dicapai, nilai-nilai keislaman yang ada dalam tema energi dalam sistem kehidupan adalah: nilai akhlak kepada diri sendiri dan orang; nilai karakter pancasila; dan nilai sains dan teknologi. Sehingga dapat disimpulkan buku ini telah berupaya untuk menanamkan nilai-nilai Islam pada teks yang ditampilkan, tetapi belum ada upaya untuk menanamkan nilai keimanan kepada Allah dan memahami ajaran agama Islam.

Kata kunci: buku teks; nilai-nilai Islam; pembelajaran IPA

Introduction

Moral education is a fundamental matter to be implemented in the education system in Indonesia. At present the Indonesian people are still facing various problems due to not having morals instilled in a person. An example is national cases such as corruption and environmental damage. Based on the Indonesia Corruption Watch Study (2022), there were 240 cases of corruption in the education sector from January 2016 to September 2021, this proves that the current academic domain is inseparable from criminal acts of corruption. In the environmental field, forests in Indonesia are still being exploited and destroyed by companies to be converted into extractive industries. From the results of the IPBES report in 2018, Indonesia loses 680 thousand hectares of forest every year. Meanwhile, based on river damage data compiled by the Ministry of Environment and Forestry, it was noted that 101 rivers were in moderate to heavily polluted conditions (Walhi, 2021).

The problem of corruption and environmental damage is actually caused by the non-internalization of the value of faith in the perpetrators. The desire to have more wealth with the belief that their actions cannot be reached by human law makes them indifferent to morality and environmental conditions. This problem is closely related to the principles that a person has in living his life, therefore to overcome this problem it becomes an important thing to touch a person's internal aspects, namely related to the principles of his beliefs or faith. A person who has faith in Allah believes that Allah sees every human action. Therefore, he believes that even if he can escape human law, he will not be able to escape Allah's law and this will lead him to stay away from actions that are forbidden by Allah. If faith has been instilled, then good morals can stand firm so that the bad tendencies possessed by a person can be minimized.

Moral education, which is currently one of the government's focuses, must be based on the foundation of faith. According to Zarman (2020) without a foundation of faith, all human behavior will tend to lead only to worldly pleasures without a strong moral basis. For example, efforts to normalize actions that are immoral according to Islam, such as adultery and deviations from sexual orientation, now known as LGBT. The massive normalization efforts indicate the importance of instilling faith values through educational institutions in the hope that the results of this education will be able to change the community.

Apart from religious learning at the school level, science learning should also be a means of cultivating faith values. As stated in the national learning outcomes (Kemendikbudristek, 2022), that science lessons are lessons that study the universe created by God and the various challenges in it. Therefore, the science learning process is a very strategic process in building faith and piety to God which will have an impact on noble moral attitudes.

In relation to science learning in schools, in general there are still discrepancies between laws and learning practices in the field. For example, in the learning achievement standards issued by the Curriculum Standards and Education Assessment Agency, it is stated that science education is strategic education in building faith and piety to God Almighty, but this learning achievement has not been explicitly translated into KI and KD. Likewise with various science textbooks used in classroom learning. The learning objectives contained in the textbook only contain aspects of knowledge and skills, while the inculcation of values is not included in the learning objectives.

This is shown from the various results of research conducted by Faroz (2021) on integrated class II thematic books published by the Ministry of Education and Culture in 2017, Rabbaniyah (2020) on class IX SMP science books published by the Ministry of Education and Culture in 2018, Subagiya (2020) on five Class XII chemistry textbooks published in 2009, Supraha (2018) on several physics, chemistry, and biology books for class X high schools published between 2008-2010, Zarman (2020) on an integrated science study guidebook for class IX published by the Ministry of National Education in 2008, Damayanti (2017) on the book BSE Integrated Science: Class VII SMP/MTs published by the Ministry of Education in 2008, and there are many other studies which state that there is no effort to instill faith values in the science textbooks they evaluate.

It becomes an important matter whether the findings of previous research have brought changes to the current textbooks. Therefore, to find out the current conditions regarding science textbooks used in educational institutions, researchers will conduct research on efforts to instill Islamic values in science textbooks. The purpose of this study was to evaluate Islamic values in science textbooks used in a SMP-IT whether they met the values to be achieved from national learning outcomes. The difference between this research and previous

studies is the research object to be studied. In this study, researchers will analyze efforts to instill values of faith and noble character in science textbooks at the VII grade junior high school/MTs level with a focus on the theme of energy in living systems. It is hoped that through this research an up-to-date description of the science textbooks used in educational institutions will be obtained, what efforts have been made by the author in instilling moral values (character) and how they are compatible with national learning outcomes, so that if there are still deficiencies, this research can be a reference in the development of science textbooks that contain values of faith and noble character in the future.

Research Methods

This research uses library research methods which are carried out by collecting library data, reading, taking notes, processing research materials and analyzing them to get answers to research problems. In this text book analysis research, the researcher will collect data using documentation techniques and will use content analysis for the data analysis technique. The researcher will scientifically analyze the science learning material and mark every Islamic value in the Natural Sciences Interactive Book for Class VII Semester 1 Middle School/MTs published by PT. Intan Pariwara. The data collection technique was carried out by reading material that was directly related to the topic of this research and the Islamic values contained there. Documentation studies are carried out by reading, marking, recording and writing down various data that are related to the research themes in the book. Data were analyzed by checking whether there were verses of the Qur'an or hadith related to moral values that were to be built in textbooks. The next step is to classify by composing, marking, and coding religious values and existing verses. After that, the researcher will conduct an analysis to see whether the values in the science learning textbook have met the values desired by the national learning outcomes and then the researcher will draw conclusions from the results of the analysis.

Results and Discussion

A. Islamic Values to be Achieved Through Science Learning in the National **Education System**

In the Decree of the Head of BSKAP Kemendikbudristek Number 033/H/KR/2022 (Kemendikbudristek, 2022) the objectives of science learning at the SMP/MTs level are explained through an explanation of learning outcomes. The document explains that by studying science, students are expected to be able to:

- 1. develop himself according to the profile of Pancasila students which has six main dimensions, namely: a) faith, fear of God Almighty, and have noble character, b) independent, c) work together, d) global diversity, e) reason critical, and f) creative;
- 2. develop curiosity to study and understand how natural phenomena and systems work and provide reciprocal relationships for human life;
- 3. play an active role in the maintenance and preservation of nature as well as wise management of natural resources and the environment;
- 4. develop inquiry process skills that are useful in identifying, formulating, and solving problems with concrete actions;
- 5. understand the requirements for becoming a member of society so that they can play a role in solving problems related to themselves and the surrounding environment; and
- 6. develop knowledge and understanding of science concepts and apply them in everyday life.

This learning achievement basically describes a set of values that are important for students to have as a result of learning science. When described in the context of values, the desired values from learning science are as follows:

- 1. The value of faith and piety to God Almighty, and noble character. By inculcating these values in the aspect of religious morality, students are expected to be able to know and love God Almighty and to be able to understand religious teachings and their relation to fellow human beings and the universe. In the aspect of personal morality, students are expected to have integrity and the ability to understand the importance of maintaining a balance of physical, mental and spiritual health. In the aspect of morality to humans, students are expected to be able to appreciate differences and empathize with others. In the moral aspect towards nature, students are expected to understand the connectedness of ecosystems on earth and be able to solve problems with the surrounding natural environment, and in the moral aspect of being a state, students are able to analyze the roles, rights and obligations as citizens, understand the need to prioritize public interests over personal interests.
- 2. Character values. Character value is something that is considered important and useful in human life. The character values to be obtained from science learning through the Pancasila student profile are religious, independent, cooperative, global diversity, critical reasoning, and creative.
- 3. The value of science and technology. These values include curiosity which will encourage humans to acquire knowledge and awareness to participate in preserving nature.

- 4. The value of skills in scientific research. This value is the value of skills in solving scientific problems through the process of identifying, formulating, and solving problems.
- 5. Usefulness value. This value is the desire to provide useful results from the results of understanding and implementing the development of science knowledge for himself and also the surrounding environment.

B. Islamic Values in Teaching Materials on the Theme of Energy in the Life System of Grade VII Junior High Schools

From the results of the analysis of the content of the book, the researcher found several attempts by the author of the Science Interactive Book for SMP/MTs Class VII Semester 1 to instill Islamic values in discussing the theme of energy in living systems. These values are as follows:

1. Save energy and not be excessive

In the teaching material on the theme of energy in living systems, the effort to instill energy-saving values can be found in the apperception section on page 125. In this apperception section, the author invites students to apply energy-saving behaviors in everyday life. The following is an excerpt from the author's invitation: "After studying this chapter, you will understand more about energy in life and be able to apply energy-saving behaviors in everyday life." (Sururi et al, 2022)

God gave various resources on this earth to be managed by humans. As Allah says in Surah Al-Baqarah verse 29:

It is He who created for you all of that which is on the earth. Then He directed Himself to the heaven, [His being above all creation], and made them seven heavens, and He is Knowing of all things.

In managing these resources, of course, there are things that must be considered and obeyed, one of which is not be excessive. As Allah says in the Qur'an Surah Al-An'am verse 141:

And He it is who causes gardens to grow, [both] trellised and untrellised, and palm trees and crops of different [kinds of] food and olives and pomegranates, similar and dissimilar. Eat of [each of] its fruit when it yields and give its due [zakah] on the day of its harvest. And be not excessive. Indeed, He does not like those who commit excess.

The meaning of the word 'not be excessive' is don't cross the line, using something according to one's needs. Today, this principle is widely ignored by humans. The use of various energy sources such as oil, gas, coal and geothermal causes the earth to be explored on a large scale. Damage to nature and pollution also overshadow human life. Therefore, human awareness in the wise use of energy is very important to prevent more damage.

From Jabir RA, Rasulullah SAW said: 'turn off the lights when you sleep at night, close the door, close the water container, cover food and drink. Even if it's just by spreading a piece of wood'. (Narrated by Imam Bukhari). (Narrated by Imam Bukhari).

Even though the reason for the emergence of this hadith is the damage/fire caused by a lamp from a fire so that Rasulullah SAW recommends putting it out at night, if examined and put into the context of today's life, this hadith suggests an invitation to save energy by turning off the lights when they are no longer needed while asleep.

In addition to an invitation to save energy, in the material on energy in life, the author also invites students not to overeat. This invitation is contained in the Strengthening Character Values rubric which discusses obesity. Through this rubric, the author invites students to pay attention to what they eat and to pay attention to calorie intake for the body so that students do not experience obesity.

Not be excessive when eating is morals towards oneself, namely paying attention to the physical health that has been bestowed by Allah. Excessive attitude in eating will have a negative impact on the body, one of which is obesity. Obesity will cause an imbalance in the body that can cause various diseases. Allah says in the Al-Qur'an letter Al-A'raf verse 31 so as not be excessive:

O children of Adam, take your adornment at every masjid, and eat and drink, but be not excessive. Indeed. He likes not those who commit excess.

Rasulullah also teaches us how to be good when eating so as not to overdo it. This method is stated in his words as follows:

"No son of Adam fills anything worse than his stomach, it is enough for a child of Adam to straighten his spine, and if he has to do it, let him share one third for his food, one third for his drink, and one third for his breath." (Narrated by Tirmidhi, Ibn Majah, and Ahmad).

2. Curiosity to Observe and Critical Thinking

In teaching materials on the theme of energy in living systems, the urge to have curiosity and critical thinking is displayed through the assignment and practicum rubrics found on pages 126,127,129, 132, 135, 139, and 141. Curiosity to observe is an important value that must be possessed by humans in learning as an effort to know God as the creator. With curiosity and his efforts to think critically through his reasoning, humans are expected to be able to understand the signs of Allah's power and become increasingly convinced of Allah's existence. In the Al-Quran the command to observe this, among others, is contained in QS. Al-'Imran [3]: 190 (observing the change of night and day), QS. Fussilat [41]: 53 (observing oneself), QS. Yunus [10]:101 (observing the heavens and the earth), and many others.

3. Discussions, Respect the Opinions of Others and Speak Politely

In teaching materials on the theme of energy in living systems, encouragement to discuss and respect the opinions of others can be found in the task rubric on pages 133 and 135. Through these assignments and invitations to discuss, the author wants to encourage students to be able to express opinions based on what they already know. and learn. From this discussion process students will understand that in the discussion process it is natural that there are differences of opinion but the most important thing is that students can respect these differences of opinion and are ready to return to the truth.

In a discussion, various parties take turns conveying their opinions with the aim of reaching a truth from a conclusion. However, if there is a discussion where there are parties who are drawn into mistakes and do not want to return to opinions that have clear truth, the discussion will become chaotic. The thing that should be done when something like this happens is to admit the error of that opinion and return to the truth. In Islam, this has been shown by angels when there was a dialogue about the creation of the Prophet Adam as a caliph on earth. At that time the angel said "Glory to You, we know nothing other than what You have taught us; verily You are the All-knowing, All-Wise" (QS. A-Bagarah [2]: 32).

Apart from being ready to return to the truth, being humble and willing to respect the opinions of others will make the discussion conducive. In the Al-Qur'an Allah commands to have discussions or debates in a good way, as stated in the Al-Qur'an An-Nahl verse 125:

Invite to the way of your Lord with wisdom and good instruction, and argue with them in a way that is best. Indeed, your Lord is most knowing of who has strayed from His way, and He is most knowing of who is [rightly] guided.

Quoting Al-Baghawi, Zulfikar (2019: 20) explains that in relation to this verse, the expression *billatii hiya ahsan* by al-Baghawi is interpreted in the best way, namely using a gentle attitude to deal with stubbornness, holding back anger, and using calm to face annoyance. Instead, invite others to the way of Allah gently, and explain the truth of Islamic teachings without coercion or intention to surpass them.

In discussions or in talking with other people, you should use polite and better speech, as stated in the Al-Qur'an Surah Al-Isra' verse 53:

And tell My servants to say that which is best. Indeed, Satan induces [dissension] among them. Indeed, Satan is ever, to mankind, a clear enemy.

This verse implies that one should speak words that are better in communicating. If in conversation he receives unkind remarks, he does not have to reply, but speaks better words. This is done with the aim of avoiding the temptation of the devil who always encourages humans to have disputes.

4. Willing to Cooperate

In teaching materials on the theme of energy in living systems, the encouragement to cooperate or work together is found in the project rubric to strengthen the Pancasila student profile found on page 148. In this rubric, the author invites students to work together in a project to make a wind turbine model. In principle, this encouragement to work together is to instill a profile of Pancasila students whose one dimension is mutual cooperation.

According to Ibad (Ibad, 2021), cooperation for Indonesian students means the ability to carry out activities together and voluntarily so that the activities carried out can run more easily, easily and smoothly. According to him, the cooperative dimension belongs to the values of Islamic Religious Education in the moral aspect because mutual cooperation focuses on human relations. In the Qur'an the command to work together is contained in the Al-Qur'an Surah Al-Maidah verse 2.

... And cooperate in righteousness and piety, but do not cooperate in sin and aggression. And fear Allah; indeed, Allah is severe in penalty.

Based on the description above and by comparing these values with the values to be achieved from science learning outcomes, this teaching material does not link learning material with efforts to instill the value of faith in God Almighty, or when viewed in an Islamic context this learning does not strive to instill the value of faith in Allah. There are several things that lead to this conclusion. The first is the mention of the word God which is only found twice, namely in the guide to using the book (page v) and in the Natural Science Objects chapter and its observations related to the scientific attitude material found on page 7. On this page the author explains that being grateful for God's grace is part of a scientific attitude. But unfortunately, the author does not apply the importance of instilling this value in subsequent discussions, including in the chapter on energy in living systems. This is very unfortunate because basically science learning that studies the universe created by Allah is a very strategic lesson in building faith and piety which will have an impact on noble moral attitudes.

In the Islamic view of life, all activities of a Muslim aim to worship Allah. Therefore, in studying nature, besides aiming to gain knowledge for ease in life, religious goals are needed, such as knowing Allah's mercy and compassion for humans through His creation, which in turn will increase human faith and belief in the existence of Allah.

In addition to not making any effort to introduce Allah, this book also does not encourage students to understand their religion in more depth. The orientation of the learning objectives listed in this book is far from religious values and only emphasizes aspects of science and technology that promote understanding of natural knowledge and inquiry skills. For example, in the learning outcomes and learning objectives of the theme of energy in living systems, the focus is on the ability to identify, analyze, explain, make predictions, and be able to communicate, all of which are inquiry skills. Even though it is possible that when discussing various sources of energy, this knowledge is associated with Allah's love for humans and Allah's commands regarding energy and environmental conservation.

Although in this book there is an attempt to instill values that are in principle compatible with Islamic religious teachings, these values are generally only associated with the interests of worldly life. For example, the attitude is not excessive in eating. The author only tries to explain the bad effects of obesity. Even though it could be inserted in that section that moderation in eating is good morals in Islam and it can also be explained about the etiquette taught by the Prophet when eating. Suggestions like this can actually be used to shape students to apply noble character.

Conclusion

Based on national learning achievements for science lessons, the formulation of Islamic values to be obtained from science learning are: (1) the value of faith in Allah which includes being able to know and love Allah, and understand Islamic religious teachings and apply them in life; (2) moral values in oneself and others which include integrity, understanding the importance of maintaining physical, spiritual and mental balance, respecting differences, empathizing with others, carrying out nature conservation, paying attention to the public interest; (3) Pancasila character values include independence, critical thinking, creativity, teamwork, and global diversity; (4) the value of science and technology which includes curiosity that forms critical thinking, knowledge, awareness of the environment, and skills.

Of the four categories of values to be achieved, Islamic values in the theme of energy in life systems in the Natural Sciences Interactive Book for Class VII Semester 1 Middle School/MTs are: moral values to oneself and others through efforts to instill values for thrifty energy and moderation as well as invitations to discuss, respect the opinions of others and be polite in speaking; Pancasila character values through calls for mutual cooperation, independence in carrying out project assignments; and the value of science and technology through the invitation to be curious, observe, and think critically. So, it can be concluded that this book has attempted to instill moral values (character) in the displayed text, but unfortunately there has been no attempt to instill the value of faith in Allah and no attempt has been made to encourage students to understand their religious teachings in more depth. These findings indicate the importance of developing textbooks that integrate faith values into their material content so that national learning achievements can be fully implemented so as to form students who have good morals and are able to apply their knowledge for the development of Islam and Indonesia.

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