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Analysis of Biology Textbook Class X 2013 Curriculum Based on Science Literacy Category Integrated Islamic Values in the Concept of Environmental Change

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abstract

Scientific literacy that integrates Islamic values in books helps students understand science and apply it in daily life. The integration of Islam aims to build students' character to become cognitively intelligent and intelligent in attitude and behavior. This study describes scientific literacy that integrates Islamic values and the level of scientific literacy that integrates Islamic values in textbooks. The research design uses a qualitative approach with content analysis methods. Research data collection techniques using observation sheets. The results showed that the biology textbooks for class X SMA from the publishers of Erlangga, Grafindo, and Tiga Serangkai contained scientific literacy that was integrated with Islamic values.

1. Introduction

Education has an essential role in the progress of a nation and as a means to build moral values. The educational process includes teaching and learning activities, which aim to educate the nation's life, as stated in the fourth paragraph of the opening of the 1945 Constitution of the Republic of Indonesia. There are changes in learning in a certain period, for example, from those unfamiliar with writing to the rapid progress of science and technology. The development of science and technology has an essential role for human needs in welcoming the 21st century to face the challenges of increasing global competence (Frydenberg & One, 2011).

One of the skills needed in the 21st century is scientific literacy. Science exists to form patterns of thought and behavior and build human character to care and be responsible for themselves, society, and the universe. Based on the results of PISA (Program for International Student Assessment) in the Organization for Economic Cooperation and Development (OECD) in 2015, it was stated that the scientific literacy ability of students in Indonesia was still below the international standard average of 386, while the average international standard was 500. Results The latest PISA test in 2018 placed Indonesia at 70th out of 78 countries in science (OECD, 2019).

The low literacy ability is influenced by several factors, including the educational curriculum, learning methods, models, school facilities and infrastructure, interest factors, motivation, attitudes, beliefs, and student self-confidence that affect science and technology, and affective

components also have a significant role. Important in students' decision-making in obtaining this knowledge (Chonkaew et al., 2016).

Generally, biology learning is listed in textbooks, and this is due to a narrow interpretation of Indonesian government regulation No. 13 of 2015 article 1 paragraph 23 which explains the process of achieving essential competencies and core competencies using the primary learning source, namely learning textbooks. Learning resources are all new materials that have the opportunity to be used as teaching materials so that they are still at a level that has the potential to be able to cause a learning process. There are many kinds of learning resources, one of which is mandatory for learning resources in printed form, such as textbooks (Prastowo, 2011).

Textbooks are translations of the curriculum to completely define what and how the material is learned and taught according to the applicable curriculum. The curriculum is structured to achieve educational goals, and these goals include developing students who are faithful, devoted, and obedient to God Almighty, knowledgeable and moral, healthy, intelligent, independent, responsible, and good citizens. Currently, the curriculum used in Indonesia is the 2013 curriculum. Based on Government Regulation No. 59 of 2014, the 2013 curriculum has core competencies to achieve graduate competency standards, which a high school student must possess at each grade level. Core Competencies are designed for each class.

Given the importance of learning achievement, both understanding of science and student character, it is necessary to integrate scientific knowledge in science subjects to achieve competence in spiritual and social attitudes. A means is needed to integrate biological concepts with Islam. These facilities include integrated textbooks. Integration comes from the English "integration," which means perfection or the whole. The integration of science is defined as the process of perfecting or unifying the sciences that are considered dichotomous to produce a pattern of an integrative understanding of the concept of science. The integration used is the integration of Islamic values in character values. Character values are inherent in humans and have been carried out as habits. Characters closely attached to humans do not just appear by themselves but arise because of previously carried out processes. The process as a person's experience can produce statements or actions as the embodiment of character in humans (Abidin, 2005).

Science textbooks in Indonesia are prepared based on the 2013 curriculum and are adjusted to the formulation of graduate competency standards to be achieved. The curriculum in Indonesia is stated in Law no. 20 of 2003 concerning the National Education System Article 1 paragraph (9) where the curriculum is understood as "a set of plans and arrangements regarding the objectives, content, and learning materials as well as the methods used as guidelines for the implementation of learning activities to achieve certain educational goals." Based on this understanding, it can be understood that the curriculum is used as the basis for designing content, programs, and activities in the teaching and learning process to realize the goals that have been set. So during KBM, students are taught various kinds of subjects to equip them with various scientific fields needed in social life. The preparation of the curriculum should be in line with the existing developments in science and technology and religious value so that education can equip students with the ability to face the latest challenges (Hidayat, 2013).

The 2006 curriculum was developed into a 2013 curriculum based on future challenges, namely the challenges of the 21st century marked by the age of science, knowledge-based society, and future competencies. The 2013 curriculum is an integrated part of the stories of the national education curriculum. Characteristics of strengthening learning in the 2013 curriculum include: (1) applying a scientific approach through observing, asking, trying, reasoning, (2) using science as a driving force for learning for all subjects, (3) guiding students to find out, not learning and

being told (discovery learning) and (4) emphasizing language skills as a communication tool, enabling children to think logically, systematically, and creatively.

Textbooks are mandatory reference books for use in schools containing learning materials to increase faith and piety, character and personality, ability to master science and technology, sensitivity and aesthetic ability, physical potential, and health, compiled based on National Education Standards. This book acts as a resource book, providing activity instructions, motivating, asking questions, connecting subject matter with daily life experiences. This textbook is one of the leading learning tools for students to acquire knowledge. This makes many teachers dependent on textbooks when teaching, especially when teaching what they are not good at (Shehab, 2017)

Books designed following the applicable curriculum and developed with a new paradigm will direct the learning process in the right direction according to the demands of the curriculum with the new paradigm. Science textbooks in Indonesia are prepared based on the 2013 curriculum and are adjusted to the formulation of graduate competency standards to be achieved. The formulation of the 2013 Curriculum graduate competency standards emphasizes a scientific approach following the demands of the times and is in line with the components of scientific literacy. Scientific literacy in science textbooks is one of the influential factors in forming students' understanding of the nature of science (Abd-El-Khalick et al., 2016).

The selection of the right textbook determines success in the learning process. For this reason, before being used, educators and students should know which textbooks are suitable to support scientific literacy learning. The selection of textbooks must be appropriate and appropriate in order to increase students' understanding of science which in the end is expected to improve scientific literacy in students (Risma, 2019)

The textbook analysis is an activity of analyzing textbooks by reviewing the content/material based on the indicator sheet you want to study so that it aims to determine the quality of the book being analyzed based on the aspect to be studied. Analyzing textbooks requires references, including the applicable curriculum, characteristics of subjects (relevant knowledge), the relationship between curriculum, subjects, and textbooks, the basics of preparing textbooks, and the quality of textbooks. Several criteria can be used to determine the quality of textbooks, and those criteria include point of view, clarity of concepts, relevance to the curriculum, attracting interest, fostering motivation, stimulating student activity, illustrations, supporting other subjects, and strengthening applicable values in the community (Anisa, 2017).

Literary, scientific literacy/language is formed from two words: literacy, which means literacy, and science, which means knowledge. Scientific literacy is defined as a person's ability to understand science, communicate science, and apply scientific knowledge to solve problems. They have a high attitude and sensitivity to themselves and their environment in making decisions based on scientific considerations. Scientific literacy is critical because the problems are related to knowledge and technology. In addition, scientific literacy empowers people to make personal decisions and formulate public policies that impact their lives. Students are expected to have the competence to build and apply factual, conceptual, information, and knowledge.

Scientific literacy is a measure of the success of science education in schools. This illustrates the true nature of science learning. Science education is responsible for achieving the scientific literacy of the nation's children. Therefore its quality needs to be improved. Improving the quality of science education can be done through scientific thinking. Scientific thinking can be developed through higher-order thinking skills. This higher-order thinking ability can be used as a foundation to form character. The character of someone who can think at a higher level will not be easily fooled by issues that provoke conflict in society (Aqil, 2017).

This scientific literacy ability is an ability that is considered essential to have, to create public awareness so that they can face a problem efficiently, can be mastered by all ages, can increase economic growth, and leadership and can improve social attitudes and care for the environment (Al-Mommani, 2016). This scientific literacy ability needs to be applied in everyday life because the abilities possessed by these students will improve many of their skills in everyday life, such as the ability to solve problems creatively, think critically, work cooperatively in groups, and use technology informatively. and effective (Akcay, Ozgur, & Yager, 2017)

They are presenting scientific literacy in the learning process results in a more stimulating experience and more significant benefits for students and teachers. The field of Biology has implemented scientific literacy according to the 2013 Curriculum by elaborating learning objectives, which include providing learning experiences to understand the concepts of biology, scientific processes; and solving everyday biological problems. Implementing this physical competence aims to facilitate students with critical conceptual and procedural knowledge to introduce scientific literacy in learning activities (Wati, 2017). Scientific literacy is essential to be mastered by students concerning how students can understand the environment, health, economy, and other problems faced by a modern society that depends on technology and the progress and development of science (Raharjo, 2017).

Integration comes from the English "integration," which means perfection or the whole. The integration of science is defined as a process of perfecting or unifying the sciences that have been considered dichotomous to produce a pattern of an integrative understanding of the concept of science. Instilling values in students is a value and moral education teacher, and not only when teaching it, but whenever and wherever, values must be an integral part of life. The integration used is the integration of Islamic values in character values. As an independent country, it has its basis in formulating character values. Referring to the Regulation of the Minister of Education and Culture No. 64 of 2013 concerning the content standards of Primary and Secondary Education, some characters should be developed. Based on these regulations, the character values in class X High School are at the level of competence five found in spiritual and social attitudes. Spiritual attitude reflects religious character. While social attitudes include honesty, tolerance, discipline, hard work, creativity, independence, democratic, curiosity, national spirit, love for the homeland, respect for achievement, friendly or communicative, love peace, love to read, care for the environment, care about social, and responsibility (Mulyana, 2004).

According to Islam, the integration of Islamic values in textbooks by connecting science material with views. This can be done because Islamic teachings have never carried out a dichotomy between science and another. Scientific buildings with all their varieties, both religious, social, and humanities, and nature, cannot stand alone. However, cooperation, greeting each other, needing each other, correcting each other, and interconnection between scientific disciplines will be more able to help the complexity of life's problems and efforts to solve them (Sholeh, 2018).

Integrating Islamic values in science learning becomes essential in formulating national education goals. The purpose of inculcating Islamic values is to develop spiritual and rational thoughts about Islam in the context of life, equip students with various natural knowledge abilities, appreciate and justify the comparative superiority of Islam, improve emotions, shape and guide children to think logically. The integration of scientific literacy and Islamic values is an integration that includes the concept of student scientific literacy, which consists of knowledge about science and knowledge about God as the only creator who has the right to be worshiped, scientific processes, development of scientific attitudes,

Based on the research results by Rofi'i et al. in 2016 showed that there were no biology textbooks that were integrated with Islam. The questionnaire results indicate a high need for

textbooks for biology subjects integrated with Islam. The results of the interviews showed (1) that they answered that they had not been integrated with the past, an average of 87.5% answered that they had not, and the rest answered that they had been integrated, but only part of the material was integrated, (2) 100% agreed that biology learning was integrated with Islam, (3) 62.5% of the unavailability of integrated biology learning facilities with Islam in their senior high school, 25% answered that there was still a lack of integrated biology learning facilities with Islamic values and the remaining 12.5% answered that they were available but not used optimally, (4) 100% needed to develop biology textbooks integrated with Islam, and (5) 100% if textbooks were available integrated Islamic biology would greatly assist the Islamic-based school learning process. This book is not yet available because not many publishers publish Biology textbooks integrated with Islam. Furthermore, (5) 100% if Islamic integrated biology textbooks are available, it will significantly assist the Islamic-based school learning process. This book is not yet available because not many publishers publish Biology textbooks integrated with Islam.

Instilling Islamic values in books inspires spiritual and religious souls to learn; thus, religion and science cannot be separated. Integrating science and technology with Islam is competence in worldly science, which is built on a divine basis. Integrating science and technology with Islamic values becomes a worldly competence as a form of awareness of God (Warningsih, 2019).

Islamic values seem to be one of the most vital influential forces in the needs of human life at this time. This is because Islam is a religion that is very concerned about science. The development of scientific literacy alone cannot solve all the problems without good Islamic literacy skills. That understanding can form more virtuous, civilized, and progressive humans with their knowledge. This is in line with the implementation of the 2013 curriculum, which is to create students with good character and good character to the creator and others (Diani, 2018).

Environmental damage or pollution is the entry or inclusion of living things, energy substances, funds, or other components into the environment or changes in the environmental order by human activities or by natural processes so that the quality of the environment decreases to a certain level which causes the environment to become less or unable to function following with the designation. The decline in environmental quality can be seen from the weakening of function or becoming less and no longer suitable for its use, reduced growth, and decreased reproductive ability of organisms. Finally, there is the possibility of the death of organisms that live in that environment.

Environmental damage is expected to be minimized by increasing integrated scientific literacy. The integration of scientific literacy and Islamic values is an integration that includes the concept of student scientific literacy, which consists of knowledge of science and knowledge of God as the only creator who has the right to be worshiped, the process of science, development of scientific attitudes, and students' understanding of science so that students not only know the concept of science but can also be integrated with Islamic values, one of which is character values. So in applying scientific literacy, students are expected to have a good awareness of character and apply the knowledge gained in their daily lives.

There are four categories of scientific literacy that are integrated with Islamic values which were developed from Chiappetta's theory (1991), including science as the body of knowledge (the knowledge of science), integrated character values (religious, honest, curious, fond of reading and communicative), science as way of investigation (the investigative nature of science) integrated character values (discipline, independence, hard work, curiosity and love of reading), science as a way of thinking (science as a way of thinking) integrated character values (creative, fond of reading, sense of curiosity and hard work), and Interaction of Science, Technology, and Society (interaction of science, technology, and society) integrated character values (social care and environmental care).

2. Method

The research method used in writing this article is the content analysis method. Content analysis on biology book Class X SMA/MA published by Erlangga (book I), Grafindo (book II), and Tiga Serangkai (book III). The instrument used in this study used an assessment sheet for the category of scientific literacy that integrates Islamic values (character). The preparation of this instrument is based on the statement of the scientific literacy category, which is integrated with character values, where the integration of character values is adjusted to the statement of the scientific literacy category. There are four categories of scientific literacy integrated with Islamic values, which were developed from Chiappetta's theory, including Knowledge of Science (the knowledge of science) integrated character values (religious, honest, curious, likes to read, and communicative). This category is used if the purpose of the text in the book being analyzed integrates religious values; namely, the book presents scientific facts (biology) which asks students to admire the power of God who has created the universe, the book presents scientific concepts that are asking students to believe in the power of God who has created, books presenting the laws of science that ask students to admire the power of God, and books presenting principles of science that ask students to admire the power of God. The integrated value of curiosity is that the book presents scientific theories that ask students to find out more deeply, the book presents scientific models that ask students to find out more deeply, and books present scientific hypotheses that ask students to dig deeper. Integrated honest value is a book containing questions that ask students to disclose the knowledge or information of the material described honestly. The integrated value of reading fondness means that books provide new information for students to know to read them. Furthermore, integrated communicative value, namely the book, presents discussion activities that ask students to discuss the concepts/materials that have been described with their friends.

Investigation of the nature of science (the investigative nature of science) integrates character values (discipline, independence, hard work, curiosity, and love of reading)—a way of conducting experiments through the scientific method that asks students to comply with the rules. Integrated independent values, namely books, contain questions to make calculations using mathematical calculations that ask students to solve them independently, and books present questions related to the material described, which ask students to solve them independently. The integrated value of hard work, namely the book, presents situations that require students to answer and work on graphs, tables, charts, and diagrams. That ask students to do it seriously, books provide many investigative activities and "hands-on" activities that students can do seriously, books present scientific inquiry as an essential part for students to read and do seriously, and book materials encourage students to explore, find and construct answers that ask students to complete them as well as possible. The integrated value of curiosity, namely book material, requires students to use scientific thinking and processes for problem-solving situations and construct conclusions by asking the teacher. And the integrated value of reading fondness is that the book displays a website link that students can visit as additional information that asks students to read it,

The integrated value of a love of reading is that books present historical developments that ask students to read them, books present a view of the objectivity and empirical nature of science that ask students to read them, books show how science concepts are formed from inductive-deductive thinking that asks students to read them, and books present cause-and-effect relationships in the elements of the material presented that ask students to read them. The integrated value of curiosity, namely the book material, encourages students to conduct in-depth examinations of science concepts and issues that ask students to find out both from experts in

their fields and the internet. Furthermore, integrated the value of hard work, namely the book, invites students to think critically and be scientific, which asks them to do it seriously.

The book displays the role of society in the development of science and technology that asks students to tell it to the community, and the book displays careers-related to the material presented, which asks students to tell it to the community. The book provides opportunities for students to learn about the history and nature of science and related science careers that ask students to tell them to the public. Books present how science concepts solve everyday problems and apply them to careers-related materials that ask students to tell them to the public. And the integrated value of caring for the environment, namely the book, presents a study of problems that are important to us now and in the future, examples of the impact of technology,

The data processing and analysis techniques carried out in the research for the analysis of scientific literacy that is integrated with Islamic values are by adding up the appearance of the statements of each category of scientific literacy that is integrated into the analyzed chapter, calculating the percentage of occurrences of the integrated scientific literacy category in the analyzed chapter. The calculation uses percentages, determines the average percentage of each integrated scientific literacy category from the analyzed textbook chapters, and provides a descriptive analysis based on the data that has been processed.

3. Result and Discussion

Scientific literacy that integrates Islamic values (character) from the three textbooks can be seen from many statements in the scientific literacy category that integrates Islamic values (character) and the percentage of occurrences of these categories.

Table 1. shows the number of occurrences of scientific literacy categories that are integrated with Islamic values.

No.	Category integrated science literacy Islamic values	Book			Total
		I	II	III	
1	As a body of knowledge, science integrates character values (religious, honest, curious, likes to read, and is communicative).	2	2	7	11
2	Science is a way to investigate integrated character values (discipline, independence, hard work, curiosity, and love of reading).	8	1	4	13
3	Science as a way of thinking that integrates character values (creative, likes to read, curiosity, and hard work)	0	1	1	2
4	Science and its interactions with technology and society are integrated with character values (social care and environmental care).	0	1	2	3
	Total	10	5	14	29

The availability of scientific literacy integrated with Islamic values can be seen by the emergence of statements that show scientific literacy integrated with Islamic values. The results of the study based on table 1 show the total number of occurrences of scientific literacy categories that are integrated with Islamic values (character) from the most to those that appear the least from the three books, namely the scientific literacy category as a way to investigate integrated character values (discipline, independence, hard work, curiosity and love of reading), Science as a body of knowledge integrated with character values (religious, honest, curious, fond of reading and communicative), science and its interaction with technology and society integrated character values (social care and care for the environment).

Category of scientific literacy as a way to investigate integrated character values (discipline, independence, hard work, curiosity, and love of reading)

This category can be seen in indicators, namely showing exercises and how to conduct experiments through scientific methods that are integrated with discipline values, presenting situations that require students to answer and work on graphs, tables, charts, diagrams, and so on that are integrated with the value of complex work characters, contains questions/questions for making calculations using mathematical calculations that are integrated with independent character values, book materials require students to use scientific thinking and processes for problem-solving situations and construct conclusions that integrate the value of the character of curiosity and display a website link that integrates the value of reading fondness characters.

The indicator displays exercises and how to conduct experiments through scientific methods that integrate the values of the discipline's character. The integration of the values of the character of this discipline is characterized by orderly behavior and obedience to the rules. The existence of experimental activities and direct activities that students can do and their students comply with all existing regulations can help students in understanding concepts. One example of a statement that describes this indicator is "Exploration activities on the effect of pollution on organisms…. Apply scientific procedures and work safety in this activity. Pay attention to and obey the work safety rules while working in the laboratory. The sentence "Exploratory activities on the effect of pollution on organisms" shows scientific literacy in the form of experimental activities,

The indicator presents a situation that requires students to answer and work on graphs, tables, charts, diagrams, and so on that are integrated with the value of the character of hard work. Furthermore, tasks and complete their duties as well as possible. One example of a statement that describes this indicator is "Make a table like the following…to analyze the negative impacts on the environment that are not balanced either due to natural processes or due to human activities". The sentence "make a table like the following" indicates scientific literacy,

The indicator contains questions makes calculations using mathematical calculations that are integrated with independent character values. The integration of independent character values is characterized by behavior that does not depend on others to complete tasks. One example of a statement that describes this indicator is "Calculate the economic value of recycled waste products .. to foster an entrepreneurial spirit". The sentence "calculate the economic value of recycled waste products" shows scientific literacy, while the sentence "to cultivate an entrepreneurial spirit" shows the value of independent character.

Indicator Book material requires students to use scientific thinking and processes for problem-solving situations and construct conclusions that integrate the value of the character of curiosity. One example of a statement from this indicator is "Environmental damage can cause environmental imbalance… Ask your teacher about…". The sentence "Environmental damage can cause environmental imbalance" shows scientific literacy, while the sentence "Ask your teacher about" shows the character value of curiosity.

The indicator displays a website link that integrates the character value of liking to read, the integration of the character value of liking to read is marked by the behavior of taking the time to read various readings that are beneficial to him. An example of a statement that describes this indicator is "Other sources of information on environmental issues can be found at http://environment.about.com/http://www.globalissues.org/issue/168/environmental-issues".

The existence of the link address indicates scientific literacy, while the sentence "Other sources of information regarding environmental problems can be found at. "Indicates the value of the character of liking to read. Questions that require students to find answers by analyzing evidence, evaluating, and processing data can encourage students to develop intellectual discipline and

critical thinking skills. This category gives students the freedom to develop their creative thinking and foster a positive scientific character (Wati & Yuni, 2018).

Category of scientific literacy as a body of knowledge integrated with character values (religious, honest, curious, likes to read, and communicative)

This category is seen in indicators, namely presenting scientific facts that are integrated with religious character values, presenting scientific hypotheses that are integrated with the value of curiosity character, containing questions that are integrated with honest values, and presenting discussion activities that are integrated with communicative values.

The indicator presents scientific facts that are integrated with religious character values, the integration of religious character values is characterized by obedient behavior towards teachings, tolerance for the implementation of worship of other religions, and living in harmony. One example of a statement that describes this indicator is "A clean and comfortable environment can be damaged, either naturally or caused by human activities. Damage to the environment that occurs naturally can be caused by tsunamis, volcanic eruptions, or earthquakes. These natural events occur beyond our control and are God's will, and there will always be wisdom behind it all." The sentence "A clean and comfortable environment can be damaged, either naturally or caused by human activities" shows scientific literacy. The facts displayed for investigation require students' thinking activities so that they can cultivate critical thinking. The existence of empirical facts to be observed in order to obtain conclusions in the form of knowledge is an activity that stimulates students to get used to reasoning (Fauziah, 2013)

The indicator presents scientific hypotheses that integrate the value of the character of curiosity. The integration of the value of the character of curiosity is characterized by behavior in an effort to find out more about something being studied. One example of a statement that describes this indicator is "Ecologists predict that we will create more and more environmental damage and pollution… What can we do to reduce environmental damage and pollution?". The sentence "Ecologists predict that we will make more and more environmental damage and pollution" shows scientific literacy, while the sentence "What can we do to reduce environmental damage and pollution?" shows the character value of curiosity.

The indicator contains questions that integrate honest values, the integration of honest character values is characterized by trustworthy behavior, words, deeds, and work. One example of a statement that describes this indicator is, "Can you tell us about the environmental damage that occurred in your area? Write an essay about environmental damage in your area." The sentence "Can you tell us about the environmental damage that has occurred in your area?" This shows scientific literacy, while the sentence "Write an essay about environmental damage in your area" shows the value of honest character.

The indicator presents discussion activities that are integrated with communicative values, the integration of communicative character values is characterized by behavior that shows a sense of pleasure in talking, hanging out, and cooperating with others. one example of a statement that describes this indicator is "We have heard about global warming, something like the greenhouse effect, the destruction of the ozone layer and others… Discuss this with your classmates". The sentence "We have heard about global warming, something like the greenhouse effect, the destruction of the ozone layer and others" shows scientific literacy, while the sentence "Discuss it with your classmates" shows the value of communicative character.

Science and its interaction with technology and society are integrated with character values (social care and environmental care)

This category can be seen in the indicators, namely showing the positive impact of science and technology on society that is integrated with social care character values, showing how the application of science concepts in technology to a society that is integrated with environmental care character values, and presenting the negative impact of science and technology on a society that is integrated with character values—social care.

The indicator displays the positive impact of science and technology on society which is integrated with the value of social care characters, the integration of social care character values is characterized by behavior to help others and society. One example of a statement that describes this indicator is "By recycling… you choose to collect and reuse objects rather than throwing them away as garbage…". The sentence "By recycling" shows scientific literacy, while the sentence "means you choose to collect and reuse objects rather than throwing them away as garbage" shows the value of social care characters.

The indicator shows how applying science concepts in technology to society is integrated with environmental care character values. The integration of environmental care character values is characterized by behavior in the form of efforts to prevent damage to the surrounding natural environment and develop efforts to repair natural damage. One example of a statement that describes this indicator is "Reduce, reuse, and recycle (3R) is a relatively easy business to do… By doing so, you mean that you have contributed to efforts to deal with the waste problem…". The sentence "Reduce, reuse, and recycle (3R) is a relatively easy business to do" shows scientific literacy, while the sentence "By doing it means you have contributed to efforts to deal with waste problems" shows the character value of caring for the environment.

The indicator presents the negative impact of science and technology on society integrated with the values of social care characters. One example of a statement that describes this indicator is "Various wastes have caused pollution that is detrimental to humans and the environment...Therefore, reuse is necessary to regulate waste so that the negative impact of the waste can be reduced...". The sentence "Various wastes have caused pollution that harms humans and the environment" shows scientific literacy, while the sentence "Therefore, it is necessary to regulate waste so that the negative impact of the waste can be reduced" shows the value of the character of social care.

Category science as an integrated way of thinking character values (creative, likes to read, curiosity, and hard work)

This category is seen only in indicators presenting experiments that illustrate creativity, imagination, and thinking integrated with creative character values. The indicator presents an experiment that illustrates creativity, imagination, and thinking that integrates creative character values, integration of creative character values is characterized by a way of thinking to do something or producing a way of observing something. One example of a statement that describes this indicator is "The activity of recycling waste paper….Presentation the process of making recycled paper in front of the class and show the results of your recycling to the teacher and your friends". The sentence "The activity of recycling paper waste" shows scientific literacy,

Integrating science and technology with Islamic values becomes a worldly competence as a form of awareness of God. The integration of Islamic values studied contains a character or moral values that are universal, applicable to other religious communities. Integrating Islamic values in science learning becomes essential in formulating national education goals. The purpose of inculcating Islamic values is to develop spiritual and rational thoughts about Islam in the context of life, equip students with various natural knowledge abilities, appreciate and justify the

relative priority of Islam, improve emotions, shape and guide logical thinking. (Muspiroh 2013). The level of the scientific literacy category that is integrated with Islamic values can be seen from the percentage of occurrences of the scientific literacy category integrated with Islamic values.

Table 2. The percentage number of occurrences of the scientific literacy category that is integrated with Islamic values

No.	Category integrated science literacy Islamic values	Book			Average (%)
		I (%)	II (%)	III (%)	
1	As a body of knowledge, science integrates character values (religious, honest, curious, likes to read, and is communicative).	5	5	17.5	9.16
2	Science is a way to investigate integrated character values (discipline, independence, hard work, curiosity, and love of reading).	20	2.5	10	10.83
3	Science is a way of thinking that integrates character values (creativity, reading, curiosity, and hard work).	0	2.5	2.5	1.6
4	Science and its interactions with technology and society are integrated with character values (social care and environmental care).	0	2.5	5	2.5
Score percentage		25	12.5	35	24.09
The average percentage of the total score (x)		6.25	3.12	8.75	6.02

The results of the study based on table 2 obtained that the overall average percentage of the assessment of the scientific literacy category that is integrated with Islamic values (character) from the three books is 6.02%, where the scientific literacy category is the body of knowledge integrated with character values (religious, honest, curious). Know, love to read and communicative) by 9.16%, science as a way to investigate integrated character values (discipline, independence, hard work, curiosity, and love of reading) by 10.83%, science and its interaction with technology and society integrated character values (social care and environmental care) of 1.6%, and science as a way of thinking integrated character values (creative, love to read, curiosity and hard work) of 2.5%.

The scientific literacy category as a way to investigate the integrated character values (discipline, independence, hard work, curiosity, and love of reading) is a category that has a higher average percentage of 10.83%, where the percentage of the book I am 20%, book II by 2.5% and book III by 10%. The results of this study are following the results of research by Chiappetta & Filman (2007) for the category of scientific literacy were in the five books that analyzed the category of scientific literacy as a way of investigation (Science as a way of investigation) is the most superior compared to other literacy categories, and this category is widely used for research. Encourage students to study science and to take advantage of multiple approaches to constructing knowledge.

The scientific literacy category as a body of knowledge integrated with character values (religious, honest, curious, fond of reading, and communicative) is a category that has the second higher average percentage of 9.16%, where the percentage of the book I am 5%, II by 5% and book III by 17.5%. This category generally appears the most in the content of the textbook material, which is following Udeani's (2013) research which shows the scientific literacy category as the body of knowledge that appears the most in the textbooks they analyze. This category emphasizes information knowledge from the products of scientists' thinking, which includes facts, concepts, principles, laws, theories, models, and hypotheses.

The scientific literacy category and its interaction with technology and society are integrated with character values (care for social and care for the environment), and the number of occurrences is small, namely three statements where, a book I am not found, book II is 1

statement and book III is 5%. This category relates to the impact of science and technology on society, which will help humans or even damage the environment and negatively impact humans. This category also shows how humans play a role in developing science and technology and vice versa how science and technology help solve human problems. In addition, some statements show the integration of Islamic values (character), Islamic values (characters) include social care and environmental care.

The scientific literacy category as an integrated way of thinking about character values (creative, likes reading, curiosity, and hard work) has very few occurrences. The average percentage result is 1.6%, where I am not found, book II is 2.5%, and book III is 2.5%. This category shows how scientists think and conduct experiments such as belief, curiosity, imagination, thinking, understanding cause-and-effect relationships, self-examination and doubt, objectivity, and open-mindedness that underlie discovery and research. In addition, some statements show the integration of Islamic values (character); these Islamic values (characters) include creativity, love of reading, curiosity, and hard work.

Based on the study results, the level of emergence of the scientific literacy category, which is integrated with Islamic values in the three books, is still relatively low. This is because most of the books still emphasize only scientific literacy. Textbooks should be translations of the curriculum to completely define what and how the material is learned and taught according to the applicable curriculum. The current curriculum in Indonesia is the 2013 curriculum, which is a very new curriculum seen from every aspect, such as content standards. The content standards in the 2013 curriculum for each level of education have determined the material and minimum competencies that must be achieved. Content standards for primary and secondary education cover the minimum material scope and level of competence to achieve minimum graduate competence at certain levels and types of education. The achievement of competencies that must be achieved at each level includes spiritual attitudes, social attitudes, knowledge, and skills. Achieving competence in spiritual attitudes and social attitudes requires the integration of science in science subjects, especially biology. A means is needed to integrate biological concepts with Islam. These facilities include integrated textbooks. Achieving competence in spiritual attitudes and social attitudes requires the integration of science in science subjects, especially biology. A means is needed to integrate biological concepts with Islam. These facilities include integrated textbooks. Achieving competence in spiritual attitudes and social attitudes requires the integration of science in science subjects, especially biology. A means is needed to integrate biological concepts with Islam. These facilities include integrated textbooks.

4. Conclusion

Based on the study results, it was concluded that the textbooks for biology class X SMA from the publishers of Erlangga, Grafindo, and Tiga Serangkai contained scientific literacy that integrated Islamic values. However, scientific literacy integrated with Islamic values was low, with an average percentage of the three books of 6.02%. The category of scientific literacy that integrates Islamic values that emerged from the three books includes the category of science as the body of knowledge integrated with character values (religious, honest, curious, likes to read, and communicative) with an average percentage of 9.16%, science as a way to investigate integrated character values (discipline, independence, hard work, curiosity and love of reading) by 10.83%, science as a way of thinking integrated character values (creative). The level of emergence of the scientific literacy category that integrates Islamic values in the three books is still relatively low. This is because most of the books still emphasize only scientific literacy.

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