



Eco-literacy components on Kurikulum Merdeka: 5th-grade elementary school's IPAS textbook analysis

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ABSTRACT

The study was conducted to analyze eco-literacy components in Kurikulum Merdeka, especially those contained in IPAS textbooks for grade 5th elementary school students, to facilitate the development of students' environmental literacy skills. The method for this study uses a qualitative approach, with data collection using content analysis techniques. Test the validity of the data using an expert judgment approach. The research finding that the six components of eco-literacy have been included in Kurikulum Merdeka, in the IPAS textbook for grade 5th elementary school students. There are many Cognitive Knowledge components and Knowledge of Environmental Issues components in books, but the Affection components, Ecological and Natural History knowledge components, Socio-political Knowledge components, and Environmentally Responsible Behavior (ERB) components still receive less attention. The results of this study from the analysis of eco-literacy components suggest that there should be further study and development regarding eco-literacy-based learning media to support eco-literacy education in Indonesia.

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ABSTRAK

Kajian ini dilakukan guna menganalisis komponen ekoliterasi pada Kurikulum Merdeka, terutama yang termuat dalam buku teks Ilmu Pengetahuan Alam dan Sosial (IPAS) siswa kelas V Sekolah Dasar, sehingga dapat memfasilitasi pengembangan kecakapan literasi ekologi siswa. Jenis metode kajian ini adalah pendekatan kualitatif dimana teknik pengumpulan datanya menggunakan desain analisis isi (Content Analysis). Metode keabsahan data yang digunakan adalah penilaian ahli (Expert Judgement). Hasil kajian ini menunjukkan bahwa enam komponen ekoliterasi telah termuat pada Kurikulum Merdeka, yaitu di dalam buku teks IPAS siswa kelas V Sekolah Dasar. Komponen Pengetahuan Kognitif serta Komponen Pengetahuan terhadap Masalah dan Isu Lingkungan merupakan komponen yang banyak ditemukan di dalam buku teks. Namun, komponen Afeksi, Pengetahuan Ekologi dan Sejarah Alam, Pengetahuan Sosial-Politik, serta Komponen Perilaku Bertanggung Jawab terhadap Lingkungan masih belum banyak mendapatkan perhatian. Hasil dari kajian tentang analisis komponen ekoliterasi ini menyarankan adanya kajian dan pengembangan lebih lanjut terkait media pembelajaran berbasis ekoliterasi untuk mendukung pendidikan literasi lingkungan di Indonesia.

Kata Kunci: Buku teks; ekoliterasi; Kurikulum Merdeka; Ilmu Pengetahuan Alam dan Sosial (IPAS)

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INTRODUCTION

Environmental problems are life issues that all humans on Earth cannot avoid. This topic is a top priority that should be addressed and resolved because environmental problems are a shared responsibility. The current environmental problems that arise indeed cannot be separated from the role of humans as the main factor causing environmental damage and pollution (Muttawakkil & Kusumah, 2020). Moral problems and human behavioral problems themselves are what cause environmental problems.

Environmental issues in the 21st century have often been discussed in national and international forums. Kementerian Lingkungan Hidup dan Kehutanan (Kemen LHK) Republik Indonesia raised environmental issues at Konferensi Tingkat Tinggi (KTT) G20 last November 2022. Previously, Menteri LHK RI had discussed environmental issues at a *Plenary G20 Environment Deputies Meeting and Climate Sustainability Working Group (1st EDM-CSWG)* in Yogyakarta in March 2022 by addressing six issues, including Land Destruction, Loss of Biodiversity, Marine Debris, Water Management, Sustainable Finance, and Marine Protection. Discussion of environmental issues in the global scope is one proof that the destruction of nature and the balance of the ecosystem influenced by human activities is at an alarming stage (Tyas *et al.*, 2022; Wulandari *et. al.*, 2022).

In Indonesia, much evidence shows an environmental sustainability crisis that hurts life. Problems such as extreme climate change, prolonged floods or droughts, forest fires, energy crises, famine phenomena, and other problems that we read or hear from mainstream news portals. Human actions mostly cause the environmental crisis that occurs. These environmental problems can be rooted in our mistakes as humans in thinking and indifference to the surrounding environment (Ihsan & Hanami, 2021). Society should have an understanding of the environment and all its problems.

Understanding the environment is important to apply, both to gain knowledge and practice in the surrounding environment (Nariswari *et al.*, 2022). The younger generation must change their perspective on the ecological system and enrich their environmental knowledge from an early age. This is because of the role of living beings in managing the environment to ensure human life's sustainability (Khoiri & Hidayati, 2020). The process of changing perspectives and instilling concern for ecology must be formed and made a habit, one of which is through ecoliteracy education.

With ecoliteracy education, it can be conveyed how important it is to understand the active role of society in preserving the environment so that it is always maintained and remains beautiful to students (Ramadhan & Surjanti, 2022). Unfortunately, ecoliteracy education in Indonesia is not included in the main learning in schools. Understanding the environment from basic education is very important, especially at the elementary school level (Normalita *et al.*, 2022). In the learning process, a book entitled "*Ecoliterate: How Educators are Cultivating Emotional, Social, and Ecological Intelligence*" explains that it is essential to develop ecoliteracy so that students can understand the interconnectedness of the environment and become more concerned about the environment around them. Therefore, it is necessary to review the ecoliteracy material in the teaching materials in the school curriculum.

In its implementation, the curriculum must be dynamic so that students can live in line with the times (Fadhlulloh & Hidayati, 2021). The dynamic nature of the curriculum makes it necessary to develop or revise it from time to time, adjusting to the needs and characteristics of students. Hamalik, in a book entitled "*Manajemen Pengembangan Kurikulum*," said curriculum development is a dynamic process that responds to the demands of structural changes in government, developments in science and technology, and globalization.

Kurikulum Merdeka is the curriculum currently being implemented in Indonesia, the result of the development of the prototype curriculum initiated by Menteri Pendidikan, Kebudayaan, Riset dan Teknologi (Mendikbudristek) at the time, Nadiem Makarim. In the Kurikulum Merdeka at the Primary

School level, learning content related to ecoliteracy is found in the subjects Ilmu Pengetahuan Alam dan Sosial (IPAS). IPAS subjects are one of the aspects of learning in the Kurikulum Merdeka that integrates Ilmu Pengetahuan Alam and Ilmu Pengetahuan Sosial. The purpose of the science subjects is to increase interest and curiosity, encourage active participation of students, understand themselves and the environment, and increase knowledge and understanding of science concepts (Agustina *et al.*, 2022). Both fields of science have an important role in increasing students' understanding of Ecoliteracy.

One way to review the application of ecoliteracy in Kurikulum Merdeka is by paying attention to the content of ecoliteracy components contained in student textbooks. According to Febriana *et al.* (2022), textbooks are teaching materials compiled systematically by experts in their fields, containing special lesson materials and meeting the indicators of the established curriculum. Through textbooks containing ecoliteracy materials, students are expected to understand how they should treat the environment (Normalita *et al.*, 2022; Kurniasih, 2022). Students at the elementary school level certainly read more from textbooks, apart from the materials and learning media that educators have facilitated. Therefore, studying the ecoliteracy components in the elementary school students' science textbooks used in Kurikulum Merdeka is necessary.

Previous studies on ecoliteracy components in textbooks have been conducted, including by Rahmah *et al.* (2019), who analyzed five textbooks of IPA Sekolah Menengah Pertama grade VIII based on environmental literacy content by taking relevant pages as samples. The study found an imbalance in the proportion of ecological literacy aspects in the books studied. Then Rachmawati *et al.* (2022) studied the scope of ecological literacy in textbooks IPA SMP grade 7, 8, and 9, according to Kurikulum 2013, and the result is that not all components of environmental literacy receive equal attention.

The study of ecoliteracy in Kurikulum 2013 based on Goleman's perspective was conducted by Nurhalisa *et al.* (2020) by analyzing the grade VI book Theme 9 Karya Negeriku, IPS subject content, and found that five ecoliteracy indicators were spread across each sub-theme. Then, the study of the content of environmental literacy aspects in the high school biology book for grade X by Marianingsih *et al.* (2021) obtained the results that all aspects of environmental literacy were included in the book, but in an unbalanced proportion. Leksono *et al.* (2020) studied environmental literacy components in high school biology books for grades X, XI, and XII. They found that environmental literacy components were already present in high school biology books.

Then, Gugssa *et al.* (2021) stated in their study that environmental issues are still not considered in elementary school science books in Ethiopia. A relevant study by Uyar and Ensar (2016), which examined four books of grade 5 and 8, revealed that Turkish language course books already contain environmental literacy components and have the potential to support the development of environmental literacy. Meanwhile, research by Nurlaili *et al.* (2020) concluded that ecoliteracy-based learning textbooks are needed as teaching materials for elementary school students to achieve sustainable development.

The urgency of this study lies in the analysis of ecoliteracy components in Kurikulum Merdeka in the science textbooks of grade V Elementary School students. This study is limited to the analysis of the IPAS textbooks of grade V Elementary School students of the Kurikulum Merdeka published by Pusat Perbukuan Badan Standar Kurikulum and Asesmen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, with ecoliteracy components formulated by experts. The aim is to determine whether the Kurikulum Merdeka has integrated ecoliteracy through IPAS textbooks for grade V Elementary School students to encourage understanding of the environment. With the ecoliteracy components through textbooks on natural and social subjects, it is hoped that students can develop positive attitudes and behaviors, namely caring for and protecting the environment.

LITERATURE REVIEW

Ecoliteracy

Etymologically, ecoliteracy comes from a combination of two words, namely ecology and literacy. Ecology is a scientific discipline that studies the interdependent interactions between humans and their natural environment. Meanwhile, literacy can be interpreted as being literate, skilled, and understanding. According to Maulana (2022), Literacy is understood as expertise in reading and writing, both reading and context, when learning.

Ecoliteracy refers to the ability to carefully understand and analyze environmental conditions to take appropriate action to improve and protect environmental quality (Rachmawati et al., 2022). Ecoliteracy is a learning that understands the environment as a basic material for prosperity and adjusts cultural priorities appropriately (Boehnert, 2015). According to Keraf in a book entitled "*Filsafat Lingkungan Hidup: Alam Sebagai Sebuah Sistem Kehidupan*", ecoliteracy is defined as a state where an individual understands ecological principles and lives according to these ecological principles when organizing and building life together with humanity to create a sustainable society. Based on this definition, ecoliteracy can be explained as the ability of individuals to understand the principles of ecological systems and have awareness and concern for the environment.

According to Simmons' theory in his book entitled "*The NAAEE standards project: Papers on the development of environmental education standards*," issued by the North American Association for Environmental Education, ecoliteracy consists of six components. The first component is Affection, which involves feelings and emotions towards the environment. The second component is Ecological and Natural History Knowledge, which includes understanding ecosystems and natural history. The third component is Socio-Political Knowledge, which relates to understanding the social and political aspects that affect the environment. The fourth component is Knowledge of Environmental Problems and Environmental Issues, which involves understanding current environmental problems and issues. The fifth component is Cognitive Ability, which includes critical and analytical thinking skills towards environmental issues. The sixth component is Environmentally Responsible Behavior, which involves real actions to maintain and protect the environment (Syukron, 2018). The six components of ecoliteracy can be used as standards for educators in developing environmental literacy, both in formal and non-formal education.

Kurikulum Merdeka

The curriculum is an important instrument in preparing students to have life skills that meet the demands of life today and in the future (Kusmana, 2017). According to Undang-Undang Republik Indonesia Nomor 20 tahun 2003 about Sistem Pendidikan Nasional in pasal one ayat 19, curriculum is defined as a set of learning plans related to objectives, content, teaching materials, and methods used as guidelines in organizing learning activities to achieve a national education goal. Curriculum is a guideline needed to carry out educational activities focusing on material, character development, and student competencies to achieve educational goals.

Kurikulum Merdeka is a curriculum concept that demands independence, namely being given freedom in accessing knowledge and science obtained by students in educational activities (Manalu et al., 2022). Kurikulum Merdeka is a curriculum with diverse intracurricular learning and more optimal learning content so that students have enough time to explore concepts and strengthen competencies. It can be said that Kurikulum Merdeka Belajar, Independent Learning Curriculum, is a manifestation of an autonomous and flexible learning system, so that an innovative, non-restrictive learning culture is created that meets the needs of students.

Kurikulum Merdeka is designed to be flexible by focusing on core material, character development, and student abilities. The two main characteristics of this curriculum that facilitate learning recovery, quoted

from Barlian *et al.* (2022), are (1) Implementation of project-based learning to develop soft skills and character according to the profile of Pancasila students; (2) Improvement of essential materials focused on ensuring sufficient time for in-depth learning in basic competencies such as literacy and numeracy.

METHODS

The method used in this study is qualitative, which uses data collection techniques through content analysis. Qualitative methods are based on the philosophy of postpositivism, which is used to study the condition of natural objects, where the key instrument is the researcher. The information data used in this study comes from the textbook IPAS V grade elementary school students Kurikulum Merdeka, published by Perbukuan Badan Standar Kurikulum dan Asesmen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. The object of this study is the ecoliteracy component by Simmons in his book, which is included in Kurikulum Merdeka in the textbook IPAS Grade V Elementary School.

This study collected data using content analysis instruments. The data collected were adapted from the ecoliteracy components formulated by Simmons in his book and the ecoliteracy sub-components he described. The instruments used include ecoliteracy components and sub-components with data derived from the textbook IPAS Grade V Elementary School Students Kurikulum Merdeka. Data analysis using content analysis techniques by examining and reviewing the contents of textbooks, IPAS V grade elementary school students, and Kurikulum Merdeka. As for content analysis, Eriyanto, in his book entitled "Analisis Isi: Pengantar Metodologi Untuk Penelitian Ilmu Komunikasi dan Ilmu-Ilmu Lainnya," defines it as a scientific research technique aimed at finding out the description of the characteristics of the content and drawing inferences from the content. In testing the validity of the data, the approach used is expert judgment, namely, constructing an instrument system based on the aspects to be measured with a relevant theoretical basis, and then consulting with competent experts in this field of study.

RESULTS AND DISCUSSION

The analysis of the IPAS textbook for grade V elementary school students in the Kurikulum Merdeka is based on ecoliteracy, which consists of six components based on Simmons' theory in his book. The six components are divided into sub-components consisting of 40 aspects, becoming the assessment aspect points. The assessment is carried out by examining the textbook's presence or absence of ecoliteracy components. The analysis was carried out to determine the extent to which the science textbook for grade V elementary school students published by the government and currently circulating contains ecoliteracy components and applies them in the Kurikulum Merdeka.

Based on the results of data analysis on the IPAS textbooks for grade V elementary school students, the Kurikulum Merdeka textbooks contain eco-literacy components, as seen in Figure 1. The textbooks identify the eco-literacy components as descriptions of materials, pictures, assessments, and projects in the form of assignments and activities, such as experiments.

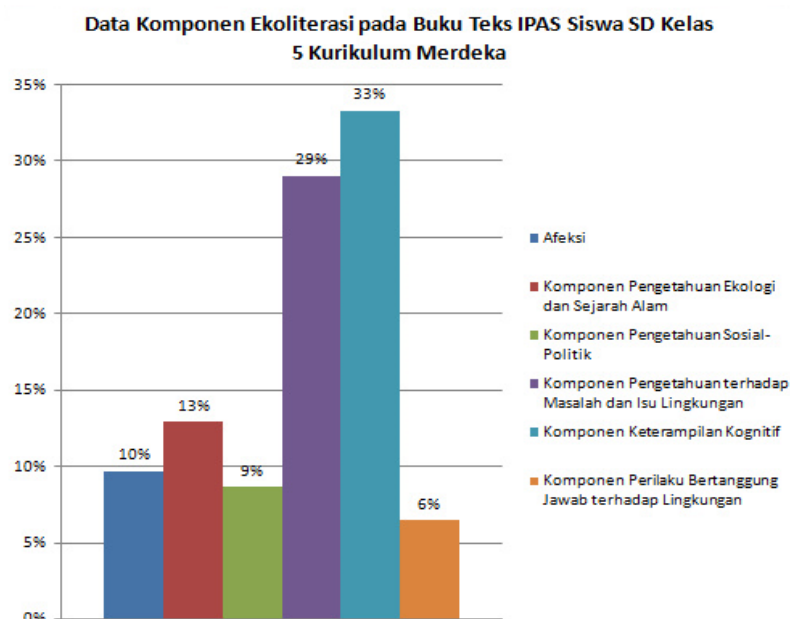


Figure 1. Ecoliteracy component data in the Science Textbook for Grade V Elementary School Students using Kurikulum Merdeka
Source: Research 2023

The graph in Figure 1 shows that the Kurikulum Merdeka, in the IPAS for grade V elementary school students, covers all six ecoliteracy components. Of all the ecoliteracy components that have been identified in the textbook, the proportion of each component is as follows: The Affection Component is contained as much as 10%, the Ecological and Natural History Knowledge Component 13%, the Socio-political Knowledge Component 9%, the Knowledge Component of Environmental Problems and Issues 29%, the Cognitive Skills Component 33%, and the Responsible Behavior Component towards the Environment 6%. The Cognitive Skills Component has the highest proportion, namely 33%. The component with the lowest proportion or the least contained in the textbook is the Responsible Behavior Component towards the Environment, with a percentage of 6%. These results were obtained by combining all ecoliteracy component data and converting it into a graph.

The most ecoliteracy content in elementary school students' IPAS textbook is the Knowledge of Environmental Problems and Issues and Cognitive Skills components. The material containing the most ecoliteracy content can be found in Chapter 2 (Harmoni dalam Ekosistem), Chapter 6 (Indonesiaku Kaya Raya), and Chapter 8 (Bumiku Sayang Bumiku Malang). Ecoliteracy components are also found in Chapter 1 (Melihat karena Cahaya) and Chapter 4 (Ayo Berkenalan dengan Bumi Kita) with low frequency. Meanwhile, in Chapter 3 (Magnet, Listrik, dan Teknologi untuk Kehidupan) and Chapter 5 (Bagaimana Kita Hidup dan Bertumbuh), there is almost no ecoliteracy content.

Affective Component

Figure 2 shows the first component, namely the affective component.

Data Sub Komponen Afeksi

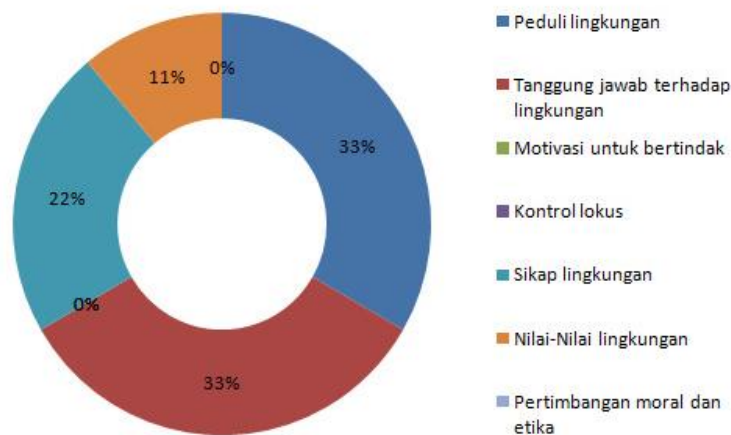


Figure 1. Results of Data Analysis of Affective Components
Source: Research 2023

The Affect component in ecoliteracy contains the Sub-components of Environmental Views, Environmental Values, Sensitivity and Concern for the Environment, Responsible Attitude, Motivation to Act to Protect the Environment, Locus of Control, and Moral and Ethical Considerations. Based on the chart in **Figure 2**, the analysis results of the Affect component show that the Affect component is included in the textbook, but does not cover all Sub-components. This component is only found in Chapters 2, 6, and 8 of the book with low frequency. The sub-components highlighted in the three chapters are the sub-component of environmental sensitivity and the sub-component of responsible attitude toward the environment. In addition, the aspects of Attitude to the Environment and Environmental Values are discussed briefly in the textbook.

The sub-components of Motivation to Take Action to Protect the Environment, Locus of Control, and Moral and Ethical Considerations have not received attention in the IPAS textbooks of grade V students. The results of this study are the same as the study by [Karimzadegan & Meiboudia \(2012\)](#) in Iran, which found that the Affection component has not been dominantly observed in textbooks and only those related to personal responsibility have received much attention. The study by [Rachmawati et al. \(2022\)](#) was not much different, finding that the Moral and Ethical Considerations Sub-component and the Motivation to Take Action Sub-component were not found in the Kurikulum 2013 junior high school IPA textbooks. Meanwhile, in the study by [Leksono et al. \(2020\)](#), Environmental Values and Moral and Ethical Values were not found in the Kurikulum 2013 high school Biology textbooks.

Components of Ecological and Natural History Knowledge

The second component is related to knowledge and natural history, which is depicted in **Figure 3**.

Data Sub Komponen Pengetahuan Ekologi dan Sejarah Alam

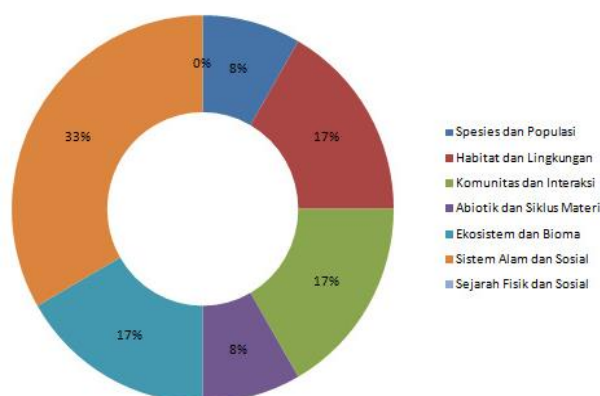


Figure 3. Results of Data Analysis of Ecological and Natural History Knowledge Components
Source: Research 2023

The chart in Figure 3 shows that the sub-components of ecological knowledge and natural history are already in textbooks, except for the physical history and biology sub-components. These results are similar to the findings by Rachmawati *et al.* (2022) in their research on the IPA SMP Kurikulum 2013 textbook, where the Physical History and Biology Sub-components received less attention. In a study conducted by Marianingsih *et al.* (2021), the Species and Population Sub-components were the most prominent environmental literacy sub-components in the Ecological Knowledge and Natural History components.

The Ecological and Natural History Knowledge Components can be found in Chapters 2, 6, and 8, with the highest frequency in Chapter 2, Ecosystem Harmony. The Ecosystem Harmony chapter contains ecosystem material closely related to environmental literacy or ecoliteracy. According to the research results by Leksono *et al.* (2020), environmental concept material includes an understanding of various ecosystem components closely related to environmental knowledge.

Components of Socio-Political Knowledge

The third component is the socio-political knowledge component, which is depicted in **Figure 4** below.

Data Sub Komponen Pengetahuan Sosial-Politik

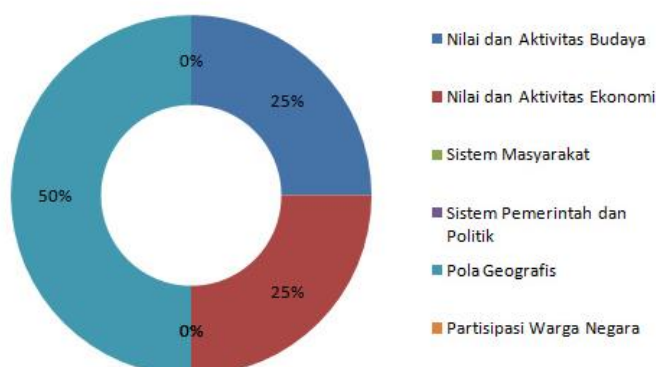


Figure 4. Results of Data Analysis of Socio-Political Knowledge Components
Source: Research 2023

The socio-political knowledge component is the least frequently found in the IPAS textbook for V-grade elementary school students. Only three sub-components are covered in the book, with the geographic

pattern sub-component found in Chapters 4, 6, 7, and 8. In addition, the cultural values and activities, as well as the economic values and activities sub-components, are each found in Chapters 6 and 7.

The sub-components of the social system, government and political system, and citizen participation are not found in the book's contents. [Rachmawati et al. \(2022\)](#) argue that the components of social and political knowledge are more dominantly discussed in social science subjects, while the science subjects are a combination of natural and social science materials. Therefore, this component should receive more attention in textbooks. Apart from that, it was understood that there is a relationship between socio-political aspects and ecoliteracy. In addition, [Nurhalisa et al. \(2020\)](#) in their study also stated that social knowledge is a science that studies social relations between humans and their environment.

Knowledge Components of Environmental Problems and Issues

Next is the component of knowledge regarding environmental problems and issues, which can be seen in **Figure 5**.

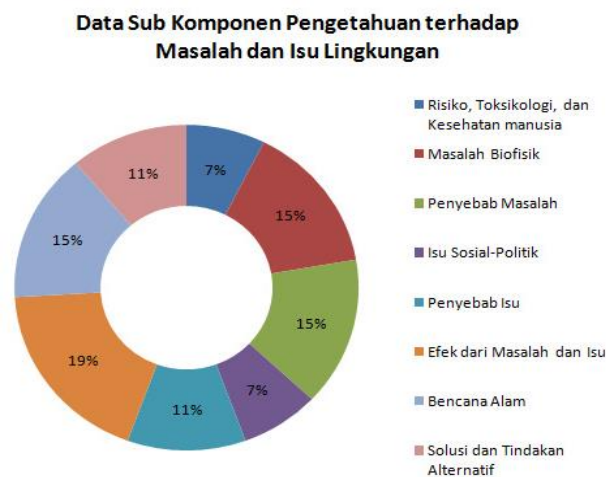


Figure 5. Results of Data Analysis of Knowledge Components on Environmental Problems and Issues
Source: Research 2023

Each Sub-component of Knowledge of environmental problems and issues has an almost even distribution in the book. The sub-components of biophysical problems, causes of problems, effects of problems, issues, and natural disasters receive quite a lot of attention. These results are similar to those of [Rachmawati et al. \(2022\)](#) on ecoliteracy components in IPA SMP textbooks and [Leksono et al. \(2020\)](#) on ecoliteracy components in high school biology books. [Karimzadegan & Meiboudia \(2012\)](#) in their study of environmental literacy in elementary school science books in Iran stated that almost all Sub-components have been emphasized.

Ecoliteracy material in the Knowledge component regarding Environmental Problems and Issues is primarily found in Chapter 8 (Bumiku Sayang Bumiku Malang). The material contains the relationship between nature and human actions, with changes in natural conditions, lifestyles that cause environmental problems, and predictions of their impact on social and economic aspects. This is similar to the results of a study by [Marianingsih et al. \(2021\)](#), which showed that the most dominant component of environmental literacy is the component of Knowledge of Environmental Problems and Issues. This is because this component discusses environmental problems arising from human interaction with the environment and provides alternative solutions to overcome them.

Cognitive Skills Components

Next is the percentage for the cognitive skills component, shown in **Figure 6** below.

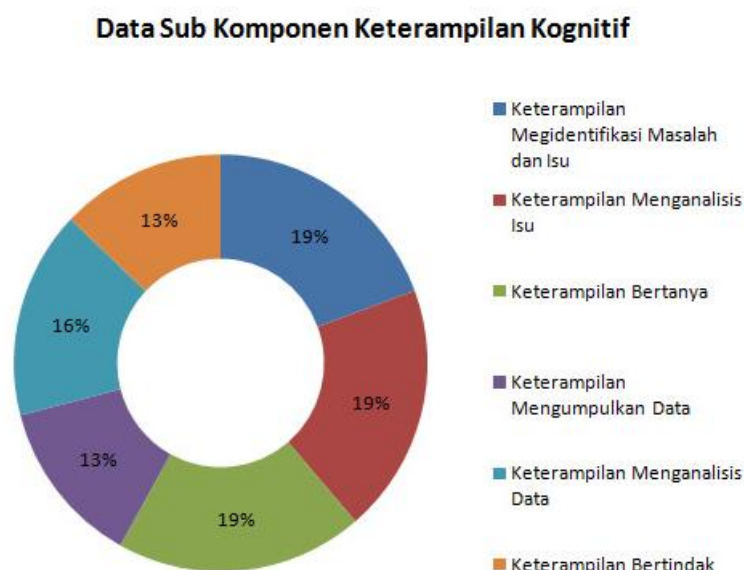


Figure 2. Cognitive Skills Component Data Analysis Results
Source: Research 2023

According to the analysis, the components of cognitive skills are evenly distributed in each chapter. Sub-components of cognitive skills often found in textbooks include the skills of identifying problems and issues, the skills of analyzing issues, and the skills of asking questions.

This result differs from the study by [Rachmawati et al. \(2022\)](#), which found that in IPA SMP, the sub-components of data collection skills, data analysis skills, and action skills were more than the other three components. A study by [Rahmah et al. \(2019\)](#) showed that the cognitive skill component was found in a few IPA SMP textbooks for grade VIII, and only in specific materials and books. The cognitive aspect can influence students' environmental awareness because cognitive ability is an aspect of human psychology related to the environment ([Nurlaili et al., 2020](#)).

Components of Responsible Behavior Towards the Environment

The next component is environmentally responsible behavior. The percentage for this component can be seen in **Figure 7** below.

Data Sub Komponen Perilaku Bertanggung Jawab terhadap Lingkungan

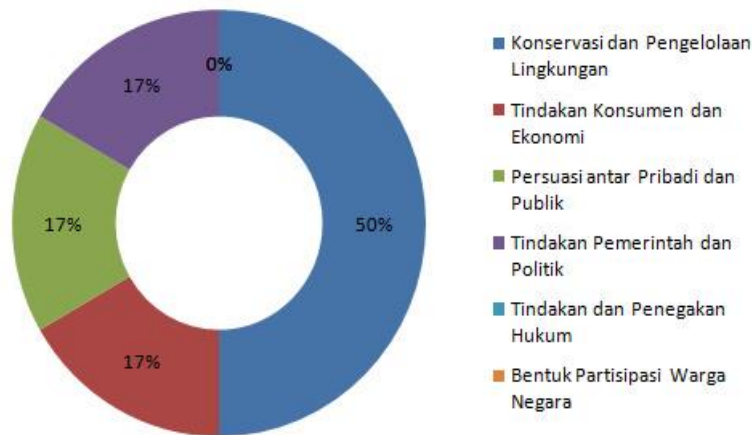


Figure 7. Components of Environmentally Responsible Behavior
Source: Research 2023

Based on the results of the analysis, the component of responsible behavior towards the environment is the least found in textbooks. The sub-components of environmental conservation and management are found in Chapters 2, 6, and 8. The sub-components of interpersonal and public persuasion are found in Chapters 2 and 8. The sub-components of consumer, economic, government, and political actions are found in Chapters 2 and 7. Meanwhile, the sub-components not yet found in the students' IPAS textbooks are the sub-components of actions, law enforcement, and forms of citizen participation.

The results of this study indicate that the component of Responsible Behavior towards the Environment still receives less attention. According to research conducted by [Leksono et al. \(2020\)](#) on the Biology SMA textbook and Rachmawati et al. (2022) on the IPA SMP textbook, the Responsible Behavior towards the Environment component still receives less attention than other components. Karimzadegan & Meiboudia (2012) from Iran and Uyar & Ensar (2016) from Turkey also obtained the same results.

Discussion

Based on the results of the identification of ecoliteracy components and sub-components in the Kurikulum Merdeka in the IPAS textbook of grade V elementary school students, it turns out that each component and sub-component of ecoliteracy has been distributed in almost all chapters, but is spread with different frequencies and is not evenly distributed. [Mukhyati & Sriyati \(2015\)](#) in their research stated that including environmental literacy components in textbooks is very important, but what is even more important is how much environmental literacy components are included in textbooks so that they are more effective in developing students' environmental literacy skills.

Each ecoliteracy component has a different amount of data and percentage. The Cognitive Knowledge and the Knowledge of Environmental Problems and Issues components have the highest percentage among the other six ecoliteracy components. This shows that knowledge of environmental values, problems, and issues is explained in detail to provide understanding to readers. However, there are still ecoliteracy components that have not received the same attention, even though the balance of each component is needed to grow and realize competence and character in students. According to [Suwandi et al. \(2016\)](#), understanding ecology is not only knowing about the environment, but also balanced with

the ability to interact with the environment, adapt, control, regulate, care, preserve, and utilize the surrounding nature for the sustainability of the ecosystem and human life.

Thus, it has been found that there are still many opportunities to integrate ecoliteracy components and sub-components in Kurikulum Merdeka through IPAS textbooks for grade V elementary school students. Nurlaili et al. (2020) stated that textbooks containing ecoliteracy components need to be packaged in books adjusted to the elementary school curriculum because they will be understood and benefit students in the learning process. Integrating ecoliteracy into the Kurikulum Merdeka teaching materials benefits learning, not only in understanding but also in actions towards the environment. Instilling ecoliteracy knowledge in students is very important to positively impact improving environmental literacy skills and skills in protecting and preserving the environment.

CONCLUSION

The study results show that the ecoliteracy component has been integrated into the Kurikulum Merdeka in the IPAS textbooks of grade V elementary school students, but with different frequencies and not evenly. It was found that the Cognitive Knowledge component and the Knowledge component of Environmental Problems and Issues were quite widely found in the books. However, the components of Affection, Ecological Knowledge, Natural History, Socio-Political Knowledge, and Responsible Behavior towards the Environment have not received much attention. Further research is still needed, and the development of learning media based on ecological literacy is needed to support ecoliteracy education in Indonesia.

AUTHOR'S NOTE

The author declares that there is no conflict of interest regarding the publication of this article and confirms that the data and content of the article are free from plagiarism.

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