

CHAPTER I

INTRODUCTION

This chapter provides an explanation and rationale for the background and topic areas that are the main focus of the research. The researcher included the research background, problems of the research, purposes of the research, scope of the research, significance of the research, state of the arts, and definition of key terms used in this research, all of which were meant to be presented in this chapter.

1.1 Background of the Research

The 21st century has witnessed a dramatic increase in environmental challenges, including climate change, biodiversity loss, pollution, and natural resource depletion. These global problems have prompted urgent calls for collective action to ensure a sustainable future. In response, various international frameworks have been established, notably the United Nations Sustainable Development Goals (SDGs), which emphasize the importance of environmental sustainability in Goals 11 (Sustainable Cities and Communities), 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land). Addressing these challenges requires a shift in mindset and behavior, which can be achieved through quality education that fosters ecological awareness and responsibility.

One promising educational response to this call is the integration of eco-literacy into formal education. Eco-literacy, or ecological literacy, refers to the understanding of natural systems and the interdependence between human life and the environment. It empowers individuals to make informed, ethical, and sustainable decisions. Goleman, Bennett, and Barlow (2012) describe eco-literacy as encompassing empathy for all life forms, a commitment to sustainability, the ability to make invisible systems visible, the foresight to anticipate consequences, and an understanding of how nature sustains life. As education plays a pivotal role in shaping attitudes and values, embedding eco-literacy into curricula is essential for fostering a generation of environmentally responsible citizens.

Eco-literacy is essential in today's education landscape as it equips students with the knowledge, values, and skills needed to understand and address pressing environmental issues that directly impact their lives and future. In an era of climate crisis, biodiversity loss, and unsustainable consumption, young learners must not only be aware of these challenges but also be prepared to make responsible decisions and take meaningful action. Integrating eco-literacy into education fosters critical thinking, empathy for nature, and a sense of interconnectedness between human and ecological systems. As Capra (2005) asserts, eco-literate individuals are capable of recognizing the complex relationships that sustain life on Earth and are empowered to live in ways that nurture the environment rather than degrade it. Therefore, embedding eco-literacy into school curricula particularly in subjects like English that can foster communication, reflection, and narrative exploration is a vital step toward cultivating environmentally responsible global citizens.

In recent years, researchers have become increasingly interested in discussing Eco Literacy because the urgency to improve ecological understanding is crucial in the face of global environmental degradation and the targets set in the United Nations Sustainable Development Goals (SDGs). Eco-literacy is defined as a situation where people are enlightened about the importance of the environment (Carlson & Heimlich, 2010). Goleman & Barlow (2012) also explained the indicators of the eco-literacy must be developed to create a society that has ecological literacy, namely: 1. Developing empathy for all forms of life; 2. Embracing sustainability as a community practice; 3. Making the invisible visible; 4. Anticipating the unintended consequences; 5. Understanding how nature sustains life.

The Sustainable Development Goals Report (SDGs) 2024, environmental awareness is included in 11, 12, 13 and 15 of the SDGs categories, namely sustainable cities and communities, responsible consumption and production, climate action, and life on land, where environmental awareness is needed to address persistent challenges to biodiversity, forests, and planetary life-support systems. Several researchers also emphasize the role of formal education, cultural

integration, and ecological-literacy can help raise awareness among students and the community (Kulnieks et al., 2013; Dharma et al., 2022; Ali et al., 2024). Therefore, improving ecological literacy is important to increase students' and society's awareness for sustainable environmental education.

According to Berkowitz et al (2004) there are two concerns about ecology in environmental education. First, the ecology can reflect outdated ecological science and epistemology. Second, at times, too much or too little attention is given to ecology, or there may be an overly rigid, linear, and hierarchical view of environmental education building on science (ecology) “facts” toward “environmentally responsible behaviors.” There are several reasons why these problems arise and persist. Improving students' ecological literacy is a goal of environmental education. (Rusmawan, 2017) stated Environmental awareness can be grown within students if the teacher has eco- literacy. In addition through projects involving communities, the development of digital learning, or curricula for teacher training, improving ecological literacy is crucial in encouraging sustainable behavior (Arga and Rahayu, 2019; Rubini et al., 2023; Vaughan et al., 2021). Ecological literacy is an educational approach to address the worsening relationship between humans and the environment. Environmental awareness is one aspect that can be achieved through ecological literacy.

In Indonesia, the importance of environmental education is gaining traction, especially in the context of the national curriculum's emphasis on character education and contextual learning. However, research suggests that existing educational materials, particularly English textbooks used in junior high schools, often lack a meaningful integration of environmental themes (Putri & Tola, 2022; Sari et al., 2023). While environmental topics may appear sporadically, they are seldom presented in ways that develop students' ecological awareness or critical thinking. This gap highlights the need for innovative learning resources that combine language learning with ecological consciousness.

English reading materials offer a valuable medium for promoting eco-literacy. Through well-designed texts, students can engage with environmental issues, reflect on human-nature relationships, and develop language skills

simultaneously. Reading activities grounded in real-world contexts not only improve comprehension but also nurture critical and ethical thinking. Moreover, junior high school students are at a developmental stage where they begin to form enduring values and beliefs, making this period ideal for introducing eco-literacy through engaging and age-appropriate content.

Several prior studies have offered different perspectives on the integration of environmental content into English language education. For instance, Putri and Tola (2022) revealed that although English textbooks in Indonesian junior high schools contain environmental themes, these are often superficial and not systematically designed to foster eco-literacy. Sari et al. (2023) supported this view, noting that existing reading materials rarely go beyond basic environmental vocabulary and do not stimulate students' critical engagement with ecological issues.

In contrast, Saputra and Rahmawati (2023) found that students who engaged with reading materials explicitly designed around sustainability themes demonstrated improved comprehension and stronger environmental sensitivity. However, their study was limited to experimental trials without long-term integration in the school curriculum. Meanwhile, Orman (2024) critiqued many classroom-based approaches for being too instructional and not sufficiently experiential, suggesting that eco-literacy should be cultivated through active, student-led inquiry.

This divergence of perspectives highlights a core debate in the literature: whether environmental themes in language learning should be integrated implicitly through general content exposure or explicitly through systematic design grounded in pedagogical and ecological theory. While implicit approaches may be easier to embed within existing curricula, explicit approaches offer greater potential for transformative learning outcomes. This study aligns with the latter, aiming to design structured materials that are pedagogically sound and aligned with eco-literacy principles.

Despite the recognized importance of eco-literacy and its potential to be integrated into English language teaching, few studies have developed structured

and validated materials that target both reading comprehension and ecological education. This study aims to fill that gap by designing English reading materials infused with eco-literacy for Grade VIII junior high school students. The research adopts a Design and Development Research (DDR) methodology to ensure that the materials are theoretically grounded, contextually relevant, and pedagogically effective.

1.2 Research Questions

The study focused on Designing English Reading Learning Materials infused with Eco-Literacy for Junior High School Grade VII. Accordingly, four sub-questions were proposed by the researcher for the study:

1. To what extent are the existing eco-literacy infused with English reading learning materials for junior high school?
2. How is the procedure of designing eco-literacy infused English reading learning materials for junior high school?
3. How is the design eco-literacy infused English reading learning materials for junior high school?
4. How is the readability of eco-literacy infused English reading learning materials in junior high school?

1.3 Purpose of the Research

1. To analyze the extent to which eco-literacy based English reading learning materials exist in junior high school.
2. To describe the procedure for designing eco-literacy based English reading learning materials in junior high school.
3. To design eco-literacy based English reading learning materials in junior high school.
4. To present the readability of eco-literacy based English reading learning materials in junior high school.

1.4 Scope of the Research

The scope of this research is limited to designing English reading learning materials that infuse eco-literacy for seventh grade students in junior high schools. The products developed are teaching materials consisting of environmental themed reading texts, comprehension activities, and reflective tasks designed to increase eco-literacy. This study use the DDR methodology and involves needs analysis, material design, expert validation, readability testing.

1.5 Significance of the Research

This research is expected to provide some theoretical and practical contributions to the field of English language and also increase ecological literacy. Theoretically, this research can be used as a guide for further research, especially in designing reading learning materials, or for those who are interested in integrating ecological literacy into English teaching materials. By embedding ecological values into reading materials, this research supports an interdisciplinary approach that combines language proficiency with environmental awareness.

Practically, this research is expected to support teachers in using English reading materials integrated with eco-literacy designed for junior high school students. This reading material aims to foster not only students' reading skills but also their awareness and responsibility for environmental issues. Teachers can implement designed teaching materials as part of their efforts to integrate educational character, environmental awareness, and language development simultaneously. Furthermore, this research can be a reference for curriculum developers and educators who want to promote green pedagogy in English language teaching.

1.6 Definition of key terms

To prevent misunderstanding, the following are key terms discussed in this research, and these terms will also be briefly explained to provide a more comprehensive understanding of the focus of the research.

- a. Eco-Literacy: The capacity to understand ecological systems, reflect on environmental values, and take responsible actions toward sustainability (Goleman et al., 2012).
- b. English Reading: reading is a complex and strategic process, which involves interaction between the text and the reader's knowledge to construct meaning (Grabe dan Stoller, 2013).
- c. Learning Materials: anything which is used to help teach language learners, including text, images, audio, video, and activities designed to facilitate learning (Tomlinson, 2011).
- d. Junior High School Students: refers to students in junior high school, generally aged 12 to 15. According to Santrock (2011), at this stage, students are in a period of rapid cognitive and emotional development, marked by increased abstract, logical, and reflective thinking skills. They begin to understand more complex concepts and think critically.

1.7 State of the Art

The concept of ecological literacy was first introduced by Orr (1992), and expanded by Capra (1996) and Goleman et al. (2012), who emphasized the integration of environmental values into education. In recent years, the World Economic Forum and UNESCO have urged educators to embed sustainability principles into curricular content across disciplines.

In Indonesia, several studies have highlighted the presence of environmental themes in English textbooks (Putri & Tola, 2022; Sari et al., 2023), but noted their limited depth and effectiveness. Saputra and Rahmawati (2023) demonstrated that reading materials infused with sustainability themes can enhance comprehension, critical thinking, and ecological sensitivity. However, few studies have explicitly designed and validated eco-literacy-based English reading materials for junior high school students.

This study seeks to fill this gap by systematically designing reading materials that promote both language proficiency and eco-consciousness, guided by the DDR model and validated through expert and student feedback.

1.8 Novelty of the Research

The novelty of this research lies in the integration of eco-literacy into English reading learning materials specifically designed for junior high school students in Indonesia. While most English language materials tend to emphasize linguistic competence alone, this study introduces an innovative approach by embedding ecological themes such as environmental awareness, responsibility, and sustainable action into the development of reading texts and tasks. The materials are not only pedagogically aligned with the Kurikulum Merdeka, but also contextualized to reflect students' real-life environmental surroundings, such as waste issues, pollution, and green habits. This creates a dual-purpose learning resource that simultaneously enhances students' English reading skills and nurtures their ecological consciousness.

In addition, this research contributes a structured model of materials development that incorporates eco-literacy through engaging reading activities, vocabulary tasks, comprehension exercises, and reflective actions. Unlike previous studies that often end at the design stage, this study advances to expert validation and classroom implementation, providing empirical evidence of the materials' validity and effectiveness. The results show that the materials are not only valid in terms of content, language level, and eco-literacy integration but are also well-received by students. Thus, this study offers a novel and practical contribution to the field of English Language Teaching by promoting environmental values through meaningful and localized reading materials.

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