

CHAPTER I

INTRODUCTION

This chapter describes the research outline embodied by the study's background, research questions, purposes, scope, significance, and state of the art.

1.1. Background of The Study

The environmental issues remain a crucial global concern in the 21st century, as approximately eight million species of flora and fauna are endangered with extinction, while around 40 percent of the human population has experienced land degradation (UNEP – UN Environment Programme, 2025). In response to these challenges, the United Nations emphasizes sustainable development as an effort to meet present necessities without compromising the future of human beings in fulfilling their needs (United Nations, 2023). Furthermore, environmental education has been internationally promoted since the 1970s beyond initiatives led by UNESCO and UNEP, particularly the Belgrade Charter and the Tbilisi Declaration, where the goal is to enhance the ecological relationship of humanity with nature and to foster environmental awareness, knowledge, attitude, and skills, and participation (UNESCO-UNEP, 1975; UNESCO 1978).

However, the environmental destruction continues to intensify, suggesting that awareness alone may not necessarily reflect environmentally responsible behavior, considering the degradation is still happening in this 21st century and going downhill even though environmental education has been carried out since 1970 (Kristalinawati et al., 2019). Thus, in the educational setting, The Berlin Declaration on Education for Sustainable Development (UNESCO, 2023) urged the establishment of Environmental Education (EE) as a standard element of every national syllabus by 2025 for the sake of addressing environmental problems across the world. The Sustainable Development Goals (SDG) agenda for 2030 proposes an environmental

dimension, namely SDG 13 (climate change), which considered as environmental objective that the United Nations Environment Programme targets in 2030 to conduct and foster sustainable development in order to diminish environmental issues (UN Environment Programme, 2025).

Moreover, Green Education (GE) has been increasingly employed and primarily utilized interchangeably with Environmental Education (EE) to emphasize the role of education in responding to the climate crisis and preserving nature (Setyowati et al., 2022; Li & Liu 2024). GE is rooted in the long-standing efforts of Education for Sustainable Development (ESD), embodies an inclusive approach which emboldens pupils with the knowledge, skills, and attitudes imperative to take part in transformative movements concerned with mitigation, adaptation, and hardiness to climate change, with the broader goal of crafting green, low-emission, and climate-resilient communities (UNESCO, 2024). In this regard, Green Education forms upon and extends the foundations of Environmental Education by deciphering its ecological awareness aims into actionable sustainability competencies.

Furthermore, there are several issues that endangered the environment in Indonesia. The illegal nickel mining in Raja Ampat, Papua, poisoned Papuan fishing sites, destroyed reefs, and damaged mountains (Maspul, 2025). The project of a new capital city in East Kalimantan, IKN, caused a forced displacement of indigenous tribes living areas, deforestation, and the decrease of native plants and animals (Niko, 2024). Riau province has contributed to 42% of 7.5 million hectares of deforestation on Sumatra Island, making Riau the highest percentage of deforestation in Sumatera (Juniyanti & Situmorang, 2023). In addition, as of August 19, 2025, air quality in Jakarta had reached the index of 146 points, which is categorized as unhealthy (IQAir, 2025). The circumstances in the world, precisely in Indonesia, require further educational response. People must be educated and aware of current environmental issues faced by the society.

Hence, the infusion and campaign of Environment in the education field are substantial to protect the environment and maintain sustainability, in

which the existing and yet-to-come pupils are urged to have decent mindfulness, understanding, and abilities for the sake of facilitating them to contribute in enhancing the value of peace and safety in the world environment (Laaloua & Tamer, 2022). Further, the learning basis in Education for Sustainable Development (ESD) includes behavioural aspect regarding climate change issues, which goals are to actively engage in the community of national and global level projects to encourage a green education and sustainable world by implementing six pertinent notions, namely weather, climate and climate change aspect, greenhouse gases, the carbon cycle, the water cycle, avoiding pollution and conserving resources, and renewable energy (UNESCO, 2024).

Nonetheless, the incorporation of environment-based materials, especially green education with English as a Foreign Language Learning experienced challenges. Pupils, teachers, and the general public have their own beliefs regarding the environment and how to take care of it, which may hold back the Environmental movement and result in the difficulty of educating people, specifically learners within English as a Foreign Language (EFL) (Tatin et al., 2024). This is where the position of local culture literacy becomes substantial, since by adding culture into the learning process, it maintains students' willingness when studying the English language (Tantri & Santosa, 2024).

Culture is considered a way of life wherein, in the classroom activities, students are offered cultural experiences to help them comprehend their own culture, for instance, through food, clothing, arts, literature, and realia, including animals and plants as part of the environment (Moran, 2001). The integration of cultural dimensions in learning materials encourages pupils to foster their cultural literacy and awareness, and the incorporation of students' backgrounds of culture is advocated in the learning materials as well (Oktarina et al., 2022; Mukundan et al., 2016). There are five cultural dimensions that are substantially infused in foreign language learning, namely products, practices, perspectives, communities, and persons, where the dimension of culture is

defined as products that one uses in various practices among communities beyond contemplating their perspectives (Moran, 2001).

Further, cultural literacy addresses the adeptness of individuals in comprehending, appreciating and representing a variety of cultures, where pupils ought to be equipped with cultural literacy skills to mingle, cherish, and express tolerance of diverse cultures in the institutional settings and among communities (Saidah et al., 2025). The notion of cultural literacy encompasses significances among students across distinct cultural backgrounds and regions as the pivotal skill in 21st-century learning for daily tasks (World Economic Forum, 2016). Thus, beyond local culture literacy, students will be familiar with learning English with the content of their cultural settings, and at the same time, it supports teachers in introducing environmental awareness, especially in Indonesia.

Culture and environment are two crucial aspects for the English language classroom activities in Indonesia that must be infused in the learning materials. One of which is beyond reading comprehension, as reading is a substantial skill for learners to acquire English language and to comprehend the significance of written texts (Jopalina et al., 2023). Indonesian's students reading skills ranked 72 out of 77 nations across the world, which emphasizes that only few students read occasionally compared to other countries (OECD, 2018). Through learning the English language by infusing of the environmental and local cultural elements, students can foster their reading competency. Consequently, it is pivotal to infuse environment-based and local culture literacy elements in English reading learning materials. However, the research concerning the mentioned infusions are still scarce. It is either the integration of environmental elements or the incorporation of local culture in developing English reading materials.

Prior research underlying the integration of environmental-based English learning materials has been explored. The reading module development has been done by infusing English reading materials with ecological elements for the tertiary level at Bali State Polytechnic, where the results revealed that

the module could enhance reading skills and nurture environmental insights and awareness (Subiyanto et al., 2022). Further, the development of digital materials that integrated environmental awareness for the middle school level has been observed, and it has been exposed that the materials are valid to be implemented by pupils (Ramadhan et al., 2021). The establishment underlying the ecolinguistic approach of English for business course materials at the higher education level fulfilled the ecolinguistics features, such as connections, circumstance, patterns or systems, emergence, quality, value, critical, variability, diversity, and activity (Krismayani, N. W., Suastra, I., & Suparwa, I. N, 2021).

Several studies regarding the integration of local culture literacy have been conducted by researchers. The Elementary school teacher students' comprehension of cultural literacy emerges that they have cultural literacy skills, since it is applied in the teaching and learning activities in advancing mindfulness of diverse culture (Saidah et al., 2025). The development of electronic module by infusing the traditional local games for students at tertiary level in the English department study program demonstrates that the learning media is valuable to assist students in enhancing cultural literacy and nurturing character education (Haddina & de Napoli, 2022). Meanwhile, the observation of cultural literacy in the English language textbooks of senior high school level indicates that the cultural literacy element is not purposively provided in the analyzed English language instruction documents (Sulistyaningrum, 2019). A booklet for middle school students has been tailored to assist reading activity by integrating local folktales, which emphasized that the booklet was applicable in conducting reading skills and appropriate for classroom activities (Kasangke et al., 2025). In Papua, Indonesia, research on integrating local culture for junior high school students indicated that Papuan English educators have implemented local cultural aspects in offering English materials, and pupils' skills can be developed beyond local cultural elements in English language learning (Romrome & Ena, 2022).

Preliminary studies indicate that the infusion of green education and local culture literacy in developing English reading learning materials for tenth graders of vocational school remains insufficient, as most of the research has focused on infusing these elements separately and on how to effectively intertwine both elements for English reading materials. Not to mention the incorporation of local culture literacy has not adequately explored how both environmental education and local culture literacy can be intertwined in reading materials for tenth graders at vocational school level. This limitation is crucial since Indonesian people come from various cultural backgrounds, and students have to enhance environmental and cultural awareness while acquiring English as a foreign language (Mashudi et al., 2022).

Environmental issues continue to increase in Indonesia, highlighting the need for educational efforts that promote environmental awareness and cultural literacy that are relevant to students' real-life contexts. English reading instruction, particularly at the vocational school level, can be integrated with environment-based and local culture literacy in meaningful ways. However, existing English reading materials for tenth graders of vocational schools rarely combine these two elements, and their integration have not been adequately examined. Therefore, this study is conducted to examine the extent to which green education and local culture literacy are embedded in existing English reading materials, to establish clear procedures for integrating both elements, to design English reading learning materials that meaningfully incorporate green education and local cultural literacy, and to evaluate the readability and validity of the developed materials. Beyond this approach, the study is expected to support students' reading comprehension while fostering environmental awareness and cultural literacy and to provide practical and theoretical contributions for English teachers, curriculum developers, and future researchers in the context of Indonesian vocational education.

1.2. Research Question

Based on the background of the study, the research question in this study will be carried out as follows:

1. To what extent are Green Education and Local Culture literacy infused in the existing English reading learning materials for tenth-grade vocational students?
2. What are the procedures of infusing Green Education and Local Culture Literacy into English reading learning materials for tenth-grade vocational students?
3. How is Green Education and Local Culture Literacy infused into the design of English reading learning materials for tenth-grade vocational students?
4. How are the readability and validity of green education and local culture literacy-infused English reading learning materials for tenth-grade vocational students?

1.3 Purpose of the Study

According to the research question mentioned above, the researcher intends to:

1. To examine the extent to which the existing English reading learning materials for tenth-grade vocational students are infused with Green Education and Local Culture Literacy.
2. To illustrate the procedure of infusing Green Education and Local Culture Literacy into English reading learning materials for tenth-grade vocational students.
3. To design and develop English reading learning materials for tenth-grade vocational students according to the Green Education and Local Culture Literacy.
4. To measure the readability and validity of Green Education and Local Culture Literacy-infused English reading learning materials for tenth-grade vocational students.

1.4 The Scope of the Study

The present research discusses the infusion of green education and local culture literacy into English reading learning materials which designed for tenth graders in vocational school level. The scope comprises the design, development, and validation underlying the reading learning materials which interwoven environmental preservation, local culture literacy, and English language learning goals. The focus coverage of environment-based elements encompasses the notion of environment and environmental comprehension on climate change proposed by UNESCO (2024) regarding Green Education, particularly weather, climate, and climate change, greenhouse gases, the carbon cycle, the water cycle, pollution and preserving resources, and renewable energy pertinent to tenth graders' social and emotional learning basis at vocational schools. The idea of local culture literacy takes into account the pupils' skill development illustrated by Moran (2001), such as products that are established and adapted by cultural participants, practices which based on the actions and reactions, perspectives that illustrate one's perceptions, beliefs, values, and attitude that are casually represented implicitly, communities, and persons that express culture in their communities. The study is focused on multimodal of reading learning materials. The study will be established according to the Indonesia's vocational schools context, and in line with the demand of national syllabus and educational criteria, specifically on tenth graders of English language subjects.

1.5 Significance of the Study

The present research aimed to provide worthwhile theoretical and practical implication underlying English language teaching and learning context that will be encompassed as follows:

1. Theoretically: This study tackles the gap in the comprehension of green education and local culture literacy can be significantly interwoven into English language teaching and learning, precisely in Indonesia and represent a framework which highlights approaches and answers of the

world's necessity for concrete ways to establish attentiveness in the environment and local culture literacy.

2. Practically: This study provides readily applicable materials and pedagogical instructions to excel teachers' efficiency in teaching and learning agendas. On the other hand, students attain fruitful advantage based on the incorporated learning approach, where students' mastery in English, awareness regarding the environment, and local culture literacy skills are developed. In terms of the developers of curriculum and institutions of education offers a prototype to construct intertwined English reading learning materials that are feasibly fulfil the aims of learning. The results and references can be carried out as the source in regards for forthcoming study or comparable courses, influencing the escalation of educational applications globally.

1.6 State of the Art

There is a fundamental reason why the researcher ought to infuse green education and local culture literacy in developing English learning reading materials, which is to develop them for tenth-grade of vocational schools, considering prior studies are scarce. The current research is expected to fill the gap mentioned above. Finally, infusing environmentally based and local culture literacy into developing reading learning materials must be taken into account since, through reading learning materials, students can enhance their reading competency (Pratama & Sumardi, 2022). Conducting this research becomes a pivotal concern, and awareness can be raised in the education field starting from a young age. Thus, the present study will focus on the development of reading learning materials infused with green education and local culture. The reading learning materials will be developed based on six Green Education aspects (UNESCO, 2024), considering it assists pupils to implement English language to solve actual world problems (Gayatri et al., 2023). For the local culture literacy element, it will be adapted from cultural dimensions (Moran, 2001).

Both dimensions must fulfill the learning objectives of Merdeka curriculum in Indonesia.

1.7 Definition of Key Terms

Green Education refers to an educational approach which offers environmental sustainability by equipping learners with knowledge, skills, attitudes, and values necessary to respond to environmental challenges. Rooted in Education for Sustainable Development (ESD), Green Education emphasizes climate change awareness, mitigation, adaptation, and responsible environmental action (UNESCO, 2024; Leung & Ng, 2019). The present study indicates that Green Education refers to the environmental dimension comprising six pertinent elements: (1) weather, climate, and climate change; (2) greenhouse gases; (3) the carbon cycle; (4) the water cycle; (5) avoiding pollution and conserving resources; and (6) renewable energy. The mentioned aspects are infused into English reading learning materials to foster students' environmental awareness and critical thinking within vocational school contexts.

Local culture literacy signifies learners' ability to comprehend, interpret, appreciate, and apply knowledge of their local cultural contexts in meaningful ways. Cultural literacy extends beyond factual knowledge of traditions and artifacts, which includes attitudes, namely openness, tolerance, empathy, and the ability to engage in intercultural communication (Hirsch, 1983; Garcia-Mila et al., 2021). In the present research, local culture literacy is framed across the five cultural dimensions proposed by Moran (2001):

- Products (artifacts, places, institutions, art forms)
- Practices (customs, rituals, communicative acts)
- Perspectives (beliefs, values, attitudes)
- Communities (social groups and relationships)
- Persons (individuals representing cultural identities)

Thus, local culture literacy in this study refers to vocational students' ability to comprehend and reflect upon local cultural aspects embedded in English reading learning materials, particularly those connected to the environment in Indonesia.

English reading learning materials refer to systematically designed or adapted instructional resources aimed at developing learners' reading comprehension skills in English. These materials include textbooks, modules, multimodal texts, authentic texts, and strategy-based reading activities (Tomlinson, 2023; Masuhara, 2023). In this study, English reading learning materials are prototype materials infused through Design and Development Research (DDR) procedures. The materials adapt a skills/strategies-based reading approach and integrate CEFR-aligned reading indicators at B1 level, which equivalent to *Fase E* in *Kurikulum Merdeka*, Green Education elements, and Local culture literacy dimensions. Therefore, English reading learning materials in the present research signifies green education and local culture literacy-infused materials to enhance vocational students' reading comprehension while promoting environmental awareness and cultural understanding.

Tent graders of vocational school refer to first-year students enrolled in Indonesian *Sekolah Menengah Kejuruan* (SMK). In *Kurikulum Merdeka* framework, these learners are classified under *Fase E*, which corresponds approximately to CEFR B1 level for reading comprehension (Council of Europe, 2020; Kementrian Pendidikan dan Kebudayaan, 2022). At this stage, students are expected to comprehend descriptive, narrative, recount, and expository texts; identify main ideas and supporting details; infer meaning from context, and apply reading strategies effectively. Hence, in the present study, tent graders of vocational school specifically refer to learners who are preparing for professional and technical fields and who require contextualized English reading materials that are relevant to real-world environmental issues and local cultural contexts.