

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 study, significance of the research, state of the art, 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

In recent years, environmental awareness indicators for sustainable development have emerged as a significant concern on a global scale, especially with the United Nations' SDGs (Sustainable Development Goals) and the World Economic Forum Report 2023-2024 (Arslan & Curle, 2024; Scherer et al., 2018; World Economic Forum, 2024). According to 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. As an international task, each country reaffirmed its commitment to the SDGs, agreeing on the need for urgent, ambitious, and transformative efforts to achieve the goals in full by 2030 (United Nations, 2024). Moreover, several countries have implemented environmental awareness into teaching and learning strategies (Debrah et al., 2021). For instance, (Vasileva et al., 2021) stated that environmental awareness has been implemented into the university curriculum. Therefore, fostering environmental awareness becomes essential to improve sustainable cities and communities.

The urgency of promoting environmental awareness is highlighted as a foundation of sustainable development, emphasizing the critical need to understand and mitigate human impacts on the environment. In the education field, environmental awareness can be promoted through environmental education.

Enhancing students' environmental awareness is a goal of environmental education (Elegbede et al., 2023). The development of environmental awareness, knowledge, attitude, and responsible behavior was facilitated by environmental education (Mohammad Shobeiri et al., 2013). Environmental education fosters awareness of environmental protection among individuals and social groups, promoting knowledge, comprehension, values, attitudes, skills, and abilities (Abbas & Singh, 2012; Erhabor & Don, 2016). In addition, Biedenweg et al. (2013) stated that Environmental education is a learning process whose main objective is to inform and motivate people to adopt more ecologically conscious and sustainable behaviors. The process of incorporating environmental content into the educational system to raise public awareness of environmental issues at all educational levels is known as environmental education (Thomson & Hoffman, 2003). It is an educational approach to address the worsening relationship between humans and the environment. As a result, environmental awareness is one of the aspects that can be achieved through environmental education.

Numerous studies in the field of education have addressed environmental awareness, particularly in teaching and learning (Hambali & Amoo, 2014; Paradewari et al., 2018; Tekin & Gunes, 2018; Widiyatmoko et al., 2022; Yildiz & Budur, 2019). The study from Hambali & Amoo (2014) On integrating environmental awareness into teaching and learning mathematics, 90% of the respondents expressed a positive awareness of climate change. This can assist in areas of curriculum innovation and help achieve one of secondary education's broad goals, which is to prepare our students for productive living within society. Meanwhile, Paradewari et al. (2018) have researched promoting environmental awareness in the learning context. The study showed that promoting environmental awareness to EFL learners in teaching and learning is important to build their familiarity with environmental issues and their awareness of sustainable living. Furthermore, Suwandi (2018) stated that developing English teaching materials for junior high school students based on environmental awareness principles is essential to meet the needs of both teachers and students, especially the students, who will not only learn English but also learn how to take care of the environment. These prior studies have demonstrated the necessity of incorporating environmental

awareness Indicators into English learning materials to address it in classroom activities.

In the context of higher education, reading proficiency is one of the abilities needed, as a foundation skill that supports almost all academic activities. (Patel & Jain, 2008) assert that reading is an active process of identifying and understanding text that supports academic achievement. It means that reading is not just a basic skill but a foundational academic competence that directly correlates with students' success in learning, thinking, researching, and contributing to their field of study. But even though reading is associated with academic pursuits, university students' reading habits are poor (Balan et al., 2019; Dorji, 2020; Hasanah et al., 2023). The reading proficiency and English proficiency of Indonesian university students remain inadequate, even with lecturers' attempts to improve reading habits (Poedjiastutie, 2018). Therefore, designing English reading learning materials in order to improve students' interest in reading a text is needed.

Some scholars have investigated the infusion of environmental awareness into English reading learning materials. First, the study from (Ali & Thahar, 2024) showed that there is a simultaneous contribution between the mastery of vocabulary in the field of environment and reading interest. The use of vocabulary with the theme of environmental awareness can help students to understand the reading texts more deeply because they can interpret environmental awareness vocabulary in their real lives. Second, the study from (Noto et al., 2022) analyze the climate change exposition reading materials. It is necessary to incorporate English reading materials with the content subjects since students are still not familiar with the topic of climate change, expository texts are the type of text that is required, and there aren't many English reading materials that are already connected to the topic. Another study from (YÖRÜK ÇEVİK, 2020) to promote environmental awareness and a sense of connectedness with our surroundings, they must be made to incorporate reading and listening passages with speaking and writing exercises about environmental issues. In conclusion, the infusion of environmental awareness indicators into English reading learning materials is needed to build students' aware and care for their surroundings.

Integrating 21st-century skills, especially problem-solving skills, into English reading learning materials can be a way to address environmental issues. Environmental problem-solving skills, as defined by Sigit et al., (2021), refer to the ability to identify solutions for the disparities between the present and the desired environments. Problem-solving abilities involve more than just simple thinking; they also call for sophisticated mental processes and a variety of cognitive abilities (Saygılı, 2017). Possessing problem-solving skills is essential for confidence and for following problem-solving procedures. Problem-solving is also one of the most useful and crucial abilities for preparing students to confront and resolve issues in The real world (Dwiyogo, 2018; Montejo, 2019; Riyadi et al., 2021). It is also in line with (Aspastur & Sulistyaningrum, 2021), which explained that problem-solving skills have become an essential skill needed in recent years. Another study from Chen & Chang (2024) Incorporating creative problem-solving skills to foster sustainability among graduate students in education management highlighted the need for creative problem-solving skills to prepare students for environmental and social challenges. Creative problem-solving training not only improved specific skills but also fostered a broader commitment to sustainability. The study concludes that creative problem-solving skills are essential for promoting sustainability and creativity among students in higher education. As a result, integrating environmental awareness into English learning materials seems to be a strategic approach to accustom the students to environmentally conscious and caring behavior. However, it is also essential to incorporate 21st-century skills into new environmental awareness English reading learning materials, specifically problem-solving skills.

On the other hand, despite being linked to achieving environmental awareness, students in higher education, especially undergraduate students in English language education study programs (ELESP), lack attention and focus on environmental problems and finding solutions for them, particularly in the context of English reading learning materials. Even though university students are well-informed about environmental issues, they show little dedication to pro-environmental behavior (Mkumbachi et al., 2020). In the case of teaching English in higher education, the *Indonesian National Qualification Framework* (KKNI)

stated that undergraduate students must be at 6 levels of competencies. One of the competencies requires undergraduate students to be able to solve problems and able to adapt to the situations faced by them. Those competencies include such as students being able to make the right decisions based on analysis of information and data, and being able to guide in selecting various alternative solutions independently and in groups. It is in line with the statements stated in *Merdeka Belajar Kurikulum Merdeka* (MBKM) for universities in Indonesia, which focuses on outcome-based education (OBE). In addition, Apen & Si (2016), problem-solving during the learning process enhanced language mastery outcomes. It means that, problem-solving skills as one of the 21st-century skills that need to be infused into English reading learning materials for undergraduate students in order to achieve the KKNI level 6 qualification.

Regrettably, most studies in English reading learning materials have yet to infuse environmental awareness and problem-solving skills. Environmental awareness learning material was only focused on knowledge and information in the context of environmental education, without linking it with concrete problem-solving as solutions to facing global issues. Knowing and measuring students' environmental awareness indicators is a little bit challenging for teachers because it includes cognitive aspects and behaviour, but there are only a few previous studies in English reading learning materials that support students with environmental awareness indicators. In addition, some private and public universities in Indonesia only little bit infuse environmental awareness in their English reading learning materials. This is proven by the learning materials they used and the fact that we can observe directly in the field. For instance, there are only a few students who use the tumbler for bringing water, but most of them still buy water in plastic bottles and use plastic to cover their food. It is also supported by the previous study from (Aquan et al., 2025) revealed that the lecturer consistently demonstrates higher environmental awareness in all categories but for the students and educational staff groups, there is a need to strengthen environmental awareness through knowledge, attitudes, and behaviors. Strengthening awareness among students can be done through the integration of environment-related courses and extracurricular activities, while for educational staff, it can be done through regular training and

workshops in environmental management. Therefore, the researcher chose 5 universities in Indonesia; these universities include 1 state university in Jakarta, 1 state university in Tangerang, 1 state university in West Sumatra, and 1 state university in the Riau Islands, and to see more details, the researcher also chose one private university in Tangerang. Based on the overview of previous research, the development of new English reading learning materials is necessary in the realm of environmental awareness indicators, with the infusion of problem-solving skills for undergraduate students in ELESP. Thus, this study has a novelty and a gap to fill from the previous research. This research intends to conduct a development study to infuse environmental awareness indicators and problem-solving skills in designing English reading learning materials for ELESP.

1.1 Research Questions

In this study, the researcher composed a main research question with four sub-questions, which are mentioned in the following part.

Main question:

How is the design of environmental awareness indicators and problem-solving skills-infused English reading learning materials for ELESP?

Sub-research questions:

1. To what extent are environmental awareness indicators and problem-solving skills infused in the existing English reading learning materials for ELESP?
2. How is the process of infusing environmental awareness indicators and problem-solving skills in designing English reading learning materials for ELESP?
3. How is the design of English reading learning materials infused with environmental awareness indicators and problem-solving skills for ELESP?
4. How are the validity and readability of environmental awareness indicators and problem-solving skills-infused English reading learning materials for ELESP?

1.2 Purposes of the Study

In line with the main research questions and sub-research questions above, this study presents the purposes of the study as follows:

Main research purpose:

To design English reading learning materials that infused environmental awareness indicators and problem-solving skills for the English Language Education Study Program (ELESP).

The Sub-research purposes of this present research are:

1. To analyze environmental awareness indicators and problem-solving skills infused in the existing English reading learning materials for ELESP
2. To describe the procedure of designing environmental awareness indicators and problem-solving skill-infused English reading learning materials for ELESP
3. To develop environmental awareness indicators and problem-solving skills-infused English reading learning materials for ELESP
4. To present the validity and readability of environmental awareness indicators and problem-solving skill-infused English reading learning materials for ELESP

1.3 Scope of the Research

The scope of the research focuses on incorporating environmental awareness indicators and problem-solving skills into the design of English reading learning materials for the English Language Education Study Program (ELESP). The learning aspect being designed is an English reading Learning material. The design of English reading learning materials for ELESP will align with the objectives of Kerangka Kualifikasi Nasional Indonesia (KKNI) Level 6 and *Merdeka Belajar Kurikulum Merdeka (MBKM)*, which focus on Outcome-Based Education (OBE) as a key component of the national learning goals for higher education, especially for undergraduate students of English language education study programs (ELESP) to face globalization and the 21st century. The environmental awareness indicators and problem-solving skills concepts are also

infused in the design. To make the design, DDR R&D is the methodology used in this research that includes need analysis, design, evaluation, and revision.

1.4 Significance of the Research

This research is expected to provide some theoretical and practical contributions to the English language field. Theoretically, this research can be used as guidance for further research, especially in the area of development studies, or for those who are interested in integrating environmental awareness indicators and problem-solving skills into the development of English reading learning materials. Hopefully, this research offers a comprehensive description and literature on environmental awareness indicators and problem-solving skills-infused English reading learning materials for ELESP.

Practically, this research hopefully supports teachers in using English reading learning materials with a focus on environmental awareness indicators and problem-solving skills integration. It is also expected that environmental awareness indicators and problem-solving skills infused in English reading learning materials for ELESP can help teachers sharpen students' environmental care skills and solve the problems that they face around them. This research intends to enhance the existing pedagogical activities by utilizing the eco-literacy teaching experience using environmental awareness indicators and problem-solving skills concepts.

1.5 Definition of Key Terms

To prevent misunderstanding, the following are the technical terminologies that are used in this study:

1. Environmental Awareness refers to the knowledge, understanding, and critical thinking skills needed to identify and address environmental issues, encompassing not only awareness of environmental problems but also the ability to make informed decisions and take responsible actions to protect the environment; essentially, it's the capacity to understand the complex relationships between humans and the natural world and act accordingly to promote sustainability (Enger & Smith, 2022).

2. Problem-solving skills refers to the ability to identify and analyze a problem, then select and implement an appropriate plan of action to find a solution; essentially, the process of finding solutions to problems through critical thinking and analysis (Cambridge, 2020).
3. EFL stands for English as a foreign language. This term is usually used in English-teaching discipline to refer to the position of whether a person is not using English as his or her first or second language (Alefesha & Al-Jamal, 2019).
4. CEFR stands for Common European Framework of Reference. In this study, the researcher uses the CEFR for Languages formulated by the Council of Europe. It is an international measurement published by the Council of Europe to describe the levels of language skills in multiple contexts and can be used for all languages (Council of Europe, 2020).
5. Undergraduate students of ELESP refer to one of the fields of study programs in universities that are related to education pedagogy and language.

