

CHAPTER I

INTRODUCTION

This chapter consists of seven sub-chapters, namely, background of the research, then followed by research questions, purposes of the research, scope of the research, significance of the research, state of the arts, and clarification of key terms.

1.1 Background of The Research

The development of instructional materials has become a central issue as education continues to adapt to the demands of globalization. Within English language education, materials are no longer viewed simply as sources of linguistic input; they are expected to create meaningful learning experiences that reflect learners' communicative needs and real-world contexts. Rather than presenting language in isolated forms, effective resources should expose learners to authentic use and foster active engagement (Tomlinson & Masuhara, 2018). Recent perspectives in English language teaching further highlight the importance of cultivating communicative competence that is responsive to intercultural interaction and the complexities of contemporary global realities (Rose et al., 2020). Despite these expectations, instructional materials in many contexts remain largely language-oriented and heavily dependent on textbooks.

In Indonesia, particularly at the senior high school level, English-speaking materials often emphasize grammatical structures and functional expressions, while offering limited opportunities for students to engage with issues connected to their immediate environment and future challenges. This situation underscores the need for more contextually relevant and meaningful speaking materials, resources that not only strengthen linguistic competence but also advance broader educational purposes by preparing learners to participate thoughtfully in diverse communicative settings.

The Education for Sustainable Development (ESD) has been recognized as a priority of universal strategy; in response to address interconnected global challenges, not just environmental issues, but inequality that impact socio-economy

as well (UNESCO, 2025). Hence, the perception that ESD is limited to environmental area is inaccurate, ESD should dealing with holistic perspective (Letouzey-Pasquier et al., 2023). ESD helps learners to live with sensible choice and responsible action, to contribute in balancing social welfare, environmental protection, economic progression; commonly refer to as the three pillars of sustainability: people, prosperity, and planet (UNESCO, 2021). This is aligned with how global education leads the school framework across the globe, to emphasize that learning should expand beyond conventional academic skills, preparing learners with competencies for sustainable future (Akinsemolu & Onyeaka, 2025).

The Education for Sustainable Development (ESD) can be incorporated into the curricula of multidisciplinary, however, it suits best in EFL learning context. Thus, EFL classrooms has the ability to show learners the sustainability issues, as education is vital to help learners move towards sustainability (Jodoin, 2020). Covered by this program, educational institutions are encouraged to promote sustainability literacy, giving learners the tools to understand and act on global issues they faced every day (Pinner, 2021). The ESD is said to be the core driver in the improvement of sustainability literacy (Saarna & Laius, 2025). Accordingly, the Education of Sustainable Development helps students to achieve the sustainability literacy, the ability to understand, builds critical thinking, and to take action on sustainability matter, including people well-being, prosperity of the economy, and the planetary-environmental development.

Sustainability literacy can be understood as the ability of learners to understand sustainability issues, make critical connections between them, and express informed views related to environmental, social, and economic aspects. Recent studies highlight that this kind of literacy should not be limited to subjects like science or social studies, but should be integrated across all learning areas, including language education (Gayatri, et al., 2023; Sterling, 2021). Within schools, the Sustainable Development Goals (SDGs) provide a clear framework for including sustainability literacy into teaching and learning. Out of the 17 SDGs, several stand out as key examples: SDG 3, which focuses on good health and well-being; SDG 4, which promotes quality education; SDG 8, which emphasizes decent work and economic growth; and SDG 14, which addresses life below water. These

SDGs are considered sustainability literacy that fully encompass all three aspects People, Prosperity, and Planet or Social, economic, and environmental (Jacinto, 2025; Benavot, 2017). Together, these goals reflect the three main pillars of sustainability; social, economic, and environmental and show how education can prepare learners to engage with global challenges in meaningful ways.

The SDGs of 3, 4, 8, and 14 are particularly relevant for high school students, as they address issues that directly impact their lives, such as health and well-being, equal access to education, future employment opportunities, and environmental stewardship. Marine literacy, for example, is emphasized as a crucial part of environmental awareness, reminding students of the need to protect marine ecosystems (UNESCO, 2020; Yu et al., 2024). By integrating these Sustainable Development Goals (SDGs) into English lessons, students not only practice their communication skills but also engage with meaningful sustainability topics, preparing them to express informed perspectives and participate in global conversations about building a better future.

Sustainability literacy is very advantageous for students, either as individual or as a part of society. Considering it helps students to understand sustainability challenges, able to think critically, and express informed perspectives across a range of environmental, social, and economic contexts. Using the Sustainable Development Goals (SDGs) as a framework helps schools connect learning to real-life global issues, making sustainability topics relevant to high school students while strengthening language skills and global awareness. These goals chosen after careful consideration and need analysis from pertinent articles. It's found that the SDGs are especially relevant for Senior High School students, because directly relatable to their present live and future prospects. These includes health awareness, access to quality education, career readiness, and environmental responsibility. Integrating SDG related themes into English-speaking learning allows students to not just improve their communication skills, but also engaging their conversation with meaningful sustainability topics, preparing them to participate in global issues and able to contribute to a more sustainable future.

Previous studies suggest that bringing sustainability themes into English language teaching can do more than improve language skills; it can also boost

learners' motivation, sharpen their critical thinking, and strengthen their sense of global citizenship (Pinner, 2021; Sung, 2023). Research in English Foreign Language (EFL) classrooms shows that when lessons are built around sustainability, students engage in more meaningful communication because they are encouraged to discuss in actual events, which socially relevant issues in the target language (Gao & Zheng, 2022). Despite these promising findings, most existing research that has been found only concentrated on reading, writing, or higher education contexts, leaving English-speaking instruction at the senior high school level less explored. Meanwhile, it was stated that secondary school indeed an important phase to explore tangible real issues in the world such as sustainable future.

At the same time, recent pedagogical studies point out at the value of Visual Thinking Strategies (VTS), an approach that uses visual prompts to spark observation, interpretation, and dialogue among students. VTS has been shown to support oral language development by easing speaking anxiety, encouraging active participation, and fostering discussions grounded in evidence (Clark-Gareca & Meyer, 2022; Huh & Cho, 2023). Although Visual Thinking Strategies (VTS) show clear advantages for language learning, even stated as the tools which effectively reduce speaking issues, relatively little research has explored how they can be systematically applied to embed sustainability literacy and Sustainable Development Goals (SDG) content into English-speaking materials for senior high school students. Collectively, the existing literature points to a promising research space at the intersection of ESD, sustainability literacy, English-speaking instruction, and visual-based pedagogies.

While sustainability is increasingly recognized as a vital educational goal, English-speaking materials, especially in senior high school, often continue to prioritize linguistic accuracy and everyday communicative topics, leaving few opportunities for learners to critically engage with sustainability-related issues that reflect the three pillars of sustainable development: social, environmental, and economic dimensions or people, prosperity and planet. (UNESCO, 2020; Yu, Guo, & Fu, 2024). As a result, the gap in applying SDGs while blending the people, prosperity, and planet aspect through VTS, highlights the need for innovative

approaches to English-speaking learning material development that integrate SDG-focused sustainability literacy into English-speaking lessons through proven effective strategies such as VTS. Despite the growing global emphasis on ESD and the incorporation of sustainability principles into educational policies, their practical application in English Language Teaching (ELT); particularly in speaking instruction at the senior high school level remains limited and fragmented.

Previous research on sustainability in English Language Teaching (ELT) has primarily concentrated on areas such as curriculum analysis, teacher perspectives, and the integration of sustainability themes into reading and writing instruction, while speaking skills have received comparatively less attention as a channel for developing sustainability literacy. Evidence from secondary English Foreign Language (EFL) contexts shows that speaking activities often lack substantive content and rarely involve learners with complex global challenges, including health and well-being (SDG 3), quality education (SDG 4), decent work and economic growth (SDG 8), or environmental sustainability, particularly issues related to Life Below Water and Ocean Literacy (SDG 14) (Yonata et al., 2022; Dhanyamol & Sethunarayanan, 2025). This disconnection highlights a clear gap between the goals of Education for Sustainable Development (ESD), the pedagogical practices currently employed in English-speaking classrooms, and the goals to achieve the understanding of sustainability literacy of three pillars.

Moreover, while sustainability literacy emphasizes the need for learners to grasp the interconnectedness of the three pillars: people, prosperity, and planet, these dimensions are minimally address harmoniously in the current English in speaking learning materials. The economic and social aspects of sustainability; such as decent work opportunities and social well-being are often overlooked (even if, some of secondary school graduates are searching for working opportunity right away, they are not equipped with this knowledge explicitly), with instruction tending to frame sustainability narrowly as an environmental issue rather than as a multidimensional concept (Pinner, 2021; Usman et al., 2025). As a result, learners risk developing only a partial or surface-level understanding of sustainability and may struggle to express well-informed perspectives on these issues through spoken English.

Visual Thinking Strategies (VTS) have been recognized in several previous studies as a valuable approach for strengthening oral communication, fostering critical thinking, and increasing learner engagement through the use of visual cues and interactive dialogue. Yet, most research addressing VTS within English Language Teaching (ELT) has focused on its influence on general speaking performance or the development of critical thinking skills, without making specific connections to sustainability literacy or Sustainable Development Goal (SDG)-related content, particularly in secondary school contexts (Clark-Gareca & Meyer, 2022; Khalil, 2024).

This study responds to the need to align existing English-speaking learning practices with the growing demand for sustainability literacy by addressing the gap in learning models that intentionally integrate sustainability-focused content through visual-based pedagogical strategies. Therefore, there is a clear need for research that can explore how English in speaking materials can be intentionally designed to instill sustainability literacy, particularly with reference to selected SDGs that reflect the three pillars of sustainable development: social, economic, and environmental (people, prosperity, and planet). This gap raises the important question of how English in speaking can go beyond routine communication practices to become a meaningful platform where learners not only strengthen their communicative competence but also deepen their understanding of sustainability in a way that prepares them to face real-world challenges.

The goals represent in this research shown the three pillars of sustainable development: people, prosperity, and planet which cover the social, economic, and environmental dimensions (UNESCO, 2020; Yu et al., 2024). In light of the gaps identified in integrating sustainability literacy into English-speaking instruction at the senior high school level, this study sets out to design English-speaking materials that deliberately embed sustainability concepts through the use of Visual Thinking Strategies (VTS). The sustainability literacy emphasized here focuses on learners' understanding of selected Sustainable Development Goals (SDGs), specifically SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 14 (Life Below Water/ocean literacy). Which are selected after the need analysis from content analysis and library research

about sustainability literacy and Sustainable Development Goals in adolescent students around the world, especially Asia and Indonesia.

The first pillar, People, in this research covers to the SDG 3: Good Health and Well-Being and SDG 4: Quality Education. The second pillar, Prosperity, in this research covers to the SDG 8: Decent Work and Economic Growth. The third pillar, Planet, in this research covers to the SDG 14: Life Below Water. Some of the articles which gathered surveys for students, like in Yuan et, al. in 2021, stated that there are goals with high preference but unfortunately poor learning levels in their schools. They are not exposed to those SDGs even if they are particularly interested in them, some of them are the SDGs chosen 3, 4, 8, and 14.

A study in Indonesia by Pakpahan et, al. in 2025, about adolescence student needs in education of the education in general especially in health area, showed the findings that adolescents recognize how vital reproductive health knowledge is for their well-being, highlighting the need for accessible and reliable information during this critical stage of growth. The case study in West Kalimantan in Genre Ambassador in 2021 by Yusof and Ariffin, showed result in how the teenagers' awareness increased after they are introduced to the SDGs program, especially in their awareness of life planning and reproductive health. The Ministry of National Development Planning, 2021, stated that, A youth focus group discussions (FGD) revealed that organizations struggled to launch SDG programs during the pandemic, with limited access to education and rising mental health concerns. In response, the government introduced the "School from Home" internet package to support learning and the "Sehat Jiwa" program to address mental health needs. This phenomenon also found in Thailand, which Ministry of Foreign Affairs of Thailand, 2021 (Yusof and Ariffin, 2021) state that, in Thailand, youth volunteers have stepped in to address mental health issues, as many young people faced depression during COVID-19. At the same time, the Youth Council of Thailand has worked to raise awareness and combat teenage pregnancies. These covers the SDG 3 as stated by United Nations, target of 3.4 "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being" and the 3.7 target, "By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning,

information and education, and the integration of reproductive health into nation strategies and programmes.”

Along with the education of health and well-being, it also covers the SDG 4 as stated in (Yusof and Ariffin, 2021), Education (SDG 4) is a national priority, with the government allocating 20% of its budget to ensure quality education and lifelong learning. In the same research, Youth in the Cambodia country have been equipped with technical and 21st-century skills to prepare them as a skilled workforce. Also, in Laos, Malaysia, Philippines, Singapore, it is stated that there’s a progression on employment on young adult after they are exposed to the SDG 8 in the school. At the same time, environmental issues are the one of the most well-known projects from the SDG but it’s rarely touching the important Life Below Water. There’s some research in designing English learning material using environmental issues, like climate change (SDG 13 Climate Action) and other but there’s no research yet in Life Below Water and the ocean literacy itself. Meanwhile, the UN assembly has already begun to raise awareness on how the ocean is very important to us all, and how we as humans are connected into the ocean where 70% of the world capacity is the ocean instead of the land.

The contribution of this study is both theoretical and pedagogical. Theoretically, it establishes a conceptual link between sustainability literacy, English-speaking skills, and VTS, showing how sustainability competencies can be fostered through communicative language instruction (Wiek et al., 2016; Sterling, 2021). Pedagogically, it offers practical guidance for English teachers and material developers by presenting a model of learner-centred, visually supported speaking materials aligned with SDG principles. The findings are expected to demonstrate that VTS-based speaking activities can enhance students’ oral participation, confidence, and understanding of sustainability issues simultaneously (Khalil, 2024).

This thesis is organized into five chapters. Chapter I introduces the research background, questions, objectives, significance, and scope. Chapter II reviews relevant literature on ESD, sustainability literacy, English-speaking instruction, and VTS. Chapter III outlines the research methodology, including design, participants, instruments, data collection, and analysis procedures. Chapter IV presents and

discusses the findings, while Chapter V concludes the study by summarizing results, discussing implications, and offering recommendations for future research.

1.2 Research Questions

Based on the background of the study, this study directed by these following research questions:

1. What are the needs for developing English speaking materials integrating Sustainability Literacy through Visual Thinking Strategies for Senior High School students?
2. How are English speaking materials integrating Sustainability Literacy through Visual Thinking Strategies developed for Senior High School students?
3. What is the design of the developed English Speaking materials integrating Sustainability Literacy through Visual Thinking Strategies?
4. What is the validity of the developed English Speaking materials integrating Sustainability Literacy through Visual Thinking Strategies for Senior High School students?

1.3 Purposes of the Research

In order to line up with the research questions, the purposes of the research are as follows:

1. To identify the needs for developing English speaking materials integrating Sustainability Literacy through Visual Thinking Strategies for Senior High School students.
2. To develop English speaking materials integrating Sustainability Literacy through Visual Thinking Strategies for Senior High School students.
3. To describe the prototype design of the developed English Speaking materials integrating Sustainability Literacy through Visual Thinking Strategies.
4. To evaluate the validity of the developed English Speaking materials integrating Sustainability Literacy through Visual Thinking Strategies.

1.4 Scope of the Research

This research focuses on developing English-speaking materials that intentionally embed sustainability literacy through VTS for senior high school students. The materials are designed around four selected SDGs; SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 14 (Life Below Water/ocean literacy), which together represent the three pillars of sustainable development. The SDG 3 and 4 are the social pillars, SDG 8 as economic pillar, and SDG 14 as environmental pillar, which taking into account after doing the document need analysis from 70 articles. The document needs analysis showed that SDG 3 and 4 gained the highest points as crucial to learn for adolescent. The SDG 8 and SDG 14 are also important but still underdeveloped in English-speaking materials especially in Indonesia. The research is situated within English Foreign Language (EFL) contexts at the senior high school level, with speaking skills as the primary focus, particularly oral participation, communicative competence, and confidence in expressing sustainability-related ideas. VTS serves as the main instructional method, encouraging learners to observe, interpret, and discuss visual representations of sustainability issues. The study does not extend to other language skills such as reading, writing, or listening, nor to other educational levels such as primary or tertiary education. It also limits its scope to the four selected SDGs rather than all 17. Within this framework, the study aims to show how English in speaking instruction can function not only as a platform for language learning but also as a meaningful space for cultivating sustainability awareness and global citizenship among senior high school learners.

1.5 Significance of The Research

The significance of this research lies in its contribution to both theory and practice in the fields of English Language Teaching (ELT) and ESD. Theoretically the study contributes to the growing body of literature that connects sustainability literacy with language education. By embedding selected Sustainable Development Goals (SDGs), namely SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 14 (Life Below

Water/ocean literacy) into English-speaking materials, the research demonstrates how communicative language instruction can serve as a platform for developing sustainability competencies alongside language skills. It also extends the application of Visual Thinking Strategies (VTS) beyond its established role in promoting oral communication and critical thinking, positioning it as a method for fostering global citizenship awareness and ethical reflection through language learning.

Practically the study provides English teachers and material developers with a concrete model of sustainability-infused speaking materials that are learner-centred, visually supported, and aligned with SDG principles. By employing VTS, the materials are expected to reduce speaking anxiety, increase learner participation, and encourage evidence-based discussions, thereby making speaking activities more engaging and meaningful. For senior high school students, the integration of sustainability themes into English-speaking instruction not only enhances communicative competence but also equips them with the awareness and skills needed to articulate informed perspectives on global challenges. In this way, the study offers practical guidance for curriculum designers, teachers, and policymakers seeking to create language learning environments that prepare learners for both academic success and responsible participation in sustainable societies.

1.6 State of The Arts

In recent years, the integration of sustainability literacy into education has gained increasing attention, particularly within the global framework of ESD. International organizations such as UNESCO emphasize that education must prepare learners to address complex challenges by balancing environmental protection, social well-being, and economic growth; often referred to as the three pillars of sustainability (UNESCO, 2020; Sterling, 2021). Within this agenda, sustainability literacy is seen as a vital competency, requiring learners to understand sustainability issues, think critically about their interconnections, and communicate informed perspectives (Wiek et al., 2016).

In English Language Teaching (ELT), sustainability has been explored mainly through curriculum analysis, teacher perceptions, and the integration of sustainability themes into reading and writing instruction (Pinner, 2021; Sung, 2023). Research in English Foreign Language (EFL) contexts shows that sustainability-oriented instruction can enhance motivation, critical thinking, and global citizenship awareness while supporting language development (Gao & Zheng, 2022). However, most of these studies have focused on higher education or literacy skills other than speaking, leaving English-speaking instruction at the secondary school level relatively underexplored (Yonata et al., 2022; Dhanyamol & Sethunarayanan, 2025).

At the same time, Visual Thinking Strategies (VTS) have been recognized as an effective pedagogical method for promoting oral communication, critical thinking, and learner engagement through visual prompts and dialogic interaction (Clark-Gareca & Meyer, 2022; Huh & Cho, 2023). While VTS has been applied successfully to improve general speaking performance and reduce speaking anxiety, its potential to systematically integrate sustainability literacy and SDG-related content into English-speaking materials has not yet been fully examined (Khalil, 2024).

Taken together, the current state of the art highlights a promising but underdeveloped intersection between sustainability literacy, English-speaking instruction, and visual-based pedagogies. Existing studies demonstrate the benefits of sustainability-oriented language learning and the effectiveness of VTS, yet there remains a gap in research that combines these elements to design innovative speaking materials for senior high school learners. This study seeks to address that gap by developing English-speaking materials that infuse sustainability literacy through VTS, thereby contributing both theoretically and practically to ELT and ESD.

1.7 Clarification of Key Terms

To ensure clarity and consistency throughout this study, several key terms defined as follows:

1. Education for Sustainable Development (ESD)

Education for Sustainable Development (ESD) refers to an educational framework promoted by UNESCO that equips learners with the knowledge, skills, values, and attitudes needed to contribute to sustainable societies. As an approach, ESD emphasizes the integration of sustainability principles, social equity, environmental protection, and economic viability, into teaching and learning processes. In this study, ESD serves as the overarching approach that guides the infusion of sustainability literacy into English-speaking instruction (Kohl, Sanusi, & Hussien, 2025; Tafese & Kopp, 2025; Wan Nor Azmi et al., 2024).

2. Sustainability Literacy

Sustainability literacy is defined as the ability to understand, critically reflect on, and communicate issues related to sustainable development. It involves awareness of the interconnectedness of people, planet, and prosperity, also known as three pillars; social, economic, and environmental, as represented in the Sustainable Development Goals (SDGs). In this study, sustainability literacy focuses on learners' engagement with selected SDGs: SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 14 (Life Below Water/ocean literacy) (UNESCO, 2024; SDGs Center Hasanuddin University, 2024; University of Tasmania, 2024).

3. Visual Thinking Strategies (VTS)

Visual Thinking Strategies (VTS) is a learner-centered pedagogical method that uses visual prompts to stimulate observation, interpretation, and discussion. Through guided questioning and dialogic interaction, VTS encourages learners to articulate ideas, provide evidence, and engage in collaborative meaning-making. In this study, VTS is employed as the core instructional method to support speaking development while embedding sustainability-related content (Nolan, 2024; Fitria & Simbolon, 2024).

4. English-speaking Learning Materials Development

English Speaking Learning materials development refers to the process of designing, organizing, and producing instructional resources that facilitate learners' oral communication in English. In this study, materials are deliberately designed to integrate sustainability literacy into speaking activities, ensuring that learners practice communicative competence while engaging with authentic sustainability issues (Salih & Omar, 2024; Tran et al., 2024; Yan, et al, 2024).

5. Merdeka Curriculum

The Merdeka Curriculum, formerly recognized as the emergency curriculum for trial design, introduced to enhance the 2013 Curriculum and to mitigate the academic disruption brought by COVID-19 (Mulyasa, 2023). The curriculum is design to encourage independence for shaping the learners' character and skills, particularly at the primary and secondary education levels, facilitate learners to explore their interest with greater freedom (Wiryawan and Nurdin, 2024).

6. Senior High School

Senior high school refers to the upper secondary level of education, typically encompassing students aged 15–18. In this study, the target learners are senior high school at eleven grade students in English Foreign Language (EFL) contexts, who are expected to develop both language proficiency and 21st-century competencies such as critical thinking, collaboration, and global awareness (Suprayetno & Ramadhani, 2025; Wu & Shafait, 2024; Harahap, Khairunisa, & Muhammadiyah, 2024).