

# EXPLORING CREATIVITY FOR GLOBAL SUSTAINABILITY: A SYSTEMATIC REVIEW OF EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) PRACTICES IN INDONESIA

T. Mulyati<sup>1</sup>, A. Magpiroh<sup>2</sup>, Y.R. Aprilianti<sup>3</sup>

<sup>1,2,3</sup>English Educational Department, Faculty of Language and Art University, PGRI University of Banyuwangi, Banyuwangi, Indonesia

e-mail: [mulyati29@gmail.com](mailto:mulyati29@gmail.com), [asiyatulmagripoh005@gmail.com](mailto:asiyatulmagripoh005@gmail.com), [yessyrizki0404@gmail.com](mailto:yessyrizki0404@gmail.com)

This systematic review investigates creative practices of Education for Sustainable Studies on the integration of Education for Sustainable Development (ESD) into English language Teaching (ELT), especially in the context of Indonesia is hardly found. This study is an attempt to highlight the growing need to align language and climate literacy in education in response to escalating environmental challenges. The study aims to identify types of creative ESD practices implemented in ELT, describe the learning outcomes produced from those practices, and review the research designs commonly used in related studies. Following the PRISMA protocol, articles were retrieved from Google Scholar using keywords such as ESD, ELT in Indonesia, Systematic review, limited to the publication year between 2024–2025. From 380 initial records, 48 full-text articles were screened, and six empirical studies met the inclusion criteria. The findings reveal that creative ESD practices such as Eco-ELT e-modules, bilingual picture books, multimodal and textual designs, project-based environmental campaigns, and classroom green initiatives foster holistic learning outcomes across cognitive, affective, and behavioural domains. Learners demonstrated improved language skills and critical thinking, heightened environmental awareness and responsibility, and active proenvironmental behaviours such as waste reduction, tree planting, and 3R practices. The reviewed studies were dominated by descriptive qualitative and mixed-method designs utilizing interviews, classroom observations, questionnaires, and thematic interpretation. The review concludes that integrating ESD within ELT promotes pedagogical innovation and sustainability-oriented competencies, yet the evidence remains limited. Future research is needed to examine long-term impacts, broader learning contexts, and diverse methodological approaches aligned with national sustainability education policies.

**Keywords:** *ELT in Indonesia; ESD; Systematic Review*

## 1. INTRODUCTION

In the current era of globalization, climate change has emerged as one of the most pressing challenges faced globally, including in Indonesia. This phenomenon is characterized by rising global temperatures, extreme weather events, shortages of food and water, rising sea levels, and increasing hydrometeorological disasters. The Intergovernmental Panel on Climate Change (IPCC) reports that the average global temperature has increased by approximately 1.1°C compared to the pre-industrial period, with its impacts being increasingly evident across various regions (Aditomo, 2020). These include seasonal flooding in urban areas, prolonged droughts in agricultural zones, and the accumulation of plastic waste in rivers and oceans throughout Indonesia. Such conditions are predominantly driven by anthropogenic activities and develop gradually, leading many people to overlook their close connection to everyday lifestyles. In response to this issue, education serves as a strategic means to enhance awareness and strengthen societal capacity in addressing this crisis.

Education plays a crucial role in equipping young generations not only with academic skills but also with awareness and concrete actions to address this crisis. In this context, Education for Sustainable Development (ESD) emerges as a relevant educational approach that aims to empower learners with the knowledge, skills, values, and attitudes necessary to contribute to sustainable development (UNESCO, 2020). It emphasizes the integration of

environmental integrity, social equity, and economic viability in learning processes. ESD also promotes transformative learning by fostering critical thinking, problem-solving, and responsible decision-making, enabling learners to address complex global challenges (López, et.al, 2024). Furthermore, it encourages learners to become active and responsible citizens who can take informed actions for a more sustainable future (Daniella, 2011).

In Indonesia, the integration of ESD is manifested through the implementation of climate change education. The Ministry of Education, Culture, Research, and has designated climate education as one of the priority issues in the national curriculum. The guideline emphasizes three key aspects of Climate Change Education objectives: cognitive reasoning, socio-emotional, and action. The implementation of climate education is mandated across all subjects, embedded in lesson planning, and evaluated through subject-based assessments (Sekarwulan et.al., 2024). It encompasses four elements, namely causes, impacts, adaptation, and mitigation, which are taught from phase A to phase F.

However, practical implementation in schools still faces challenges. The limited public understanding of the urgency of the climate crisis, insufficient learning resources, and uneven integration of climate issues into education becomes issues. Moreover, the lack of awareness and capacity among educators is a major barrier. Nevertheless, many schools have begun to cultivate climate-friendly practices through greening programs, waste management, and energy conservation, reflecting positive steps toward more sustainable education. Therefore, teacher training, collaboration between educators and researchers, and the development of a more flexible approach are needed to strengthen the integration of SDGs in language education.

In this context, ESD serves not only conveys sustainability concept but also cultivates critical analysis skills, and a responsible attitude towards environmental and social issue (Oraif, 2024). Hence, ESD represents an essential framework that drives educational transformation worldwide. Meanwhile, English Language Teaching (ELT) holds significant potential in supporting the implementation of ESD. Integrating sustainability related content into ELT enables students to practice discussing, writing, and presenting solutions to global issues in English. This approach not only enhances language competence but also fosters global awareness and strengthens students' roles as active global citizens.

The integration of ESD into ELT provides some benefits. For teachers, this approach fosters pedagogical innovation, enriches teaching materials, and makes classroom learning more contextualized to Indonesia's current realities. For students, the learning process not only focuses on language mastery but also on character development, environmental awareness, and the cultivation of critical and creative thinking skills. Through learning activities such as classroom discussions, collaborative, and sustainability focused tasks the integration of ESD into ELT can foster student learning motivation, enhance their critical thinking and encourage active Felix et.al assert that language learning centered on global issues can increase students' active participation and stimulate their creativity in formulating solutions to sustainability challenges (Felix et al., 2025). Similarly, Lopez et al., (2024). emphasize that integrating sustainability issues into language learning not only promotes pedagogical innovation but also enhances critical thinking and English fluency. Thus, the integration of ESD into ELT not only contributes to achieving the goals of sustainable education in Indonesia but also enhances the quality of English language learning. ESD transforms language classrooms into critical, creative, and reflective learning spaces that prepare young generations to face global challenges while simultaneously fostering local awareness of sustainability.

Studies on ESD integration into the field of ELT have demonstrated various positive results. For example, a study that measured the effectiveness of this approach on the students' English proficiency confirmed the positive relationship between ESD and learning achievement in English classes. This research topic was mostly found in non-Indonesian context (Arslan & Curle, 2024). In Indonesia, a systematic review on ESD integration into ELT context is still limited. The only review on SDGs was done in 2024 and only focused on the research trend on the SDGs practice in EFL setting (Astawa et al., 2024). However, a systematic review on ESD practice in Indonesia focusing on the learning outcomes, the

identification of creative ESD practice types, and research design used has not been explored. Further, there is a need of updated information on publication since the policy of climate education in Indonesia was released in 2024. Thus, conducting another systematic review on the ESD integration in Indonesia context is still necessary in order to give a comprehensive information as a response to the government's policy on the climate education. This research aims to identify the types of creative ESD practices used in ELT across Indonesia; to describe learning outcomes resulted from creative ESD practices in ELT, and describe the research design commonly employed in studies focusing on ESD practices. Hopefully, this study can provide comprehensive information about ESD practices in ELT context as a response to the Indonesia government's recent climate education policy.

## **2. RESEARCH METHOD**

### **Research Design**

This study employed a qualitative approach with systematic literature review design. It was used in order to synthesize various academic works relevant to ESD Practices in ELT context, especially in Indonesia. The objectives of the study are to identify the types of creative ESD practices used in ELT across Indonesia; to describe learning outcomes resulted from creative ESD practices in ELT, and describe the research design commonly employed in studies focussing on ESD practices. The sources of literature include research articles published between 2024-2025 from Google Scholar database. The collected articles were then filtered and analysed based on PRISMA guidelines (Page et al., 2021). The procedure involves several key stages: identification, screening, eligibility, and inclusion.

#### **a) Identification**

Identification is the initial step in the Systematic Literature Review proces. In this stage, the relevant scientific articles from Google Scholar database were gathered based on the research focus. To yield profound articles, some key words were used, namely, Sustainability, Education for Sustainability, Circular Economy, Green Practice, ELT, and English. From the initial search, a number of relevant articles that met the scope of the study were obtained. Those were further analysed in the next stage: screening.

#### **b) Screening**

After all relevant articles have been successfully collected through the identification stage, the researchers did screening based on the publication year between 2024 – 2025 and the topic discussed i.e. ESD practices in ELT contexts. In this stage the researcher read the titles, the article key words and abstracts to determine whether the articles suit with the criteria or not. The irrelevant articles were then excluded. In addition, a check for duplicates is also performed to ensure that the same article does not appear more than once. This stage is important to maintain accuracy and avoid bias in the analysis process. Articles that passed this screening are then reviewed in the next stage: eligibility stage.

#### **c) Eligibility**

The collected articles in the screenening stage were then processed based on some criteria namely 1) the articles are not a review paper or opinion without empirical data analysis; 2) the articles must be research based articles conducted in Indonesia; 3)the articles must be about ESD practices in ELT context. The articles that do not meet the criteria were then excluded from the analysis. This process ensures that only high-quality and relevant literature is used in the subsequent data synthesis stage.

#### **d) Inclusion**

At this stage, only articles that have met all the eligibility criteria are finally included in the data analysis and synthesis process. These articles are confirmed to have direct relevance to the research focus, namely the integration of ESD in ELT context in Indonesia. Here, the researcher did full text review on the included articles. They were coded based the

research questions and analysed for finding the answers. Further, peer review by expert in ELT were administered to provide validity and reliability of the research results.

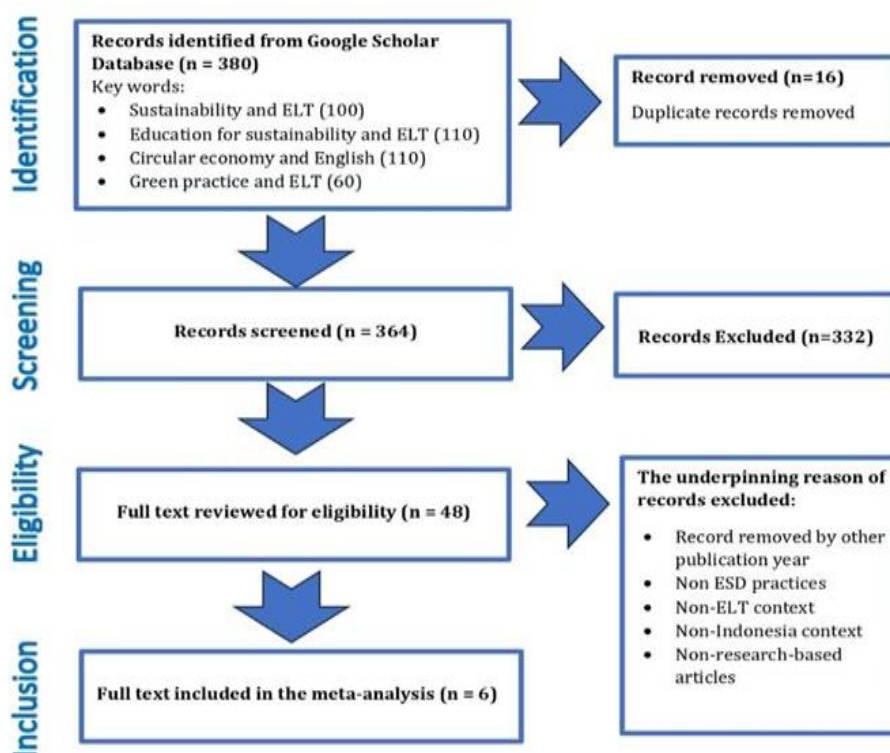


Figure 1. The Research Procedure Flowchart

### 3. Findings and Discussion

In the identification stage, the researchers successfully recorded 380 articles and were then 16 articles removed due to duplicate records. In the screening stage, there were 364 articles included into screening based on the publication year between 2024-2025 and the determined criteria. There were 48 articles included into eligibility stages and it was identified that 332 articles were excluded. Those article were excluded since they did not meet the criteria namely the topic was not ESD practices, non-ELT context, non Indonesia context, and non researchbased articles. After doing full text review, the researcher indentified 6 articles which were included into meta-analysis. The selected articles are presented in table 1 below.

#### The General Finding

In the identification stage, the researchers successfully recorded 380 articles and were then 16 articles removed due to duplicate records. In the screening stage, there were 364 articles included into screening based on the publication year between 2024-2025 and the determined criteria. There were 48 articles included into eligibility stages and it was identified that 332 articles were excluded. Those article were excluded since they did not meet the criteria namely the topic was not ESD practices, non-ELT context, non Indonesia context, and non researchbased articles. After doing full text review, the researcher indentified 6 articles which were included into meta-analysis. The selected articles are presented in table 1 below.

Table 1. The Selected Articles Are Presented

No	Authors	Purpose of the study	Level	Year
1	Lestari,I.W.; Zumrudiana, A.; Habibullah, M.R; Fatoni,M.; Nadiyah, F.	Analyzing the students' perception on Ereading module with Eco-ELT themes.	University	2025
2	Maghfiroh, A.; Harmanto, B.; Prayitno, H.J.; Tamrin, A,; Lathifah.	Exploring the integration of ecological education in ELT materials and its role on the students' behaviour.	Elementary and Junior high school	2025
3	Jasmine, M.P.; Silvhiany, S.; Inderawati, R.	Analyzing the students' need on the multimodal text about climate change learning in ELT setting.	Elementary school	2025
4	Putri, C.; Shilviany R.; Inderawati, R.	Improving the students' language skills and reading interest through bilingual picture books	Elementary school	2024
5	Bulan, A.; Ramadhan, R.A.; Wahyuni, N.	Analyzing the need on Eco ELT materials to increase the students' environmental literacy	Senior high school	2024
6	Misbah	Describing eco-critical language awareness of the ELT pre-service teachers	University	2024

### The Main Findings

The research objectives formulated were used as the underpinning indicators when the researchers reviewed the included articles. The following are the results.

### The Creativity Types of ESD Practices in ELT Across Indonesia

Creativity, as one of the 4C skills in 21st century learning, refers to the interaction of aptitude, process, and environment that leads individuals or groups to produce perceptible, novel, and useful outcomes within a social context (Plucker, Beghetto, and Dow 2004; Greenhill 2010). Within ESD practices, creativity is not only about idea generation but also about applying creative thinking to address sustainability challenges in real-world settings. In this case, teachers play a crucial role in shaping students' creative capacities by designing meaningful, real-world learning experiences, fostering a classroom environment that supports intellectual risk-taking, and encouraging interdisciplinary approaches to problem-solving(UNESCO, 2020; Henriksen et.al. 2024)

The policy of climate change education in Indonesia has been issued in 2024 by the government. In response to this, the researchers have identified some ESD Practice in ELT

setting. The following table summarizes these findings, highlighting how creativity is reflected in teaching strategies, the learning material and media across the reviewed studies.

Table 2. Findings summary on creativity in ESD Practices in Indonesia

No	Creative teaching strategies	Authors	Purpose of the study	Year
1	Interdisciplinary focus	Lestari, I.W.; Zumrudiana, A.; Habibullah, M.R; Fatoni, M.; Nadiyah, F.	Analyzing the students' perception on Ereading module with Eco-ELT themes.	2025
2	Intellectual risk taking	Maghfiroh, A.; Harmanto, B.; Prayitno, H.J.; Tamrin, A.; Lathifah.	Exploring the integration of ecological education in ELT materials and its role on the students' behaviour.	2025
3	Interdisciplinary focus	Jasmine, M.P.; Silvhiany, S.; Inderawati, R.	Analyzing the students' need on the multimodal text about climate change learning in ELT setting.	2025
4	Interdisciplinary focus	Putri, C.; Shilviany R.; Inderawati, R.	Improving the students' language skills and reading interest through bilingual picture books	2024
5	Interdisciplinary focus	Bulan, A.; Ramadhan, R.A.; Wahyuni, N.	Analyzing the need on Eco ELT materials to increase the students' environmental literacy	2024
6	Integration of real world applications.	Misbah	Describing eco-critical language awareness of the ELT pre-service teachers	2024

Based on the table 2, some studies shows that ESD based ELT materials have begun to be integrated in ELT setting. In this practice, Eco-ELT theme were mostly chosen to be inserted into ELT materials such as E-reading module, bilingual picture books, and multi modal. This practices aim to enhance the students language proficiency, learning interest, and environmental awareness. Second, ESD practice was identified as a curriculum innovation. ESD is not only inserted into ELT material but it is also integrated into curriculum design. Eco-critical language awareness is determined as one of course in UIN Raden Intan Lampung (Misbah, 2024). It is done as a creative strategy that links the concept of sustainability into English teaching practices among preservice teachers. Third, projectbased and contextual learning were another ESD practice in ELT setting(Maghfiroh et al., 2025) . It was found that connecting Eco-edu and English through this learning model not only enhance the students' language proficiency but also positive behavior on environmental awareness.

Taken together, these findings indicate that teachers have begun to adopt practices that reflect characteristics of creative teaching, particularly in designing real-world,

contextual, and interdisciplinary learning experiences within ESD-oriented ELT (Henriksen et.al. 2024). This is evident in the use of project-based learning and authentic contexts, which encourage students to apply knowledge creatively and engage with real-world sustainability issues. Moreover, such practices align with the view that creative teachers promote real-world, action-oriented learning by connecting lessons to authentic contexts, encouraging students to apply knowledge creatively through approaches like project-based learning and community engagement. They also foster creativity by supporting intellectual risk-taking and integrating interdisciplinary learning to enhance students' problem-solving and creative expression.

### **The Learning Outcomes Reported from Creative ESD Practices in ELT**

Based on the six reviewed articles, the implementation of ESD in ELT setting consistently impacts the improvement of student learning outcomes in three main domains: affective, behavioural, and cognitive.

In affective domain, all articles indicate that the integration of ESD successfully stimulates students' awareness, empathy, and concern for environmental issues and humanitarian values. English learning with sustainability themes such as climate change, ecological literacy, and nature conservation encourages students to develop emotional sensitivity towards global and local problems (Putri et al., 2024) . The students become more enthusiastic, motivated, and have a positive attitude towards learning English because the material is considered relevant to real life. In addition, the introduction of sustainability values through literature, social projects, and thematic discussions also fosters a sense of social responsibility and empathy to others and the environment (Bulan et al., 2024).

Further, in the behavioural domain, ESD practices have proven to foster real changes in students' habits and actions. The students not only learn foreign language but also practice sustainability values in their daily lives (Lestari et al., 2025). Several studies indicated increased student involvement in project-based activities such as environmental campaigns, waste management, tree planting, and 'green lifestyle' practices like reducing plastic use and implementing the 3R principles (reduce, reuse, recycle). Besides, this approach strengthens students' collaborative attitudes, responsibility, and leadership in a team to solve sustainability issues. ESD-based learning transforms the classroom into a participatory environment, where students actively discuss, negotiate, and take on roles in environmental conservation efforts .

Meanwhile, from a cognitive aspect, ESD practices in ELT setting makes a significant contribution to the development of students' critical thinking skills, problem-solving abilities, and conceptual understanding (Jasmine et al., 2025). The students not only gain improved language proficiency—such as speaking, writing, reading, and listening, but also broaden their insights into global issues. Learning activities in the form of environmental text analysis, debates on social issues, and research-based projects help them develop analytical and reflective skills. Through the context of sustainability, language learning becomes more meaningful as students connect language structures with broader scientific and social thought (Bulan et al., 2024).

Overall, the findings from the six studies indicate that the implementation of ESD approach in ELT setting yields holistic learning outcomes. The integration sustainability values successfully balances students' emotional, behavioural, and intellectual development. Thus, ESD not only enhances language competence but also strengthens global awareness, social responsibility, and critical thinking capacity

### **The Types of Research Design Commonly Employed in Studies Focussing on ESD Practices**

Based on the six reviewed articles, there were two research designs used to investigate the integration of ESD in ELT setting namely descriptive qualitative and mixed-method approaches.



Figure 2. The research design used in ESD practices

Figure 2 above shows that the descriptive qualitative approach was used in these studies. The first two studies used this design in order to analyze the students' and the teachers' perception on ESD practices. A study entitled "Eco-Critical Language Awareness for ELT PreService Teachers: Practicing the Concept Into Practice" employed a descriptive qualitative design that relied on classroom observation and interviews to explore how pre-service teachers implemented ESD-related practices (Misbah, 2024). In addition, a study entitled "Ecological Education in ELT" utilized qualitative descriptive analysis through interviews and thematic interpretation to investigate students' critical thinking and sustainable behaviour (Maghfiroh et al., 2025). Then, one study conducting a need analysis for developing English teaching materials using the Eco-ELT Approach also adopted a descriptive qualitative method using interviews and questionnaires. This identified students' needs and environmental literacy aspects (Bulan et al., 2024). Most of these qualitative studies used Miles and Huberman's model for data analysis, which includes data collection, reduction, presentation, and conclusion drawing. The qualitative method was chosen since it can capture both measurable learning outcomes and in-depth insights into students' and teachers' experiences and behavior.

Meanwhile, based on figure 2, the other three studies employed mix-method. This was used in order to capture both the process and the result of ESD integration in an ELT setting since it combined quantitative and qualitative phases. The quantitative phase often involved the use of questionnaires to collect statistical data on students' language improvement and attitudes, while the qualitative phase included interviews or open-ended responses to gain a deeper understanding of learners' and teachers' perspectives. A study entitled "Exploring Young Learners' Needs in Multimodal Text Design for Integrating Sustainable Education into ELT" adopted mixed-method design to investigate young learners' perspectives on sustainable content integration (Jasmine et al., 2025). Another need analysis study using this method was done by Putri et al. (2024). They focused on identifying the students and teachers' need on the bilingual picture books with ESD theme and how it can improve the students' language skills and reading interest. Another study was entitled "EFL Learners' Perception on Integrating E-Reading Module with Eco-ELT Themes", also employed a mixed-method explanatory design in which quantitative data were analyzed first, followed by qualitative data to support the findings (Lestari et al., 2025). These reflect a growing trend toward combining descriptive exploration with limited experimentation to obtain balanced, data-driven conclusions. This method also provided a more comprehensive picture of how ESD contributes to both linguistic and affective learning dimensions. Overall, the findings indicate that qualitative and mixed-method designs dominate ESD-related ELT research, as they provide flexibility to examine both numerical evidence and contextual realities. These approaches enable researchers to explore not only the effectiveness of ESD integration but

also its pedagogical processes, challenges, and impacts on learners' development. Through interviews, classroom observation, questionnaires, and document analysis, the studies collectively highlight that mixed and qualitative approaches are the most suitable for capturing the multifaceted nature of ESD in language education.

#### 4. Conclusion and suggestion

Based on the result of meta-analysis of six included articles discussing ESD practice in ELT setting across Indonesia published between 2024 and 2025, the researchers have identified three main findings.

First, creative ESD practices in ELT have been primarily reflected in three creative teaching strategies namely designing meaningful real world learning experiences, fostering a classroom environment that support intellectual risk taking, and encouraging interdisciplinary approach in ELT classroom. These findings indicate that by engaging students in authentic contexts, promoting openness to new ideas, and connecting multiple disciplines, teachers are able to enhance not only students' language proficiency but also their creativity and sustainability awareness.

Second, the integration of ESD in ELT setting demonstrates positive outcomes across cognitive, affective, and behavioral domain. Students show improved English proficiency, heightened critical thinking skills, stronger environmental awareness, and greater motivation toward learning. Moreover, teachers benefit from new pedagogical insights that make language teaching more meaningful and responsive to global challenges. Further, in terms of research methodology, the reviewed studies predominantly utilized descriptive qualitative and mixed method designs, reflecting researchers' efforts to capture both the process and impact of ESD integration. However, the limited number of studies and the absence of longitudinal or experimental designs indicate the need for broader and more rigorous future research. The systematic review confirms that integrating ESD into ELT supports Indonesia's educational transformation toward sustainability. It enhances not only linguistic competence but also students' character, awareness, and participation as responsible global citizens.

However, this research is limited by the fact that the reviewed articles were only restricted to those which have been published after the climate change education policy issued i.e. the publication year after 2024. Thus, it may not fully capture the broader trends in the field. Future researchers should further expand the database scope, explore diverse educational levels, and strengthen empirical evidence to optimize ESD practices in the ELT field.

#### REFERENCES

- Arslan, S. & Curle S. (2024). Institutionalising English as a foreign language teachers for global sustainability: perceptions of education for sustainable development in Turkey. *International Journal of Educational Research*, 125. <https://doi.org/10.1016/j.ijer.2024.102353>
- Astawa, N. L. P. N. S. P., Santosa, M. H., Artini, L. P., & Nitiasih, P. K. (2024). Sustainable development goals in EFL students' learning: a systematic review. *Pegem Journal of Education and Instruction*, 14(2),1-11. <https://doi.org/10.47750/pegegog.14.02.01>
- Bulan, A., Ramadhan, R. A., & Wahyuni, N. (2024). Need analysis for developing English teaching materials using the eco-ELT approach to enhance environmental literacy among high school students in Dompu regency. *Jurnal Pendidikan dan Pembelajaran Indonesia*, 4(1), 72-80. <https://doi.org/10.53299/jppi.v4i1.417>
- Daniella, T. (2011). *Education for Sustainable Development: An Expert Review of Process and Learning*. Paris: UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000191442>
- Felix, S. M., Lønnum, M., Lykknes, A., Staberg R. L. (2025). Teachers' understanding of and practices in critical thinking in the context of education for sustainable development: a systematic review. *Education Sciences*, 15(7), 824 . <https://doi.org/10.3390/educsci15070824>

- Greenhill, V. (2010). 21st Century Knowledge and Skills in Educator Preparation. *Partnership for 21st Century Skills*.
- Henriksen, D., Mishra, P., & Stern R. (2024). "Creative Learning for Sustainability in a World of AI: Action, Mindset, Values." *Sustainability*, 16(11), 4451. <https://doi.org/10.3390/su16114451>
- Jasmine, M. P., Silvhiany, S., Inderawati, R. (2025). Exploring young learners' needs in multimodal text design for integrating sustainable education into ELT. *Journal of Language and Language Teaching*, 13(2), 785-797. <https://doi.org/10.33394/jollt.v13i2.13775>
- Lestari, I. W., Zumrudina, A., Habibullah, M. R., Fatoni, M., & Nadiyah, F. (2025). EFL learners' perception on integrating E-reading module with ECO-ELT themes. *Journal of English Education*, 13(1), 235-246. <https://doi.org/10.25134/erjee.v13i1.10461>
- López, U. H., Mercedes, V. V., & Purificación, S. V. (2024). The Contributions of Creativity to the Learning Process within Educational Approaches for Sustainable Development and/or Ecosocial Perspectives: A Systematic Review. *Education Sciences*, 14(8), 824. <https://doi.org/10.3390/educsci14080824>
- Maghfiroh, A., Harmanto, B., Prayitno, H. J., Tamrin, A., & Lathifah, L. (2025). Ecological education in ELT; how could it promote students' critical thinking skill and sustainable behaviour?. *Journal of Languages and Language Teaching*, 13(2), 1005-1015. <https://doi.org/10.33394/jollt.v13i2.14330>
- Misbah H. (2024). Eco-critical language awareness for ELT pre-service teachers: practicing the concept into practice. *Attractive Innovative Education Journal*, 6(1), 682–691
- Oraif I. (2024). Education for sustainable development: the use of a competence-based approach in an English as a foreign language (EFL) writing course at a university in saudi arabia. *Sustainability*, 16(14), 6069. <https://doi.org/10.3390/su16146069>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hrobjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Wilson, E. M., Mcdonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J. Tricco, A. C., Welch, P. W., & Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *Research Methods and Reporting*, 372. <https://doi.org/10.1136/bmj.n71>
- Putri, C., Silvhiany, S., & Inderawati, R. (2024). Empowering young learners: integrating climate change education with bilingual picture books in ELT. *Journal of English Education*, 12(2), 601-616. <https://doi.org/10.25134/erjee.v12i2.9889>
- Plucker, J., Beghetto, R. A., & Gayle, D. (2004). Why Isn't Creativity More Important to Educational Psychologists? Potentials, Pitfalls, and Future Directions in Creativity Research. *Educational Psychologist*, 39(2), 83–96. [https://doi.org/10.1207/s15326985ep3902\\_1](https://doi.org/10.1207/s15326985ep3902_1)
- Sekarwulan, K., Hendarti, L., Hadju, R. Z., Amalia, N. R., Utami, A. F., & Gradiyanto, H. (2024). Pendidikan perubahan iklim panduan implementasi untuk satuan pendidikan dan pemangku kepentingan. BKAP Kemendikbud: Jakarta.