

The Call for Environmentally-Based Language Teaching and Green Pedagogy: Climate Actions in Language Education

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ABSTRACT

Environmental education (EE) is one of the content-based language learning pedagogies used to enhance students' awareness of environmental concerns and their effect on people and animals. It aims to build the language teachers' and students' awareness of the importance of EE and green pedagogy in ELT. However, research into integrating EE in language education is still scarce. Therefore, this article presents an analysis of multimodal discourse of the EE imperatives in using content and language integrated learning (CLIL) strategy. Grounded in the video data analysis (VDA) approach, the researchers analysed the recorded talks of two university lecturers who offered their finest teaching approaches, and two environmentalists from "Bye-Bye Plastic Bags Jakarta" who described their significant efforts in handling plastic waste from a 2021 webinar held by the British Council Indonesia. Based on the thematic analysis, the forum suggests: 1) including environmental issues in language curriculum, syllabus, and textbook development, 2) providing environmentally-relevant materials and resources, 3) providing environmental language teacher professional development, and 4) accelerating environmental literacy programs at all levels of education. In other words, the inclusion of green pedagogy and environmental sustainability initiatives in ELT should be well-acknowledged. The methodological and pedagogical strategies in integrating environmental issues in ELT in this study addressed the high demand to catalyse language teachers' metacognitive awareness in EE and indirectly build students' metacognitive skills about environmental care.

1. Introduction

The role of language teaching in Environmental Education (EE) is pivotal and urgent; however, research into integrating EE in language education is still scarce. The purpose of this webinar video review article is to emphasize the critical nature of incorporating environmental issues into English language education and the positive effects of language teaching practices on increasing students' knowledge of ecological issues. The British Council Indonesia, in association with TEFLIN, conducted a webinar on climate action in language education on the 24th of April 2021. The webinar was selected as it has a high impact, reaching 964 EFL teachers from Indonesia and beyond. The event aimed to build the EFL teachers' interest in nature and encourage the students' socio-semiotic sense to empower their ways of being, doing, and saying (Mahboob, 2019). Yet, one of the environmental issues we are currently facing is plastic waste management. The problem is not dealing with the lack of waste disposals or sanitation workers. It is perpetually still mainly associated with the character of the people who do not become aware of the critical impacts of

inadequate sanitation on life quality. Therefore, it is urgent to look for innovative approaches to infuse environmental learning into English language teaching.

The concern for connecting environmental learning with language education is to develop teachers' and students' awareness of environmental problems such as global warming, energy consumption, plastic waste management, water, and air pollution. With this in mind, this paper focuses not only on the language learning goals but also on increasing the students' ecological awareness (Pišlar, 2009). For example, it encourages the students to be more environmentally friendly, improve their vocabulary learning spectrum, build their interest in nature and environmental issues, and enhance their ability to discuss and talk about ecological issues in English. Therefore, the ELT practitioners must recognize the importance and value of EE starting from primary to higher education context and pedagogy (Hauschild et al., 2012). Thus the call for green pedagogy in TEFL and critical CLIL will need to bring a "revolutionary ferment" into our language education (Templer, 2018).

The green pedagogy mainly draws on three main areas: the need to develop language education curriculum, language learning materials and resources (textbooks, modules, worksheets, etc.), and the urgent call for language teacher professional development in the area of environmentally-based language education. These areas will be partially elaborated on in the following section. Regarding the English language curriculum, Li (2013), for example, maintains that changing the curriculum is one of the critical factors affecting the teachers' receptivity to EE in China's college English. On the other hand, the role of textbooks is also pivotal in improving environmental literacy and raising the students' awareness to become environmentally conscious individuals (Curdt-Christiansen, 2020). Yet, based on the recent keynote talk delivered by the English Education Society of British Council Indonesia, training EFL teachers to integrate environmental issues in language education is essential and highly demanding (Downes, 2021). One of the critical issues he outlined is the lack of institutional support for teachers who wish to integrate climate change content into their teaching practice.

This article recognizes the urgent need for further research and professional development programs regarding the integration of environmental issues in ELT and aims to promote the global climate connection among EFL teachers and language education practitioners. Given the importance of integrating environmental issues in English language teaching, this article provides some pedagogical imperatives and best practices of project-based language learning such as digital photovoice, vodcasting, digital poster creation, and presentation. In addition, a student-teacher collaboration

project in an environmental English course is also provided. This article will also provide a framework of green pedagogy that entails three aspects: 1) language teacher professional development, 2) environmentally-based curriculum, and 3) environmentally-based materials and resources. Furthermore, considering green pedagogy in English language education and research might be necessary to keep participating in the global climate connection projects and help the EFL teachers with pedagogical strategies to infuse the environmental issues in their teaching contexts. Finally, some pedagogical considerations and recommendations are also presented

2. Literature Review

2.1. The Call for Green Pedagogy

According to the International Association of TEFL (IATEFL) credentials, both individual and organizational parties are responsible for making impactful responses to the climate emergency (Burton, 2019). Some global initiatives have been made to participate in the global climate actions, such as the shift from printed paperwork to the digital version, the use of eco-wrapper, and the prohibition of plastic materials. Meanwhile, green pedagogy is closely related to EE pedagogy. It is grounded in an educational perspective where teachers and students are actively engaged and bound together in a quest for solutions for ecological issues (Riordan & Klein, 2010). It is more likely to be two sides of a coin where the students can improve and develop their language and content knowledge simultaneously, thus embracing the principles of Content-Based Instruction (CBI) (Hauschild et al., 2012).

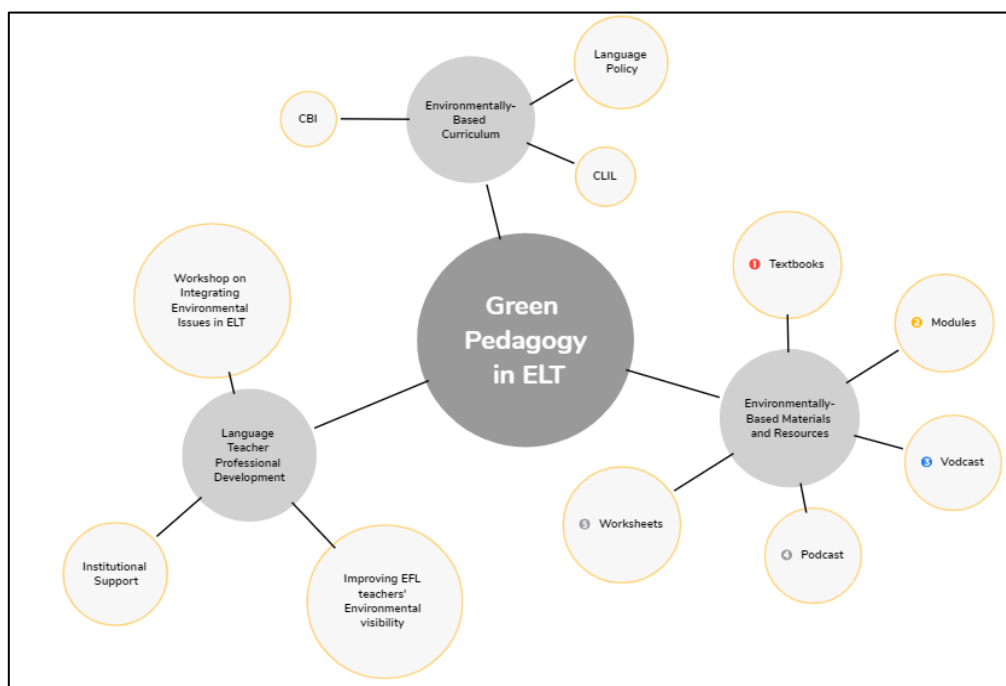


Figure 1. Green Pedagogy in ELT

Environmentally-based language curriculum, respectively, embrace the working principles of CBI, and CLIL approaches. CBI has been recognized as a holistic and global approach to language teaching in which it encourages the students to be more autonomous and active learners (Stryker & Leaver, 1997). It links to the ecological conception of language, where Garner & Borg (2005) define CBI as an approach to language ecology that calls for a comprehensive articulation of communication in language pedagogy. Cenoz (2015) states that CBI and CLIL have similar properties that share the exact pedagogical nature where pupils simultaneously learn the language and academic content. Thus, CLIL entails a dual-focus educational approach to teaching language and content knowledge (Coyle et al., 2010; Dalton-Puffer, 2007).

Furthermore, language policymakers can articulate the need for change in the curriculum, thus accentuating the environmental issues within its goals and objectives. For example, in the Indonesian context, the top-down policy is one of the challenges that hamper the actual change of curriculum and its implementation. Therefore, the teacher's role as a course developer, researcher, mentor, and instructor (Bouckaert & Kools, 2018) must have the ability to articulate the goals and objectives of the curriculum into practice. This role might be daunting for some teachers; however, continuing teacher professional development in course content materials will significantly increase their participation in integrating the curriculum and environmental issues within their classrooms.

2.2. Environmentally-based Materials and Resources

According to Bouckaert (2019), EFL teachers are the focal segment and key role in making and adjusting language materials in plenty of ways. However, they will need to have the ability to collect data, write, evaluate, and deliver the materials in their classrooms (Tomlinson, 2011b, 2011a, 2013, 2014). His edited book series in language materials development has included a step-by-step process of its implementation and collected ideas from experts in the field. It provides valuable insights for language teachers to develop their teaching materials and resources. One of the processes of language material development is the selection of materials that are evaluated based on three categories; they are: 1) the students' needs and expectations as well as pedagogical requirement, 2) the EFL teachers' identities (skills, abilities, methodologies, and beliefs), and 3) The EFL teachers' philosophies in presenting the contents and approaches to teaching and learning (Rubdy, 2014). The materials selection requires the teachers to filter and evaluate both content and pedagogical approaches to meet the students' needs and expectations.

Regarding the development of environmentally-based language materials and resources, the EFL teachers, as the essential materials developers, must look at how EFL

textbooks, modules, vodcasts, podcasts, and worksheets are selected, evaluated, and developed. The importance of infusing environmental issues in ELT has attracted some ELT practitioners from different ELT contexts, including an ecolinguistics approach to writing English textbooks. Mliless & Larouz (2018), for example, criticize the language style used in ELT textbooks in the Moroccan context in which it tends to be the euphemistic, agency-absent, and passive voice. Furthermore, Zahoor & Janjua (2020) pinpoint the inclusion of green content with ecolinguistics and eco-pedagogical approaches to Pakistani EFL textbook writing. It aims at raising the pupils' awareness of critical global environmental issues. Yet, the importance of including the ecolinguistics approach to textbook writing has recently been advocated by Famarzi & Janfeshan (2021). They strongly emphasise the lack of ecolinguistics representation in Iranian EFL textbooks. Their study revealed that only a few topics are covered and discussed within the textbooks, so the model of EE in language learning is not adequately included. The EFL textbook or module developers will need to consider infusing EE materials for environmental learning within the language education territory.

Moreover, vodcast and podcast language learning materials are essential teaching aids in ELT as a means of audio-visual learning in the digital era. First, it is necessary to look at the distinction between the two terminologies. Vodcast is originated from VOD (video on demand) and cast (multimedia) that contains audio-visual materials (MP4, WMV, AVI, MPG, etc.), while podcast mainly includes audio with no visual content (Meng, 2005). With EE, for example, vodcasts production and dissemination on environmental pollution have been initiated in the 8th grade of natural science students in Portugal (Marques & Reis, 2017). It aims at raising public awareness starting from the early age of learners. The project was also aimed to engage the students' environmental activism and encourage them to be more environmentally friendly in the future. It can be inferred that integrating ecological issues in ELT should be started earlier, starting from elementary to a higher level of education. With this in mind, the students will receive more input about EE from multiple subjects such as natural science, language, and social science. Finally, designing worksheets for EE is also a potential and strategic way to integrate environmental issues in language education. Uyang et al. (2019), for example, developed a PBL worksheet for teaching ecological pollution to improve the students' critical thinking skills. Another example of the worksheet in language learning is a crossword puzzle (Mollica, 2007) that teaches environmentally-related vocabularies.

2.3. EFL Teachers' Professional Development

The implementation of green learning in ELT is highly dependent on the EFL teachers' skills in integrating EE into their teaching. Given the importance of this issue, British Council, under the climate action in language education

project, has initiated professional development training series for EFL teachers around the globe by conducting online workshops for integrating climate issues in ELT (visit the British Council website).. According to Downes' (2021) talk in the webinar, EFL teachers received little support from their institutions regarding integrating climate issues in the ELT context. Apart from the institutional roles in supporting EE, it is necessary to look into the teachers' awareness, knowledge, critical thinking, problem-solving, decision making, action, and stewardship (Wahyudin & Malik, 2019).

Early on, language teachers must understand the importance of incorporating EE into their ELT activities. This attempts to promote a sense of environmental care that must originate from the teacher as a change agent and the driving force for developing cognitive, emotional, and psychomotor abilities. The language teachers will need to be careful of their surroundings to grow their awareness of the importance of integrating EE in ELT practices. Building the teachers' EE literacies can accelerate the EE campaigns, seminars, and community services in and beyond the school. One of the examples of EE campaigns in the school is the eco-school program (Nurwidodo et al., 2020), which aims to raise awareness of teachers, students, and administrators. Several examples of eco-school activities include waste management, health, nutrition, eco-friendly bags (campaign against plastic bags), environmental care exhibition, and multimedia campaign (standing banners, posters, wallpapers, electronic display boards, flyers brochures, and more).

This idea is not giving EE training to teachers, but it is more likely to be a reminder, catalyst, and driving force to familiarize them with EE. The more they are engaged in EE activities, the more they are aware of their surroundings. Those activities will increase the language teachers' metacognitive competence to integrate EE into ELT practices. For example, the school can set an electronic display board in the teachers' room showcasing EE-related videos of ecological issues, EE or green pedagogies, inspiring environmentalist stories, and EE-related community services. It will broadly open the teachers' minds and insights about their role in educating students to love the environment.

Some questions may arise, for example, "*How to increase the teachers' knowledge of EE? What are the strategies? Why are they important?*" In Malaysia, for instance, Lateh & Muniandy (2010) asserted that EE is a compulsory subject in the Teacher Training Institute (TTI), and all teachers must have adequate EE knowledge and pedagogical skills before they teach in the classroom. Teacher education and training are pivotal in preparing teachers to be environmentally knowledgeable. In Greece, Liarakou et al. (2009) reported survey results about the teachers' knowledge and attitude towards renewable energy sources. Their study suggested the authorities invest more in EE and the teacher education sector. Obtaining adequate

knowledge of EE is not an instant process. Therefore, the government must have a systematic plan to address the issue. The education quality assurance agency should develop an EE syllabus and empower the teacher trainers to deliver EE workshops for school teachers.

The purpose of building the teachers' awareness and knowledge is to increase their metacognitive competence. Language teachers with adequate metacognitive competence in EE will understand how EE and green pedagogy work in learning. The teachers will go through a process of inquiry to find out how to improve the EE pedagogies. This process also indicates that metacognitive knowledge will significantly impact the teachers' critical thinking skills (Magno, 2010). With this in mind, the teachers can increase their problem-solving and decision-making abilities. Yet, EFL teachers' actions in EE are essential. Franzen et al. (2018) compiled eighty-eight EE activities for teacher educators in Wisconsin, United States of America. These activities present the context, materials, step-by-step directions, and assessment strategies. Language educators from other countries can adopt or modify the workouts to fit their contexts. They can also design meaning-making activities by actively conducting a national symposium on EE materials development. Teachers also can participate in the online community of practice where teachers from different contexts share their successful stories and pedagogical strategies in implementing EE.

3. Method

The study employed a video data analysis (VDA) to analyse the recording of a webinar on climate action in language education held by the British Council Indonesia in association with TEFLIN on the 24th of April 2021. The video or other visual data was used to look at how language teachers and environmentalists think and respond to ecological issues and design impactful strategies and instructions to cope with the issues (Nassauer & Legewie, 2021). Two university lecturers, two environmentalists, and a keynote speaker from British Council Indonesia delivered their talks to 964 attendees from Indonesia and beyond. The event was held in the Zoom-mediated webinar and saved in a digital recording. This multimodal discourse contains rich digital information relating to how the language teachers should integrate environmental issues in language education.

The researchers used the thematic analysis to generate themes, sub-themes, and categories (Braun & Clarke, 2006). It went through several steps: 1) watching the video several times to get familiarized with the data, 2) doing initial coding to identify the major themes, 3) doing axial coding to categorize the themes and sub-themes, and 4) writing up. In discussing the data, all the names in this paper are pseudonyms.

4. Results & Discussion

4.1. Environmental Education in Actions

This section presents several climate actions on how to carry out EE to build people’s awareness of the environment where they live and inhale oxygen. The following inspiring stories from the representatives of “Bye-Bye Plastic Bags Jakarta” and two language education practitioners from Makassar and Ambon are just a few of the many inspirational stories from other language teachers and environmentalists in Indonesia.

4.1.1. Bye-bye Plastic Bags

We begin with the inspiring youth’s action in Bali, Bella (10) and Mely (12), as the founder of the “bye-bye plastic bags” campaign. These two amazing kids successfully inspired other people to care for and love the environment. They feel compelled to clean up plastic waste on an island in Bali because of a deep-seated desire to help the environment. There are no intentions or financial backing for their efforts from the government or any other sponsors. Being environmentally conscious doesn’t have to be reserved for the elderly, the well-educated, or those who belong to an environmental group. It is an uplifting story that others can learn from. Everybody’s knowledge of the importance of cultivating an understanding of ecological sensitivity must begin at an early age, and education is one way to do this.

Environmental care activities need a high level of commitment from everyone, and one of their main objectives is to encourage broader participation in every climate action program. The “bye-bye plastic bags” believe that education is the key to building the pupils’ awareness of EE. They then distributed and donated more than eight thousand EE booklets to schools across Indonesia. They also organized several EE events to talk to more than five hundred thousand students. Organizing interactive sessions with students

allowed them to participate in environmental literacy discussions. Real-life examples of their programs encouraging Indonesian kids can be seen in this massive real-life action. Therefore, the government, community organizations, and, most importantly, industries must sponsor this method of EE in the form of corporate social responsibility assistance (CSR). Schools must also collaborate with environmental organizations and offer space to share with students.

One of the great movements of the “bye-bye plastic bags” is promoting creativity as a means of inclusivity. Inclusiveness encompasses all forms of creative activity associated with plastic waste control, such as clothing manufactured from plastic waste, crafts, and other forms of innovation. One of the most effective ways to reduce plastic trash is enforcing general rules to influence people’s perceptions of the material. For example, the Bali government adopted a municipal ordinance governing the use of single-use plastic materials in light of the extreme reaction from the community to the issue of plastic waste. Plastic bags, straws, and other polystyrene products should be less prevalent due to this initiative.

4.1.2. Project-based Language Learning with Technology

Photovoice is a pedagogical practice involving documentary photography. It encourages pupils to use their social-semiotic sense to express themselves (Widodo, 2015, p. 68). A digital camera or smartphone was required to photograph environmental issues in their surroundings. So they created images of sanitation, water pollution, soil damage, and air pollution impacts. A digital photo gallery was then made to help pupils understand their surroundings through their social semiotic sense. This project allowed students to learn ecological terminology and improve their critical thinking abilities. The following are the steps of doing digital photovoice.

Table 1. Stages of Conducting Digital Photovoice

Stages	Descriptions
Recruitment of participants, mentors, and facilitators	Participants are the students who can be recruited from the classroom, student community groups, and student associations. At the same time, mentors and facilitators are the technical experts expected to help the participants manage their work correctly. They can be the teachers/lecturers, photographers, journalists, students from the multimedia department, etc.
Plan the project	Based on the learning purposes and outcomes, the teachers identify a problem and design a digital photovoice project to uncover a social phenomenon relevant to the learning target. For instance, the teacher plans a photovoice project of environmental issues to improve their critical thinking and problem-solving skills.
Train the participants	It aims to provide the participants with adequate skills and knowledge of doing digital photovoice. The training may include technical photography, ethics (ethical photography), safety in various situations, and group-building for a group-based project. The option to Bring Your Own Device (BYOD) (Van

	Wingerden et al., 2018) might be acceptable and applicable in some contexts while others are not. However, suppose the teacher decides to adopt the BYOD concept. Ensuring the students have the ease of access and use of technological devices needed for the project is necessary.
Photo-taking session	Students take photos of their surroundings (e.g., polluted ditch or canal, the pile of plastic waste, industrial waste, etc.) using a digital camera or smartphone. They can take as many photos as possible that represent the social phenomena under their investigation. The images are then collected and saved in a digital folder for later reviews. The images are protected in digital images to allow the students to share with others online.
Discuss, reflect, and select the photos	The students and teachers discuss, reflect, and select the photos to represent social phenomena that host many meanings. They can discuss and reflect on the pictures from different socio-economic, political, financial, and sociocultural viewpoints. The selected videos are then described and elaborated <u>comprehensively to provide a clear vision and critical analysis of a phenomenon.</u>
Exhibit	The selected digital images and descriptions are arranged in a digital photo gallery such as a Facebook and web-based photo gallery. The photo gallery is then posted and exhibited online via social media and call for feedback, critics, and suggestions from the <i>netizens</i> for future development. The use of Facebook-photovoice was found effective in empowering the participants' autonomy and collaboration in self-access learning (Rubrico & Hashim, 2014).
Action & follow up	Based on the feedback, comments, suggestions, and critiques, the students prepare actions and follow-up activities to tackle the issues that emerged during the digital photovoice process.
Evaluate the process	Critical questions like the following should guide the evaluation: - What are the students' perceived experiences with digital photovoice? - Did the digital photovoice project encourage their critical-thinking and problem-solving skills? - What are the problems encountered in the project?

Yet, digital photovoice is considered one of the qualitative methods in ELT research that provides a scientific process of participatory and collaborative actions to empower the students' social well-being and socio-semiotic knowledge and understanding.

4.1.3. Environmental English Course

Reni shared her stories of integrating climate actions in language education in the Ambon context. She incorporated the climate actions in the language education curriculum by setting up an elective course (2 credits), namely "Environmental English." She said that it was to raise the community awareness of environmental issues and to put actions through the community service initiative to deal with the eco-friendly challenges. The lecturers and students worked on an ecological project under the theme "World Environmental Day," They organized environmental actions to care for their surroundings. Finally, the student exhibited their ecological activities to see what they had done and produced during the project. The study applied project-based learning as student-centered pedagogy, where they acquired more profound knowledge from exploring real-world problems.

At the beginning of the course, the students were enthusiastic to know more about the project and explore relevant information. The lecturer provided the students with some resources such as videos and handouts. The videos were environmentally-relevant to ecological issues and inspiring actions of environmentalists for dealing with the environment. As the output of this project, the students produced some unique products by recycling plastic waste. These activities indirectly build students' metacognitive skills about environmental care, affecting their behavior and interactions with the surrounding environment. Besides that, Reni and the team cooperated with the Indonesian Institute of Science (LIPI), local people and community, and the Access Micro-scholarship Program between 2012 and 2015.

Project-based learning is one of the many other teaching approaches to integrating environmental issues in language education. It was participatory learning where lecturers and students took part in the project. They can also obtain authentic experiences interacting with others beyond the classroom setting. They can meet and build social interaction with people in the local community, environmentalists, policymakers, and fundraisers who have something in common to save the environment. Finally, they could better understand the world and organize further actions to execute

4.2. Pedagogical Implications

Based on the presenters-informed stories, each action or approach to integrating ecological issues in language education have implications for students, teachers, language curriculum developers, policymakers, local communities, and environmentalists. Axiologically, they can use the knowledge, thoughts, and understanding obtained from the activities to raise their awareness of the environment. It empowers the local community and environmentalists to connect with other relevant parties. For teachers, the knowledge of EE will help them design pedagogical strategies to educate their students. They can also develop a project to promote EE and build their capacity to interact with the environment. Besides that, they can write EE books, handouts, or other relevant sources. For curriculum developers and language policymakers, the knowledge of EE can help them better develop an environmentally-based curriculum and syllabus that carry meaning-making practices of environmental learning.

Further research on project-based language learning in integrating EE in ELT is urgent. Therefore, it is necessary to carry out studies on PBL approaches to deliver environmentally-based content. For example, a digital photovoice project is one of the alternative strategies to research. The researchers can also use community-based approaches to raise the students' awareness of environmental care. Designing a subaltern linguistic project with a credible approach is one of the most trending topics in EE and language education (Mahboob, 2019), and this study recommends future research to design a credible project on EE using a Positive Discourse Analysis (PDA).

5. Conclusion

Based on the environmentalists and teachers-informed talks, we conclude that teachers, students, local communities, environmentalists, and policymakers must all work together to foster the growth of environmentally conscious students. For one thing, it is impossible to do this alone in a situation when the assistance of other parties is required. Therefore, preparing EFL teachers to integrate environmental issues in language education is essential. It calls for the development of green pedagogy and EE-based instructions in teaching ecological matters. We recommend the language curriculum developers develop an EE syllabus for the teacher education programs. It is necessary to have a common interest in improving the teachers' skills to deliver a targeted EE. In addition, the school can also design an eco-school or green school programs to empower the community to care for the environment.

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