

Ecological pedagogy in the EFL Classroom: Current Teachers' Practices, and Perceptions

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Abstract

Ecological pedagogy is not a new concept, yet its theoretical foundations remain incomplete, and its relevance to practical fields like language pedagogies requires further investigation, whether through theoretical, empirical, or experiential approaches. The present study investigates the perceptions and practices of English as a foreign Language Teachers (EFL) regarding the adoption of ecological pedagogy within Algerian universities. It aims at examining their familiarity with ecological pedagogy and attitudes towards its integration in EFL Teaching. Furthermore, it intends to determine the extent to which teachers adopt eco-pedagogy into their courses activities. For these purposes, a questionnaire was employed as a research tool; the questionnaire was administered to EFL teachers at the English language departments in Ten Algerian Universities. The results indicate that while teachers acknowledge the importance of eco-pedagogy in enhancing students' environmental attitudes and life skills, their actual practices often lack such understanding. Teachers demonstrated a limited awareness of the importance of incorporating environmental content into their EFL teaching. This study advocates for the integration of environmental themes into language instruction, which would not only enhance students' linguistic abilities but also cultivate their awareness of critical environmental issues. It is recommended that teachers receive training in this area, as they have expressed concerns regarding their own knowledge and skills for successful ecological pedagogy implementation.

Keywords: Ecological, pedagogy, environment, ELT, perception, practice, adoption.

I. Introduction

English Language in the Algerian Context

Education aims not merely at transmitting static knowledge but serves as a medium to equip individuals with the required competences to face the twenty-first century's difficulties. It is essential for learners to understand the environmental challenges and to consider alternative solutions; and education seems to be the best channel to achieve these objectives. The landscape of language education has experienced a major transformation, shifting from conventional, linear methods to a more expansive understanding of multidimensional strategies that facilitate learning through various modes. Learning a new language extends beyond the limitations of a traditional classroom context, embracing a variety of perspectives that enhance exploration, reflection, and comprehension. One particular context for investigation is English as a Foreign Language (EFL), as the process of learning a foreign language is complex and demanding. This difficulty stems from

the need for students to gain a comprehensive understanding of all the facets of the target language (Brown, 2007).

In non-native countries such as Algeria, English is considered a second foreign language (together with French) and is taught for academic and professional purposes. In recent decades, the Algerian political and governmental authorities adopted various measures to promote the status of the English language in educational institutions. Such impetus stems from the demands of global competition and the need for international recognition. Thus, the majority of Algerian students are progressively becoming aware to its value as a universal language.

Language and Ecology

The term "ecology" was initially introduced by Ernst Haeckel in 1866 (van Lier, 2006; Kravchenko, 2020; Hornberger & Hult, 2008; Fill & Steffenson, 2014). However, its emergence within the fields of Linguistics and Language sciences was first known in the work of Sapir (1912), where he related language to the environment, suggesting that both physical and social forces, mediated through language, play an important role in shaping and altering the environment (Sapir, 2006). Some researchers argue that a more significant concept of language ecology was presented in Einar Haugen's 1972 study, which examined the interactions between a specific language and its surrounding context. (Haugen, 2001). Since that time, the discipline has evolved through extensive research (Muhlhauser, 2010) emphasizing the relationship between ecology and language, as well as in Ecological Linguistics (van Lier, 2006; Kravchenko, 2020) which aims to uphold the ecological dimensions of language. The interpretation of this field continues to vary based on scholars' perspectives on the concepts of environment and ecology.

The interplay between language and ecology has emerged as a critical area of inquiry in the fields of linguistics and language education, providing insights for pedagogical actions (Richards & Schmidt, 2014); however, certain critics consider such association unconventional and often overstated or unnecessary (Sapir, 2006). Some believe that while it's an intriguing topic for language science research, more work has to be done on its applications. It is a work that requires careful consideration in the scholarly community (Halliday, 1992; Van Lier, 2006; Fettes, 2002; Steffenson & Fill, 2014; Freeman, 2018). Furthermore, the relationship between language and ecological issues stimulates and inspires multidisciplinary research, which provides a venue for open-ended discussion in related disciplines namely language sciences and education, with the aim of developing language theory. (Van Lier, 2006; Freeman, 2018; Halliday and Matthiessen, 2014). This viewpoint, which strongly contradicts standard paradigms, calls for a more systematic research of Language Sciences and their underlying theories, which in turn influences real-world implementations. (Kravchenko, 2020)

The Objectives of the Study:

This study attempts to examine current practices in EFL teaching and provide ways to improve environmental education and ecological pedagogy in Algerian higher education institutions. The research is significant for various reasons. This study will first analyse the framework of English language teaching in Algerian universities, highlighting the resources and strategies used to include ecological pedagogy into the academic curriculum. Second, it seeks to identify and explore any flaws in current educational policies. Third, it will suggest recommendations to increase

understanding of major environmental challenges such as climate change and global warming. Therefore the study aims to raise community awareness of environmental concerns and efforts through the perspective of English language education.

II. Literature Review

Ecological Pedagogy : an Overview

Eco-pedagogy, also known as ecological pedagogy, is an educational approach that integrates principles of sustainability and ecological thinking into teaching practices. This approach addresses societal issues and highlights the need for environmental preservation. (Action, 2011) The emergence of ecological pedagogy can be understood within the framework of ecological evolution, originally referred to as "pedagogy for sustainable development," eco-pedagogy emerged as a branch of critical pedagogy and has since transcended its original scope (Van Lier, 2010). It is currently evolving as either a pedagogical movement or a curricular framework that advocates for the welfare of all living species (Kahn, 2010). Eco-pedagogy works to advance environmental activism by actively opposing many types of social injustice and dominance. The integrity of regional cultures and their innate values have been threatened by globalization, which has led eco-pedagogy to address these issues. Consequently, compared to earlier times, there is a noticeable rise in awareness regarding environmental education nowadays, which is essential for the educational landscape. Fassbinder (2012) claims that the predominant urgency surrounding environmental challenges need an educational framework that compels relevant authorities to address urgent ecological issues. Environmental education confronts the tangible realities of pollution, climate crises, waste management and the societal frameworks that perpetuate environmental degradation. Eco-pedagogy embodies an idealistic educational paradigm aimed at eradicating all forms of socio-environmental injustices and violence (Freire, 2000), fostering awareness and empowerment among students to address these critical issues.

Eco-pedagogy is not an antithesis of environmental pedagogy; on the contrary, it is a fundamental component of the latter. The frameworks, methods, and materials offered by eco-pedagogy make it easier to execute environmental education. It is characterized as a multidimensional and global initiative, with its origins traceable to the inaugural Earth Summit held in Brazil in 1992 (Grigorov & Fleuri, 2012). This approach addresses human concerns, behaviors, and the individuals' ethical responsibilities to the natural world. Eco-pedagogy focuses on curriculum designed to promote environmental consciousness in educational contexts, and civic education (Gadotti, 2008). It has evolved into a thorough educational approach that can be implemented with students of all skill levels, highlighting the importance of positive environmental attitudes and encouraging involvement in solving global issues.

Following ecological pedagogy, the creation of concepts, instructional materials, and educational content should be guided by ecological and environmental principles. Vygotsky & Piaget highlighted how important it is for curriculum to represent the value of knowledge for students. Although this claim is true, it is also incomplete. In order for curriculum content to be meaningful to students, it must not only relate to their own experiences but also have a good impact on their environment and societal context. The preservation of humanity and respect for the Earth should be a year-round endeavor. Berberoglu (2015) argues that ecological pedagogy has a beneficial impact

on shaping environmental attitudes of both teachers and students thus when their perspectives are effectively altered, it leads to significant changes in the way they approach environmental concerns.

Ecological Pedagogy in the EFL Classroom

According to recent research (Petkou et al,2021, Said et al, 2023) ecological pedagogy may be effectively and smoothly integrated into EFL teaching/learning process as it is a universal language rooted within global practices (Tang, 2009). In EFL classes, students can enrich their vocabulary through learning new words related to environmental issues, climate action, and sustainability. The study of ecology provides EFL students with various opportunities to use the language in authentic situations on a daily basis. When teachers incorporate real-world contexts such as conversations, role-playing, discussions, and collaborative projects, they significantly enhance students' language skills in a relevant and practical manner. Furthermore, by engaging students in extracurricular activities and learning experiences beyond the classroom, they can develop their linguistics competences in relation to the course content (Munir & Zaheer, 2021). This approach also enables students to be more autonomous and less dependent on the teacher, allowing them to explore their own interests and passions.

Nkwetisama (2011) posits that the adoption of ecological pedagogy within the EFL/ESL classroom is intended to enhance students' awareness and responsiveness to global environmental crises. Accordingly, fostering an understanding of environmental protection is fundamental to environmental education and is applicable to learners of all ages, as are the complexities of language structures and features. The teaching of English as a second or foreign language involves both language competency development and environmental issues, fostering a greater awareness of environmental preservation and conservation. This approach galvanizes the entire community, fostering sense of responsibility for nature and allowing the application of their knowledge for the benefit of the world. Thus, instilling students' environmental concerns can yield a positive influence on efforts to preserve and protect the environment. Through the exploration of environmental literature, narratives, and poetry, students can enhance their linguistic abilities while simultaneously cultivating environmental awareness. This dual focus allows for the simultaneous advancement of language skills and ecological consciousness. The EFL classroom serves as a platform to integrate ecological thinking and principles with language learning, thereby fostering language skills in listening, speaking, reading, and writing about environment-related topics among learners.

Language Teachers as Eco-activists

In the context of language education, the role of teachers involves more than merely transmitting knowledge, language and communication skills to students. There are several key features of ecological pedagogy that relate to its philosophical foundations, principles, and ethical considerations, wherein both educators and students are integral participants within the ecosystem (Gates, 2021) A substantial and expanding body of literature advocates for teachers and educators to involve students in environmental activities to encourage sustainability and preserve the planet (e.g., Bowers 2012; Dewey 1916; Katunich 2019; Pantić, 2015; Reid et al. 2021). These studies argue that students benefit more from their education when it transcends decontextualized, lower-order thinking and the basic acquisition of fundamental knowledge and skills. Instead, it claims that students achieve deeper and more meaningful learning when their studies emphasize higher-order

thinking and establish clear connections to the realities of the world they live in, as well as the world that future generations will face (Goulah & Katunich, 2020) Language teachers have a unique potential to shape attitudes and support practical actions. Unlike other academic fields that follow a set curriculum, language teaching is a flexible process and intrinsically adaptable, allowing for the integration of a variety of material. Historically, language education comprised literature and specialist fields like English for Specific Purposes (ESP). Currently, environmental concerns offer a topical and relevant potential for inclusion in language education. Immediate action is required in this situation. To effectively incorporate ecological consciousness, language teachers must consciously integrate this focus into their initial training as well as ongoing professional development (Cates, 2022).

III. Methodology

Research Design

In order to fulfill the research objectives, a quantitative research design has been applied as it offers a holistic understanding of the phenomena under study through incorporating both descriptive statistical data as well as in-depth interpretation. It aims at exploring English Language teachers' perceptions and practices concerning ecological pedagogy through the use of a questionnaire designed to examine the main constructs of the research under study. The questionnaire was adopted from the study of Hameed (2023) in which she analyzed teachers' perceptions and practices regarding environmental concerns and English language teaching. The questionnaire has been distributed electronically among EFL teachers from Ten Algerian Universities (Annaba, El Taref, Guelmna, Constantine, Algiers, Souk Ahras, Oran, Adrar, Biskra, Bejaia) and 68 responses were received back.

Description of the Questionnaire:

The questionnaire consisted of four sections comprising questions about teachers' overall perspectives on ecological pedagogy, its significance within the curriculum, the application of such materials to enhance student awareness, as well as their views and suggestions. The first section collects background information about teacher's age, gender, academic qualification and teaching experience. The second section includes six multiple choice questions assessing teachers' knowledge and familiarity with ecological pedagogy, environmental issues, and language teaching/learning processes. The third section includes questions aimed at evaluating teachers' perceptions of ecological pedagogy and its integration into their classrooms. The final section examines their actual teaching practices. The third and fourth sections used a five-point Likert scale, participants were asked to indicate their opinions about the given statements by marking one of the following: strongly disagree, disagree, neutral, agree, and strongly agree.

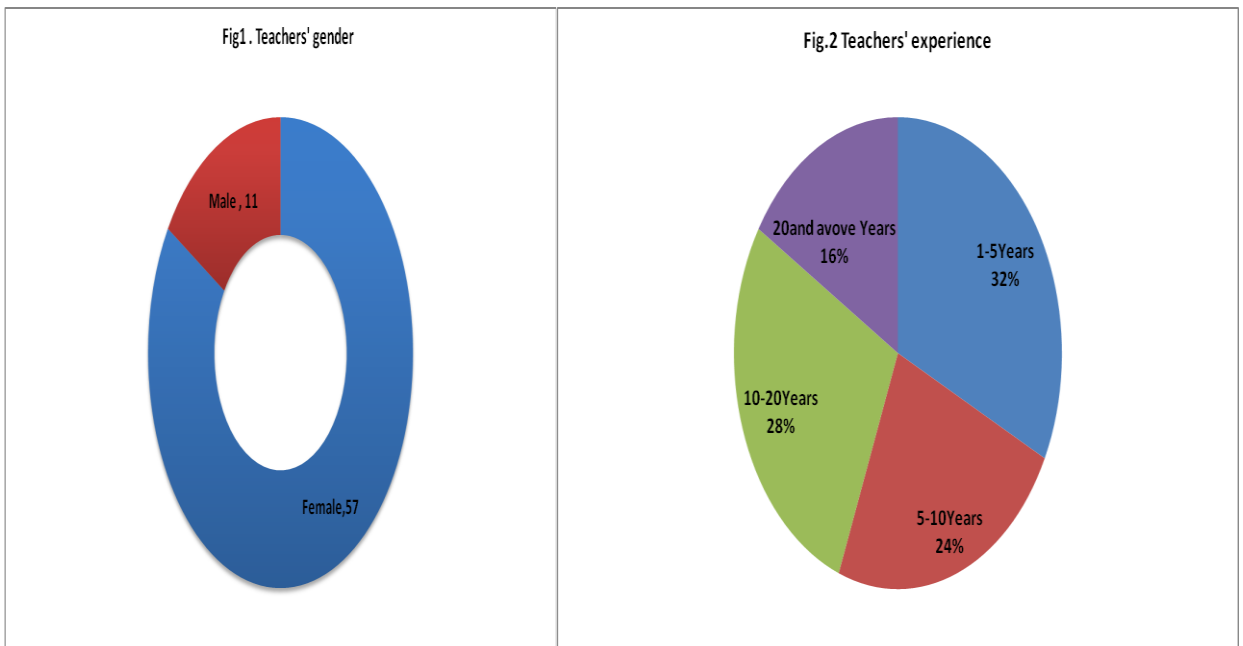
IV. Findings and Discussion

Section one: Demographic Information

As it is demonstrated in table 1, figures 1&2; the sample population of this study involves 57 female teachers out of 68, 85% of the participants hold a doctorate degree 38% of them have a teaching experience ranging from 10 to 20 years.

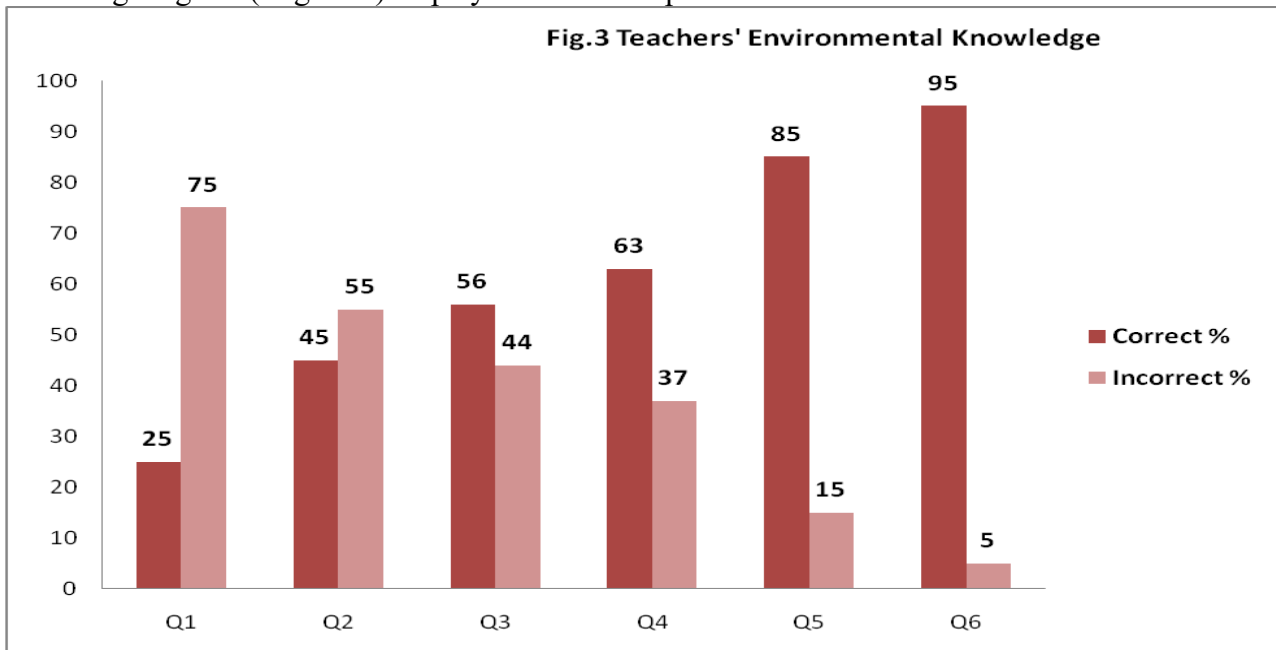
Table 1. Demographic informations

Age	25-35 :16
	35-45 :22
	45-55 :19
	55 and above : 11
Academic qualification	Magister : 10
	Phd : 58



Section Two: Teachers’ Environmental Knowledge

As it has been explained previously, this section examines teachers’ environmental knowledge, the following diagram (Figure.3) displays teachers’ responses.



The findings from this section indicate that a significant proportion of teachers possess a strong understanding of environmental issues. The percentage of correct responses suggests that many questions were answered accurately. In the segment concerning the Algerian environment, most participants demonstrated their knowledge through correct answers. Overall, the results highlight their general awareness of main environmental challenges in Algeria such as pollution, waste management, quality of water resources, and desertification. Nkwetisama (2011) emphasizes the importance of such knowledge in addressing current ecological realities. The results suggest that English educators in Algerian universities are well-informed in this domain. Given that awareness of environmental issues is a crucial initial step toward finding solutions (Said et al., 2003), it may be deduced that teachers with this level of knowledge will play a significant role in promoting ecological pedagogy and enhancing environmental education.

Section Three: Teachers' Perceptions

The third part of the questionnaire consists of 10 statements that explore teachers' perceptions of ecological pedagogy, and its role in improving students' competences and life-long habits. It examines teacher' attitudes towards institutional support in developing such pedagogies and their predisposition to participate in training sessions in order to incorporate ecological pedagogy appropriately in their classroom practices; and finally their attitude towards such inclusion. Table 2 demonstrates the section's results.

Table 2. Teachers' Perceptions

Statement	SD	D	N	A	SA
1. The ultimate goal of ecological pedagogy is to help students understand the urgency of environmental issues	10%	16%	10%	46%	18%
2. The adoption of ecological pedagogy is helpful in improving students' environmental attitudes	6%	19%	12%	47%	16%
3. I believe that training can help me further to incorporate ecological pedagogy in ELT	15%	19%	24%	34%	8%
4. Teacher training grounded in environmental education-related pedagogy would be highly beneficial for my development	12%	16%	24%	37%	11%
5. Ecological pedagogy and environmental education are promoted in my university	12%	28%	16%	37%	7%
6. I believe it is fundamental to integrate environmental concepts, topics and issues in my ELT course activities	26%	20%	8%	31%	13%
7. The classroom is the ideal context to nurture knowledge of environmental concerns	25%	13%	12%	34%	16%
8. I believe the incorporation of ecological pedagogy is required in all disciplines including English language teaching	12%	7%	23%	43%	15%
9. I am familiar with the local and national environmental concerns and i can address them in my sources sessions	7%	48%	3%	38%	4%
10. I often take part in campaigns, field-trips, study days... that address environmental problems	22%	18%	9%	14%	37%

According to Table.2, 58% of the participants agree that ecological pedagogy should be adopted in university programs, while 26% disagree. Such result shows that professors have a generally positive attitude toward the introduction of ecological pedagogy within the university curriculum. They also consider such approach effective to obtain lifelong skills and improve students' environmental attitudes (63% agree) which reflect again their optimistic and encouraging attitude. Similarly, 59% agree approve that the classroom is the best place where they can raise students' awareness about the existent environmental concerns. As per the question that eco-pedagogy is promoted by my institution, 44% agree whereas 40% disagree which do not identify the position of the university towards such approach. When asked about the provision of an adequate training, 42% agree, and 34% disagree with one question and for another statement in the same line 48% agree, 28% disagree and 24% are neutral. Following the participants' response 44% agree to include environmental concepts and issues in their ELT activities, while 46% disagree. The findings are intriguing because they reveal that though teachers are positive about the adoption of ecological pedagogy in the general curriculum, they seem reluctant and less excited about its inclusion in their EFL teaching practices. When asked about their knowledge about the local and national environmental issues, 58 % of the respondents agreed, and 23 % were neutral .The findings of this section reveal that teachers have some positive attitudes towards ecological pedagogy and its potential inclusion in their classroom activities.

Section four: Teachers' practices

The final section of the questionnaire aimed to examine EFL teachers' practices regarding ecological pedagogy. Teachers were given 10 statements that explore teachers' actual practices as well as teachers' future practices as an evidence for their willingness to include ecological approach into their classroom routines. The results are demonstrated in tables 3 and 4.

Table 3. Teachers' Classroom Practices

Statement	SD	D	N	A	SA
1. Adopting ecological pedagogy is not relevant to my curriculum	28%	19%	36%	7%	10%
2. I am not interested in designing lessons and activities on environmental topics	19%	28%	39%	9%	5%
3. I only teach the content that aligns with the standards for my ELT curriculum	16%	13%	41	23%	7%
4. A goal of my teaching is to promote students' sustainable practices in the classroom	9%	11%	28%	45%	7%
5. I assist students in cultivating a sense of responsibility towards the environment through class assignments and projects.	9%	12%	27%	38%	14%
6. I use environmentally themed texts and materials	8	8%	36%	42%	6%
7. I dedicate a percentage of my instructional time weekly or monthly on discussions about environmental topics and issues	6%	33%	39%	16%	6%

Table 4. Teachers' Future Classroom Practices

Statement	SD	D	N	A	SA
1.Ecological pedagogy can be integrated into almost any curriculum including ELT	4%	26%	29%	19%	22%

2. I have the required knowledge and skills to adopt ecological pedagogy in my teaching practices	6%	16%	36%	32%	10%
3. I am good at integrating-indirectly- environmental concepts into my classroom assignments and exam questions	3%	27%	46%	23%	0%

In the above tables, we notice that the neutral option is significant, as the values for most statements frequently exceed those of the other choices, between 27% as the minimum and 41% as the maximum. This suggests that regarding what teachers actually do in their classrooms and what they can do in the future, they are either uncertain about their roles in adopting ecological pedagogy within their English Language Teaching (ELT) practices or prefer not to disclose their views, opting for a neutral stance. Additionally, the disagreement among teachers on various statements reflects a rather discouraging situation. According to Said et al. (2003), the effective incorporation of ecological pedagogy and the successful implementation of environmental sustainability awareness within ELT programs depend on the active involvement of teachers; without their engagement, such initiatives remain unattainable. Therefore, the data presented raises concerns about teachers' awareness of the urgency of environmental issues and their capacity to address them.

V. Conclusion

The present research suggests rethinking language education from an ecological perspective. Despite its vast and divergent theoretical scope, ecological pedagogy plays a vital role in improving language education, language sciences as well as teacher professional development. First, the ecological principles encourage innovative research aimed at bridging gaps and integrating various disciplines to advance language sciences. Second, it promotes creative instructional approaches based on heuristic and trans-disciplinary frameworks, which can complement rather than oppose current practices. The study aimed to explore and assess EFL teachers' perceptions and practices at Algerian universities concerning the incorporation of ecological pedagogy. To achieve this objective, a quantitative research design was applied using a structured questionnaire designed to address the fundamental constructs under investigation. The findings from the questionnaire reveal that teachers' attitudes towards integrating environmental education into English language instruction are inadequate, despite their strong knowledge of ecological realities. Additionally, an examination of their practices indicated alarming results, as many teachers admitted to neglecting environmental topics entirely. When such topics were included in their teaching materials, they were not given the necessary emphasis. EFL teachers acknowledged their lack of focus on ecological challenges and environmental issues within their English language teaching practices, expressing concerns about insufficient time and training to address this important area. Accordingly, English language instruction serves as a valuable medium for promoting education through indirect methods. While the primary objective of a language teaching curriculum is to impart language skills, integrating contemporary global challenges into the content can significantly contribute to the achievement of sustainable development goals. This perspective is supported by numerous scholars, including Fuente (2022), Kwee (2021), and Bowden (2010). Consequently, the current study advocates for the incorporation of environmental education within English language teaching from multiple angles. This could involve integrating environment-related materials for integrated skills activities, encouraging discussions on environmental issues in speaking and writing classes, and assigning projects that emphasize environmental protection across various skill development sessions. Such an approach would fulfil a dual function: it would maintain a focus on language proficiency while simultaneously disseminating crucial environmental education to a broader audience. Moreover, the study emphasizes the necessity of training teachers in this area, as they have expressed concerns regarding their preparedness and expertise to effectively deliver this integrated curriculum.

The primary objective of English as a Foreign Language (EFL) classes is to foster cultural awareness, cultivate an interest in global matters, and enhance the teaching and learning of languages, among other aims. Yet, English Language Teaching (ELT) classrooms should extend beyond the confines of traditional language instruction; they ought to incorporate various pertinent issues while engaging with language. Hence, language educators must be equipped to address prevalent societal challenges namely the urgent environmental concerns. When students are educated in an environmentally conscious setting, they are inspired to advocate for living organisms, ecological balance, and a nurturing attitude towards natural resources. Therefore, eco-pedagogy posits that affection and accountability towards the environment can flourish among students as they learn and interact with their surroundings. The implementation of an eco-pedagogy approach in fostering environmental awareness represents a significant effort to prepare future generations to be environmentally responsible.

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