



Climate-Responsive University EFL Pedagogy: The Interaction of Institutional Support and Lecturer Agency

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Abstract

Climate change education is increasingly relevant to higher education, yet little is known about how university EFL lecturers sustain climate-responsive teaching under different institutional conditions. This study explored how lecturers in Malaysian and Indonesian higher education settings perceived the role of climate change education, the practices and strategies they described using or recommending, and how institutional support and lecturer agency influenced these practices. A qualitative comparative design was used using semi-structured interviews with seven EFL lecturers, comprising three participants in Malaysia and four in Indonesia. The interview data was analysed thematically. Participants viewed climate change as meaningful for connecting English learning with local environmental problems, authentic communication, critical engagement, and interdisciplinary knowledge. They reported or proposed discussions, multimedia, podcasts, documentaries, guest speakers, and project-based activities. However, the degree and consistency of integration varied with the interaction between institutional conditions and individual initiative. The study showed that lecturer agency could initiate and adapt climate-responsive teaching, while curricular recognition, credible resources, and institutional support influenced its continuity. Because the findings were based on self-reported interviews, they established neither classroom effectiveness nor national differences.

A. Introduction

As climate change increasingly disrupts ecological systems, economies, and human well-being, universities face a troubling contradiction: students must learn to confront a planetary crisis, yet climate-related learning remains difficult to translate into everyday teaching beyond science-oriented courses (IPCC, 2022; UNESCO, 2022; Henderson & Drewes, 2020; Monroe et al., 2019; Ssekamatte, 2023). EFL classrooms offer one such space because language learning can connect linguistic development with critical thinking, intercultural dialogue, and socially relevant communication (Crookes, 2021; Mambu, 2023; Micalay-Hurtado & Poole, 2022; Putri, 2018; Goulah, 2017; Porto, 2025). The problem, however, is not whether climate change is important, but how lecturers translate sustainability agendas into language objectives, materials, classroom activities, and pedagogically accountable engagement (Biesta et al., 2015). Because this study draws on lecturer interviews, it investigates how lecturers perceive and report this translation rather than whether climate-responsive instruction was independently observed or verified.

Research on climate change education supports contextual, participatory, and interdisciplinary approaches that move environmental learning beyond science classrooms (Henderson & Drewes, 2020). In language education, studies have examined the curricular representation of sustainability goals, environmental discourse in textbooks, and eco-critical pedagogies (Arslan & Curle, 2021; Curdt-Christiansen, 2021; Mambu, 2023; Sahayu et al., 2025). Indonesian evidence further shows that environmental themes can be embedded through digital storytelling, ecolinguistic materials, eco-literacy, and multimodal critical framing (Astawa, 2025; Ayuanita et al., 2025; Muqoddas & Mulyadi, 2023; Putri, 2018; Saifulloh et al., 2025). Research on environmental narratives also indicates that accessible texts and visuals can make complex ecological issues pedagogically usable, although oversimplification remains a concern (Astutik & Elviana, 2025; Nugraha et al., 2025).

Recent studies have also shifted attention from materials to teacher preparedness and enactment. Silvhiany et al., (2023) examined 214 Indonesian EFL teachers' preparedness and perspectives, while Silvhiany et al., (2023) showed how connected learning and ecojustice pedagogy can operate in EFL teacher education. Rabbianty et al., (2025) documented the potential of Padlet for environmental education among pre-service English teachers. Most directly, Usman et al., (2025) found limited and inconsistent SDG integration across EFL curricula in Indonesian and Malaysian universities, with implementation often driven by lecturers' individual initiatives rather than systematic

institutional support. Together, these studies establish the relevance of climate-responsive language education but leave the relationship between pedagogical intention, institutional conditions, and lecturer agency insufficiently explained.

Existing studies have clarified teachers' preparedness, climate awareness, curricular engagement, and the role of institutional conditions in enabling climate education (Rushton et al., 2025; Silvhiany et al., 2023; Usman et al., 2025). Yet they provide less detailed explanation of how university EFL lecturers negotiate the relationship between institutional support and personal agency when deciding whether, how, and how consistently climate-related content is incorporated into their teaching. Usman et al., (2025), the study most closely related to the present research, found that SDG integration in Indonesian and Malaysian EFL curricula remained limited and was frequently driven by individual initiative. However, its broader focus on the SDGs leaves the interaction between institutional conditions and lecturer agency in climate change-specific EFL pedagogy insufficiently examined. The remaining gap therefore concerns how these two dimensions interact in shaping the reported extent and consistency of climate-responsive EFL practice, rather than whether sustainability education in Southeast Asian EFL contexts has previously been studied.

This unresolved relationship provides the basis for a bounded comparison between participating higher education contexts in Malaysia and Indonesia. Both settings position English within university education and face socially relevant climate concerns, while their institutional arrangements and curricular priorities may create different opportunities for integration. The comparison is therefore used to examine contextual variation, not to establish national differences. Critical pedagogy, critical language awareness, and environmental literacy serve as sensitizing concepts rather than directly measured constructs. Together, they direct attention to dialogue, problem-posing, power, representation, contextual understanding, and possibilities for action (Crookes, 2021; Curdt-Christiansen, 2021; Mambu, 2023; Micalay-Hurtado & Poole, 2022; Muqoddas & Mulyadi, 2023; Oberman & Sainz, 2021; Sahayu et al., 2025). These perspectives help interpret the pedagogical possibilities of climate-related topics without assuming that lecturers' reported practices already constitute critical or transformative pedagogy.

Bringing institutional conditions and lecturer agency into the same analytical frame distinguishes this study from research that has primarily examined teacher preparedness, climate awareness, curricular content, or teacher agency independently

(Rushton et al., 2025; Silvhiany et al., 2023; Usman et al., 2025). The study offers contextual qualitative evidence from participating Malaysian and Indonesian higher education settings and develops a preliminary, data-grounded interpretation of how institutional support and individual initiative interact in climate-responsive EFL pedagogy. This contribution is empirical and conceptually exploratory rather than a claim to extend critical pedagogy or critical language awareness as theories. It also clarifies the practical importance of curricular guidance, accessible teaching resources, professional learning, and institutional recognition in moving climate-responsive EFL beyond isolated lecturer initiatives. These implications remain bounded to the participating contexts and should not be interpreted as national policy recommendations.

This study aims to examine how university EFL lecturers in participating Malaysian and Indonesian higher education contexts perceive and report their engagement with climate change education, focusing on their understanding of its role in EFL instruction, the practices and pedagogical strategies they use or propose, and how institutional support and lecturer agency shape the extent and consistency of those practices.

B. Method

This study adopted a qualitative comparative design to examine lecturers' perspectives on climate-responsive EFL teaching (Creswell & Poth, 2018). This design suited the study's focus on perceptions, reported practices, and contextual conditions. The study does not treat Malaysia and Indonesia as nationally representative cases. The lecturer is the primary unit of analysis, while country and institutional contexts provide a basis for examining patterns and contrasts across participating settings. Semi-structured interviews elicited accounts of how lecturers understood climate change education, what they reported doing, and which strategies they proposed. Critical pedagogy, critical language awareness, institutional support, and lecturer agency served as sensitizing concepts rather than predetermined coding categories.

The study involved seven university EFL lecturers, including three from Malaysia and four from Indonesia. Participants were selected purposively based on two main criteria: a minimum of seven years of experience in teaching English as a foreign language and formal certification in English language teaching. These requirements were intended to ensure that all participants possessed sufficient professional experience to provide informed and reflective accounts of their teaching practices. The participants were therefore selected for the depth and relevance of their experience rather than to achieve

statistical representativeness. As the institutional information available was insufficient to distinguish university-specific influences from broader national differences, university affiliation and country were used only to describe the contexts in which participants worked and were not treated as separate units of comparison.

Data were collected through 45–60-minute semi-structured interviews comprising fifteen questions on climate change education, its integration into EFL teaching, and relevant media and pedagogical strategies. Interviews were conducted face-to-face or online, audio-recorded with consent, and transcribed for analysis. The format ensured consistency while allowing participants to elaborate on their experiences. The data represent participants' perceptions and self-reported practices rather than independently verified classroom implementation or learning outcomes.

Data analysis followed Miles, Huberman, and Saldaña's (2014) interactive approach. Transcripts were read closely and coded line by line. Inductively developed codes were grouped into categories concerning perceived importance, reported integration, institutional support, lecturer agency, and suggested pedagogical approaches. Matrices were used to compare patterns within and across the Malaysian and Indonesian participant groups. Two researchers independently coded the transcripts and resolved discrepancies through discussion. Preliminary interpretations underwent member checking, while peer debriefing challenged and refined the analysis. Final themes were selected according to recurrence, relevance to the study objectives, and capacity to represent variation rather than commonality alone. The analysis combined within-participant interpretation with contextual comparison across groups.

Ethical approval was obtained from the Research Ethics Committee of Universiti Malaysia Terengganu (UMT/JKEPM/2024/378). All participants provided written informed consent before participation. Pseudonyms were used, and identifying information was removed from transcripts and reporting. Participants were informed that participation was voluntary and that they could withdraw without penalty. Digital recordings and transcripts were securely stored and restricted to the research team.

C. Results and Discussion

This section first presents the empirical findings derived from the interview data and then interprets their significance in relation to the study's conceptual framework and previous research. The Results are organized around lecturers' perceptions of climate change education,

their reported integration experiences, and their proposed pedagogical strategies. The Discussion subsequently examines how these findings illuminate the interaction between institutional support and lecturer agency in climate-responsive EFL pedagogy.

1. Results

The results are based on interviews with seven EFL lecturers from the participating Malaysian and Indonesian contexts. Three themes were identified: (1) the perceived importance of climate change education in EFL, (2) reported experiences of integrating climate-related content and the role of institutional support and lecturer agency, and (3) reported or proposed media and pedagogical strategies. Because the data were obtained exclusively through interviews, the findings represent participants' perceptions and reported practices rather than independently observed classroom implementation or measured student outcomes.

a. Perceived Importance of Climate Change Education in EFL Classrooms

Across the interviews, participants described climate change as relevant to higher education EFL because it could connect language learning with contemporary social and environmental issues. Their accounts emphasised meaningful communication, interdisciplinary connections, critical engagement, and preparation for wider social participation. The theme therefore captures how participants understood the pedagogical value of climate-related content rather than demonstrating its effects on students' language proficiency, environmental knowledge, or behaviour.

M2 described climate change as a useful interdisciplinary topic:

"Providing climate change issue in EFL classroom promotes interdisciplinary learning and research opportunities. Universities offer a unique environment where students from diverse academic backgrounds come together. Teaching climate change at this level allows for collaboration between students from various fields such as science, engineering, economics, and social sciences". (Interview with M2, 2024)

M2 associated climate-related content with opportunities for students from different academic disciplines to communicate through English around a shared issue. IN1 similarly linked climate change education with global citizenship:

"It's really important because it connects students with global issues they need to understand. It helps them learn about science and the environment, and it encourages them to think critically. Plus, it prepares them for future challenges and gets them involved in taking care of the planet and being active citizens". (Interview with IN1, 2024)

For IN1, climate-responsive EFL combined language learning with engagement in environmental and social issues. Her account placed particular emphasis on critical thinking, future challenges, and students' participation as citizens. M3 reported that students appeared more enthusiastic when English activities addressed issues affecting their future: *"students are more enthusiastic when they learn English to talk about things that affect their future"*. (Interview with M3, 2024)

This perceived enthusiasm was associated with the personal and future relevance of the topics. However, it reflects M3's assessment of student engagement because the study did not collect observational or student-level data.

IN3 described using local environmental problems such as flooding and plastic pollution as discussion topics: *"students were very active when they talked about plastic pollution in rivers. They compared their villages' conditions and even suggested solutions in English"* (Interview with IN3, 2024). Her account identified three reported forms of classroom participation: comparing local conditions, discussing environmental problems, and proposing solutions in English. The use of locally familiar issues provided the content for these communicative activities.

IN4 emphasised the relationship between environmental reading materials and critical engagement: *"When students read about environmental issues in English, they not only practice language but also learn to question information, compare sources, and decide what action they can take"*. (Interview with IN4, 2024)

IN4 thus associated environmental texts with language practice, source comparison, questioning information, and consideration of possible action. Collectively, these accounts show that the participants perceived climate-related content as relevant to communicative, interdisciplinary, and critically oriented EFL activities.

b. Reported Integration, Institutional Support, and Lecturer Agency

The second theme concerns how institutional conditions and lecturer agency were described in relation to reported integration. All seven participants reported at least one instance of incorporating climate-related content into EFL teaching, although the reported frequency, form, and institutional basis of this integration varied.

Within the participating Malaysian contexts, M1 and M2 described explicit institutional support, particularly through environmental orientation, curriculum-related encouragement, resources, seminars, and guest lectures. M3 also reported incorporating

future-oriented environmental issues into English learning activities but did not identify comparable institutional support. M1 noted: *"As this university is an environmental-based, there are a lot of related subjects provided"*. (Interview with M1, 2024)

M2 similarly reported that faculty-level support made it easier to bring environmental materials into English classes: *"Our faculty promotes environmental awareness as part of the curriculum. So we often get resources, seminars, or even guest lectures that relate to climate change. It becomes natural to bring these materials into English classes"*. (Interview with M2, 2024)

The support reported by M1 and M2 included the availability of related subjects, curricular recognition of environmental awareness, teaching resources, seminars, and guest lectures. M3 reported integration experience but did not identify comparable institutional support. These differences occurred within the participating Malaysian group and therefore do not represent Malaysian higher education as a whole.

The four Indonesian participants did not report formal university support for integrating climate-related content. IN2 characterised her integration as occasional and dependent on topic suitability: *"I only did oral speech when it is appropriate with the topics or themes discussed"*. (Interview with IN2, 2024)

Her account indicates that climate-related content was incorporated when it corresponded with the topic of a speaking activity rather than as a consistently specified curricular component.

Despite limited formal support, IN4 reported deliberately incorporating climate-related materials into her EFL classes: *"I incorporate climate change issues into my EFL classes by providing materials related to these topics"*. (Interview with IN4, 2024)

She described reading passages on pollution, environmental podcasts, and writing activities on recycling. These examples show how she selected environmental materials and incorporated them into different language skills.

IN1 likewise described a personal responsibility to include environmental issues: *"Even though my university does not ask for it, I feel it is important to integrate environmental issues into my teaching. Students need this knowledge for their future, and as a teacher, I cannot just ignore it"*. (Interview with IN1, 2024)

IN1 explicitly distinguished her individual commitment from institutional requirements. Her reported integration was therefore based on professional judgement rather than a formal university expectation.

IN3 reported using local environmental issues such as flooding and waste management to make English activities relevant to students' lives: *"When I give them a topic about our local problems, they can speak more easily because it is close to their life"*. (Interview with IN3, 2024)

Her account illustrates contextual adaptation through the selection of familiar environmental problems as speaking topics. Across the participating contexts, institutional support was explicitly reported by two lecturers, whereas the remaining five accounts placed greater emphasis on topic suitability, locally relevant materials, or individual commitment.

c. Reported and Proposed Media and Pedagogical Strategies

The third theme captures both reported practices and proposed strategies. Participants referred to interactive and multimodal approaches, including social media, multimedia presentations, podcasts, documentaries, workshops, guest speakers, discussions, and project-based activities. Not every strategy was reported as having been implemented; some represented participants' recommendations for climate-responsive EFL teaching.

M1 proposed using TikTok and other social media videos because they could provide accessible starting points for environmental discussion: *"TikTok can be effective in attracting students' attention, especially when the videos present environmental issues in creative ways"*. (Interview with M1, 2024)

M1's recommendation focused on the familiarity and creative presentation of short-form digital content. M2 proposed multimedia presentations, class discussions, and hands-on activities: *"Multimedia presentations, incorporating visuals, graphs, and videos, are very helpful. Class discussions and hands-on activities also make students more engaged"*. (Interview with M2, 2024)

His proposed combination included visual input, discussion, and participatory activities. The reported value of these approaches reflects M2's perception because student engagement was not independently assessed.

IN3 suggested podcasts as a flexible medium: *"Podcasts are easy to use, and students can listen anytime. It gives them exposure to real English and real issues"*. (Interview with IN3, 2024)

She highlighted flexible access and exposure to English used in discussions of contemporary issues. IN2 highlighted documentaries and contextualised speaking activities: *"When students watch a documentary, they are more aware and it helps them to speak in English about real issues. It gives them authentic language and authentic problems at the same time"*. (Interview with IN2, 2024)

IN2 associated documentaries with authentic language, real-world environmental problems, and subsequent speaking activities. Her statement represents a lecturer perception rather than measured evidence of increased awareness or speaking performance. IN1 described a reported classroom activity involving a local environmental activist: “*The students were very inspired. They could ask questions in English and then reflect on what they learned*”. (Interview with IN1, 2024)

This was presented as an implemented activity, whereas workshops, guest speakers, documentaries, and project-based learning were also included among IN1’s broader recommendations. Table 1 consolidates the participants’ reported integration experience, reported university support, and suggested media or methods.

Table 1. Reported Integration Experience, Institutional Support, and Suggested Media/Methods for Climate-Responsive EFL

Lecturer	Integration Experience	University Support	Suggested Media/ Methods
M1	Yes	Yes	TikTok, social media videos
M2	Yes	Yes	Multimedia presentations, class discussions, hands-on activities
M3	Yes	No	Social media, news media
IN1	Yes	No	Workshops, guest speakers, documentaries, project-based learning
IN2	Yes	No	Audio-visual materials, contextual speeches
IN3	Yes	No	Podcasts
IN4	Yes	No	Internet-based materials (videos, podcasts, articles)

Note. “Integration experience” indicates at least one reported instance of incorporating climate-related content into EFL teaching; “university support” refers to reported curricular, resource, or professional support. These classifications are based on participant accounts and are not independently verified.

As summarised in Table 1, every participant reported some integration experience, but only M1 and M2 reported university support. The suggested approaches differed in format, yet most involved authentic or multimodal materials and opportunities for students to use English in relation to environmental issues. Overall, the interview findings reveal variation in how climate-related content was incorporated, the support available to lecturers, and the media or activities they associated with climate-responsive EFL teaching.

2. Discussion

The findings suggest that participants regarded climate change as a legitimate and potentially meaningful topic for EFL, particularly when it could be connected with

authentic communication, local issues, interdisciplinary content, or critical discussion. This interpretation is consistent with work positioning language education as a space for engaging climate-related issues and critical awareness (Crookes, 2021; Goulah, 2017; Mambu, 2023; Micalay-Hurtado & Poole, 2022; Monroe et al., 2019; Silvhiany et al., 2023). At the same time, the present data do not demonstrate that climate-responsive EFL improved students' language proficiency, motivation, ecological awareness, or citizenship. Rather, they show how lecturers understood the pedagogical possibilities of connecting language education with environmental questions that students encounter in their academic and social lives (Biesta et al., 2015; Nurwahyuni & Tabrani, 2025).

Those possibilities became most concrete when participants used flooding, plastic pollution, waste management, and other locally recognisable problems as the content of language activities. Local environmental experience appeared to reduce the distance between climate change as an abstract global phenomenon and English as a means of discussing its immediate consequences (Rousell & Cutter-Mackenzie-Knowles, 2020). Similar connections between ecological knowledge, local narratives, and contextualised language learning have been identified in tourism English, eco-literacy materials, and Indonesian environmental narratives (Astawa, 2025; Muqoddas & Mulyadi, 2023; Nugraha et al., 2025). Locality in this sense is not merely an attractive classroom topic. It functions as a discursive bridge through which students can describe lived conditions, compare experiences, negotiate possible responses, and relate environmental concerns to broader social questions through English.

Nevertheless, the presence of environmental content does not by itself make language teaching environmentally critical. Discussions, texts, or digital media can remain at the level of vocabulary and factual comprehension unless students are invited to examine how environmental problems are represented, whose perspectives are privileged, and how responsibility and possible action are framed. Critical pedagogy requires dialogue, problem-posing, attention to power, and opportunities for reflective action rather than the simple inclusion of topical content (Crookes, 2021; Oberman & Sainz, 2021). The participants' references to questioning information, comparing sources, discussing community problems, and considering responses indicate openings for such engagement (Walshe & Rushton, 2026). These openings resemble the critical potential demonstrated through collaborative digital storytelling and critically framed ecological literacy (Putri, 2018; Saifulloh et al., 2025), but the interview evidence does not establish that critical pedagogy was systematically enacted.

Whether such openings could become sustained practice was closely connected to the relationship between institutional support and lecturer agency. Curricular recognition, environmental orientation, resources, seminars, and guest lectures expanded what some participants considered feasible, whereas limited formal support placed greater responsibility on lecturers' personal commitment and contextual judgement. This pattern should not be interpreted as an essential difference between Malaysian and Indonesian higher education. Usman et al., (2025) likewise found that sustainability integration in EFL curricula across Indonesian and Malaysian universities remained uneven and was frequently driven by individual initiative. Research conducted in other educational settings also shows that teacher agency is shaped by curricular expectations, institutional cultures, professional networks, and access to resources (Henderson & Drewes, 2020; Rushton et al., 2025). Agency therefore operates within institutional conditions rather than independently of them.

This interaction explains why neither institutional provision nor individual commitment is sufficient on its own. Lecturer initiative can introduce climate-related material when no formal expectation exists, but practices that depend largely on personal commitment may remain occasional and vulnerable to competing workloads or curricular priorities. Conversely, an institution may endorse environmental education without producing consistent classroom practice if lecturers lack pedagogical resources, confidence, or discretion. The preparedness of Indonesian English teachers to integrate climate change has similarly been linked to knowledge, perceived relevance, and supporting conditions (Silvhiany et al., 2023). The present findings therefore refine the structure–agency relationship by showing that climate-responsive EFL develops through the alignment of institutional legitimacy, material opportunity, and professional judgement. Lecturer agency initiates and adapts practice, while institutional support influences whether such practice acquires continuity and curricular stability.

The same relational dynamic is visible in participants' use or recommendation of social media, multimedia presentations, podcasts, documentaries, guest speakers, and project-based activities. These media can provide authentic language and multiple modes of representation, but their value depends on the intellectual and communicative work required of students. Evidence from digital environmental education, sustainability podcasts, and climate-responsive teacher education shows that technology becomes pedagogically meaningful when learners actively interpret, discuss, produce, or challenge environmental messages (Mohammed, 2024; Oraif & Alrashed, 2025; Rabbianty et al.,

2025; Silvhiany et al., 2024). A documentary used only to transmit information differs substantially from one accompanied by source evaluation, comparison of competing claims, and reasoned discussion. Multimodality should consequently be treated as a resource for designing critical language activity, not as evidence of pedagogical innovation or effectiveness in itself.

The materials through which environmental issues enter the classroom are equally important because language resources never present ecological realities neutrally. Textbooks, articles, videos, and podcasts select particular problems, actors, relationships, and possible futures. Research on Chinese textbooks demonstrates how language curricula can develop environmental literacy through recurring representations and value orientations (Curdt-Christiansen, 2021), while ecolinguistic analyses reveal how educational texts may reproduce or challenge assumptions about human relationships with nature (Ayuanita et al., 2025; Sahayu et al., 2025). The participants' emphasis on comparing sources and examining local problems therefore has significance beyond selecting engaging content. It points toward an ecolinguistically informed practice in which students learn to analyse how English constructs environmental responsibility, urgency, adaptation, and agency. This strengthens the connection between language awareness and climate education without treating ecological literacy as an automatic outcome.

For institutions, this relationship calls for support that enables rather than replaces lecturer judgement. Explicit curricular space curated and scientifically credible materials, professional learning, and interdisciplinary collaboration can reduce the burden on individual lecturers while preserving flexibility for local adaptation (Rushton et al., 2025; Usman et al., 2025). The practical principle emerging from the findings is therefore supported autonomy: institutional recognition combined with sufficient professional discretion to adapt content to students' linguistic, disciplinary, and environmental contexts (Henderson & Drewes, 2020; Rushton et al., 2025).

Within this institutionally supported space, lecturers can translate broader environmental commitments into classroom practices by connecting familiar environmental cases with purposeful speaking, reading, writing, and source-evaluation tasks (Mambu, 2023; Putri, 2018; Silvhiany et al., 2023). Climate-responsive activities should also be aligned with course outcomes and assessment; otherwise, they risk remaining supplementary topics that disappear when time becomes limited (Arslan & Curle, 2021). Environmental education in ELT has been associated with critical thinking and sustainable dispositions,

but such outcomes require intentional pedagogical design rather than thematic inclusion alone (Maghfiroh et al., 2025).

The experiences reported in these Malaysian and Indonesian contexts speak to a problem encountered wherever language curricula are expected to respond to sustainability while retaining established linguistic objectives. In Turkey, the presence of the Sustainable Development Goals in English curricula has raised questions about how policy commitments are translated into teachable content (Arslan & Curle, 2021). Chinese textbook research demonstrates the role of curricular discourse in shaping environmental awareness (Curdt-Christiansen, 2021), while studies from England and Saudi Arabia respectively show how teacher agency and digitally mediated language activities influence classroom enactment (Oraif & Alrashed, 2025; Rushton et al., 2025). Across these settings, the recurring issue is not whether environmental themes can enter language education, but how curricular legitimacy, resources, representation, and teacher agency combine to sustain meaningful engagement. The Southeast Asian cases clarify this mechanism without proposing that their particular institutional practices should be replicated elsewhere.

Although this study offers a contextually grounded account of how institutional support and lecturer agency interact in climate-responsive EFL pedagogy, its limitations must be acknowledged. The small sample and limited institutional description preclude national comparison or broader generalization. Reliance on cross-sectional interview data also means that reported practices, their continuity, classroom implementation, and student outcomes could not be independently verified. Moreover, the distinction between implemented and proposed strategies depended entirely on participants' accounts. The findings should therefore be understood as an exploratory interpretation of the structure-agency relationship within the participating contexts, rather than evidence of causality, pedagogical effectiveness, or patterns representative of Malaysian, Indonesian, or Southeast Asian higher education.

D. Conclusion

This study provides an exploratory account of how university EFL lecturers in participating Malaysian and Indonesian contexts perceive and report climate-responsive teaching. Participants viewed climate change as relevant to EFL and described or proposed a range of interactive and multimodal approaches. The central finding is the relationship between institutional support and lecturer agency: institutional recognition, curricular

opportunities, and resources may facilitate more systematic integration, while individual agency enables lecturers to adapt or initiate climate-related teaching when formal support is limited. These findings are contextual and should not be interpreted as evidence of national differences or verified classroom effectiveness.

The study makes an empirical and conceptually preliminary contribution by explaining climate-responsive EFL as a product of interaction between institutional conditions and lecturer agency. Lecturer initiative can create pedagogical openings, but institutional recognition, curricular space, professional learning, and credible resources influence whether these initiatives become continuous and coordinated practices. This relationship offers a practical basis for developing institutionally supported yet contextually adaptable climate-responsive EFL pedagogy without prescribing a uniform teaching model.

Future research should address the limitations of the small, context-specific sample by examining clearly bounded institutional cases across more diverse higher education settings. Classroom observations, student perspectives, curriculum and material analysis, and learning evidence are needed to verify reported practices and distinguish implemented strategies from proposed ones. Longitudinal research could also determine whether climate-responsive practices persist and how they change as institutional conditions develop. Ultimately, climate-responsive EFL matters when language learning enables students to understand, question, and communicate the environmental realities shaping their lives.

Declaration of Competing Interest

The authors declare that they have no known financial or non-financial competing interests, personal relationships, or institutional affiliations that could have influenced the research, interpretation of the findings, or preparation of this manuscript.

Declaration of Generative AI

Generative AI tools were used during manuscript revision to assist with language refinement, structural organization, argumentative coherence, and citation and reference consistency. Generative AI was not used to collect data, conduct interviews, transcribe or code raw data, or generate interview quotations or research findings. All AI-assisted revisions, interpretive statements, citations, and bibliographic information were critically reviewed and verified by the authors against the original data and relevant sources. The authors take full responsibility for the accuracy, originality, integrity, and final content of the manuscript.

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