

Analysis and Optimization Strategies of College English Teaching from the Perspective of Eco-Linguistics

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Abstract: This paper is designed to provide a comprehensive analysis of eco-linguistic applications in college English teaching. The paper aims to explore the theoretical foundations of eco-linguistics, to review existing research in the field and to provide insights into the current state of eco-linguistic research in college English teaching. The paper will also present case studies of eco-linguistic applications in college English classes, demonstrating the potential for eco-linguistic activities to promote environmental awareness, critical thinking and cultural understanding.

1. Introduction

Since the end of World War II, with the rapid development of society and technology, countries and economies around the world have undergone dramatic and radical changes. In recent years, human society has also suffered from the backlash of environmental destruction brought about by technological development, with ecological crises such as extreme weather, wildfire, drought and numerous regions swamped by floods in Europe, China and north America. How to sustainably operate and live has become an increasingly strong expectation and realistic demand of people in all countries in the face of global ecological problems such as human and nature, plant and animal extinction, global warming, climate crisis, and resource depletion. In this context, sustainable development (sustainability) or ecology, as an interdisciplinary discipline, provides a new perspective for academia and industry to re-examine and examine the comprehensive impact of human thoughts and activities on the earth's ecosystem.

With the widespread and in-depth integration of ecological principles and perspectives into existing disciplines, several new interdisciplinary disciplines such as environmental ecology, human ecology, and urban ecology have emerged in China and abroad. In the field of humanities and social sciences, the formation and development of ecological linguistics is a rethinking and new perspective of linguists on ecological issues. Eco-linguistics is a subfield of linguistics that focuses on the relationship between language and the environment. It is a multidisciplinary field that combines elements of linguistics, environmental studies, and sociolinguistics to examine how language shapes our perceptions and interactions with the environment[1].

Eco-linguistics also considers how environmental issues are represented and communicated through language, and the role of language in environmental conservation and sustainability. Eco-

linguistics seeks to understand the ways in which language can be used to promote environmental awareness, encourage environmentally responsible behaviour, and create sustainable solutions to environmental problems. The field recognizes the central role that language plays in shaping our perceptions and attitudes towards the environment, and the potential for language to be a powerful tool in the promotion of environmental sustainability.

Under this whole frame, eco-linguistics is a relatively new field, but it has rapidly gained recognition as an important area of study, as the global community increasingly realizes the importance of addressing environmental issues. The field provides a valuable perspective on the relationship between language and the environment and illustrates potential credits for language teaching. It is a process and practice of teaching a second or foreign language[2]. Interestingly, this concept is primarily a branch of applied linguistics, but can be also considered as interdisciplinary field. There are four main learning categories for language education, namely, communicative competency, proficiencies, cross-cultural experiences, and multiple literacies.

Both are developed as interdisciplinary, the relationship between eco-linguistics and language teaching is dynamically strong and multifaceted. Eco-linguistics provides a framework for understanding the impact of language use on the environment and the potential for language to be used as a tool for environmental conservation and sustainability. This framework can be integrated into language teaching to enhance students' language proficiency and environmental awareness. Language teaching, in turn, provides a context for the practical application of eco-linguistic principles. That is the very dynamic reason of this paper to analyse problems in current teaching methods and then to explore possible applications or approaches for remodelling college language teaching and promoting environmental sustainability in China and abroad.

2. Literature Review and Concept Explorations

2.1. Literature Reviews on eco-linguistics

The Emergence of Eco-Linguistics: Eco-linguistics emerged as a new field of study in the 1980s, when scholars from various disciplines began to recognize the importance of language in shaping our relationship with the environment. The development of eco-linguistics as a multidisciplinary field, incorporating linguistics, anthropology, sociology, and environmental studies. This has allowed eco-linguistics to approach the relationship between language and the environment from a variety of perspectives.

There are five main clusters of concepts and theories in the field, namely, linguistic landscape, discourse analysis, linguistic ecological model, eco-cultural communication and eco-semiotics. First comes linguistic landscape. The study of the relationship between language and the built environment, including the language used in public spaces, advertisements, and signs[3]. Another significant group of concepts is discourse analysis. The examination of language use in specific contexts, such as political discourse, media discourse, or environmental discourse, to uncover the ways in which language influences our perceptions and attitudes[4].

Moreover, Linguistic Ecological Model is a theoretical framework that recognizes the interdependence of language and the environment, and the role of language in shaping our relationship with the environment. Further, scholars explored the scope of eco-cultural communication. The examination of the ways in which cultural norms and values shape language use, and the ways in which language use in turn shapes cultural norms and values[5]. Last but not least, eco-semiotics is also assessed in the field. The study of the signs and symbols used to represent the environment and environmental issues, and the ways in which these signs and symbols shape our understanding of the environment[6].

These concepts and theories in the field offer a range of analyses of environmental elements from

an ecolinguistic perspective, including its representations of nature, the construction of environmental activism, the discourse of ecological citizenship, and the role of language in shaping public opinion on environmental issues. They provide insights into the language, interrelations and eco-cultural communication practices that shape our attitudes towards the natural world and offer ideas for how language can be used to foster more sustainable relationships with the environment.

2.2. Key concepts and theories of eco-linguistics and college English teaching

There has been a growing body of research in the field of eco-linguistics and its application to college English teaching in recent years. Some of the key theories and research findings are illustrated respectively in the following.

Initially is the role of language in environmental attitudes and behaviours. Research has demonstrated the important role that language can play in shaping environmental attitudes and behaviours[7]. Studies have shown that language use can influence environmental attitudes, beliefs, and actions, and that environmentally aware language can help to promote environmentally responsible behaviour.

Another concept is about the importance of intercultural communication in promoting environmental awareness. Research has highlighted the importance of intercultural communication in promoting environmental awareness and understanding. Studies have shown that intercultural communication can help to break down linguistic and cultural barriers and foster greater appreciation for linguistic and cultural diversity, including diversity in environmental attitudes and behaviours.

The following theory focus on the benefits of integrating eco-linguistic principles into language teaching[8]. Research has demonstrated the benefits of integrating eco-linguistic principles into language teaching, including the promotion of environmentally aware language learning, intercultural communication and understanding, and environmentally responsible behaviour.

Interestingly, the effectiveness of eco-linguistic teaching methods has investigated the effectiveness of eco-linguistic teaching methods, including the integration of eco-linguistic principles into the curriculum, the development of eco-linguistic activities and projects, and the promotion of environmentally aware language learning[9]. These theoretical thinking and research discussions in this field provide insights into the use of ecolinguistic teaching in a range of contexts, including environmental education, language learning, and the development of a critical pedagogy. They offer evidence of the effectiveness of ecolinguistic teaching in raising awareness of environmental issues, developing language competence, and fostering a deeper understanding of the relationship between language and the natural world.

Upon different theoretical assessments above, the literature review suggests that eco-linguistics has a significant role to play in college English teaching, and that integrating eco-linguistic principles into the curriculum and teaching methods can have a positive impact on language learning and environmental awareness. Further research is needed to understand the implications and applications of eco-linguistics more fully in college English teaching, and to continue to explore the ways in which language and culture can be used to promote environmentally responsible behaviour.

3. Methodologies

In general, there is a mixed-methods approach incorporating both qualitative and quantitative methodologies in this paper to provide the most comprehensive and robust understanding of the impact of eco-linguistic principles on college English teaching. This paper adopts the combination of qualitative method and discourse analysis to examine a popular series of college English textbooks, *New Horizon College English*, that in which how language used and its drawbacks of shaping college student attitudes and perceptions on sustainability, and lack of source on provide valuable insights

into the role of language in shaping our relationship with the environment.

Further, a consecutive survey was conducted over two years in gathering information about student attitudes and beliefs related to environmental issues and the design of the mentioned textbook above. In details, over 93% of 189 targeted students agree that environment issues or sustainability is critical and nearly 78% of targeted audience think the examined textbook is failed to provide enough learning source on environment issues or sustainability during their study. Similar figures, interestingly, of students' attitudes illustrate that they are interest in learning knowledge about environment issues or sustainability in the multiple methods online as well as in the classroom. All qualitative and quantitative methodologies mentioned above provide a deep understanding about attitudes and beliefs of a larger numbers of college English learners as well as illustrate a broad frame to discuss the relation of eco-linguistics and college language teaching.

4. Analysis of College English Teaching from the Perspective of Eco-Linguistics

After probing into current college English teaching about environment issues or sustainability, there are several problems are found tangibly and intangibly. These problems can hinder the integration of eco-linguistic principles and activities into college English teaching, limiting students' exposure to the environmental dimension of language use.

4.1. Narrow Focus on Language Proficiency

Overall, the current state of college English teaching varies widely across institutions in China. However, in many cases, college English teaching tends to focus primarily on the development of language proficiency, with little attention given to the environmental dimension of language use. For example, a teacher who is focused solely on teaching students to use grammar and vocabulary correctly may not incorporate environmental themes or eco-linguistic activities into their teaching. This can result in a lack of integration of eco-linguistic principles and activities into the language curriculum, limiting students' exposure to the environmental dimension of language use. While environmental topics may be covered in some English language courses, they are often treated as separate from the core language curriculum, rather than integrated into it. Thus, this narrow focus on language proficiency can limit students' exposure to the environmental dimension of language use.

4.2. Limited Availability of Eco-Linguistic Resources

Another problem is the limited availability of eco-linguistic resources for college English teachers. This can make it difficult for teachers to incorporate environmental themes into their teaching and to effectively integrate eco-linguistic activities into their classroom practices. For example, a teacher who does not have access to eco-linguistic materials may struggle to find ways to engage students in discussions of environmental issues and to teach them how to use language to communicate about these issues effectively. Further, taking the mentioned series of college textbooks as the example. Its contents and lesson plans may contain passages or activities related to environmental issues, but they are often treated as isolated topics rather than integrated into the broader language curriculum. In many cases, language proficiency is assessed through traditional methods such as grammar tests, vocabulary quizzes, and written compositions[10].There are little consideration given to the online or offline discussions or brainstorm about environmental or substantial topics.

4.3. Lack of Awareness and Trainings of Eco-Linguistics

One of the major problems in college English teaching from the perspective of eco-linguistics is

the lack of awareness of eco-linguistics among teachers and students. According to some research and survey about environmental attitudes and beliefs, there are a huge gap among teaching staffs across the country. Additionally, College English teachers often lack the training and resources needed to effectively incorporate environmental themes into their teaching and to integrate eco-linguistic activities into their classroom practices[11]. For example, a teacher who has not received training in eco-linguistics may not be aware of the importance of teaching students how to use language to communicate environmental messages effectively. While they may not have the necessary resources and support to incorporate environmental themes into their teaching. It indicates that this limitation is strongly linked with textbook design and availability of teaching resource discussed above. As a result, environmental themes and eco-linguistic activities may not be integrated into the language curriculum.

4.4. Limited Assessment of Environmental Dimension of Language Use

The environmental dimension of language use is often not adequately assessed in college English teaching. Traditional methods of assessment, such as grammar tests, vocabulary quizzes, and written compositions, do not provide a comprehensive assessment of students' ability to use language to discuss environmental issues in a meaningful and impactful way. This limitation indicates there is demanding on updates of teaching methods on green version of English assessment in higher education as well as examination redesign[12].

Upon those analysis from the perspective of eco-linguistics, those problems in college English teaching are caused by a combination of factors that include inadequate teacher training, a narrow focus on language proficiency, and limited availability of eco-linguistic resources as well as limited assessment of the environmental dimension of language use. It reaches findings like the current state of college English teaching often focuses on language proficiency and does not adequately address the environmental dimension of language use. While environmental topics may be covered in some courses, they are often treated as separate from the core language curriculum and are not integrated into the broader language teaching framework. This highlights the need for a more comprehensive approach to college English teaching that incorporates eco-linguistic principles and activities. While understanding these causes is essential for developing effective strategies of improving college English teaching from the perspective of eco-linguistics.

5. Optimization Strategies for College English Teaching from the Perspective of Eco-Linguistics

Upon those findings above about some existing problems or limitations of college English teaching in China from the perspective of environmental issues, this paper attempts to provide some possible solutions or teaching approaches as the optimization strategies for those discussed problems mentioned above, which may create a more comprehensive and effective understandings to college English teaching that incorporates eco-linguistic principles and activities.

5.1. Integrating Eco-Linguistic Principles into the Curriculum and Lesson Plans

One of the most effective strategies for optimizing college English teaching from the perspective of eco-linguistics is to integrate eco-linguistic principles into the curriculum and lesson plans. There are several aspects could be considered thoroughly before adding on this green codes.

Initially, here comes the incorporating environmental themes. Incorporating this green idea into the language curriculum can help to raise students' awareness of environmental issues and to encourage them to think about the role that language plays in these issues. For example, teachers can incorporate readings and discussions about heated environmental topics, such as climate change

across the globe or deforestation in Brail or Indonesia, into their language classes[13].

Following up the incorporating step is emphasizing the importance of effective communication. This purpose of the idea is designed to help targeted students to understand the role or the context that language plays in environmental issues. For example, teachers can provide opportunities like group discussion or personal presentations for students to think about sustainability-oriented topics and to practice by using language to communicate about environmental issues, such as writing persuasive essays or giving oral presentations on environmental topics. The highlighted centrepiece of this designed activity is to focus on the communicative media such as suggested writing essays or group presentations as the proper context of green-mode language teaching.

Next is using eco-linguistic-centred activities. Traditional teaching activities in college English classes are focused on language itself such as words, grammar as discussed earlier. Under the substantial mode of teaching frame, either the redesign of teaching curriculum or readjustment of teaching plans are expected to assist students to develop the language skills they need to communicate effectively about environmental issues by updating some eco-linguistic elements into the online and offline language activities. For example, teachers can lead students in redesigned activities that encourage them to use proper language knowledge to reflect on their own environmental behaviours or to explore different environmental impacts on daily life by using different forms of communication such oral presentations or argument essays, which is dynamically connected to current curriculum design and mainstream language activity across higher educational institutions.

Another suggested eco-linguistic activity to be applied in a college English class is a redesigned language simulation game. In this game, students are divided into groups and tasked with creating a sustainable community. They must use English to negotiate and make decisions about environmental issues, such as resource management and waste reduction. This type of activity encourages students to reflect on their own language use and the impact of their language on the environment and helps promote environmental awareness and critical thinking skills. More importantly, this in-class simulation game is dynamically connected with efficient language assessment mentioned earlier. For evaluating the effectiveness of this eco-linguistic activity, a survey was conducted among students who participated in the game as well as the same reason for conducting the mentioned survey earlier in this paper. The results may show that how much environmental awareness are increased among targeted students in statistical percentage as well as the reflection of their attitudes and beliefs on the role of language in shaping our relationship with the environment. Additionally, regarding to conducted surveys, students may positively report greater appreciation for the importance of sustainable practices and a deeper understanding of the challenges facing the environment. These findings suggest that eco-linguistic activities, such as the environmental language simulation game, can be effective in promoting environmental awareness and critical thinking skills among college English students[14].

Last but not least is providing resources for eco-linguistic learning. This green idea requires appropriate resources for substantial education such as eco-linguistic textbooks or online resources. As discussed in the earlier of this paper, current textbooks are expected to add on more green contents as the teaching and learning resources for both teachers and targeted students to develop their knowledge and skills about environmental issues. Upon providing more environment-related contents online and offline, university teachers can help students to understand the importance of effective communication in environmental contexts and to develop the language skills they need to communicate effectively about environmental topics by redesigning the learning resources with discussed eco-linguistic principles and green updates about the teaching curriculum and lesson plans. This can not only help to support students' learning and to deepen their understanding of eco-linguistics, but also result in a more comprehensive and effective approach to college English teaching that incorporates eco-linguistic principles and activities.

5.2. Encouraging Students to Become Environmentally Aware through Language Learning

Another suggested strategy for optimizing college English teaching from the perspective of eco-linguistics is to encourage students to become environmentally aware through language learning. There are also some steps needed to be thoroughly considered as the following.

Originally is fostering critical thinking. Like current mode of college English teaching, encouraging students to think critically about environmental issues can help to raise their awareness of the impact that language has on the environment. For example, teachers can encourage students to analyse the very language used in environmental advertisements or news articles to understand how language can shape our understanding of environmental issues. In this way, students are led to rethink about the relation between language itself and the whole environment. Additionally, the different impacts between different languages like Mandarin and English, can be compared under this frame.

Then, providing students with opportunities to apply their language skills to real-world environmental issues. It can help to deepen their understanding of the impact that language has on the environment. For example, teachers can encourage students to launch environmental activity on campus or substantial events around their neighbourhood. Through this way, targeted students not only have developed their language skills in the very good context, but also becoming more environmentally aware and to advocate for environmental causes and to influence larger numbers of residents to take green actions. Additionally, students are learned to apply different forms of communication media such advertisement or simple speeches involved in these real-time events.

Next is encouraging students to build an eco-linguistic community, either in the classroom or online, which can help to deepen their understanding of eco-linguistics and to foster a shared commitment to environmental awareness. For example, teachers can encourage students to establish visual group for sustainability on WeChat or QQ, which online media provide helpful supports for students to discuss more efficient and effective. More importantly, those digital media can meet up the very psyche of this younger generation and then encourage them to voice up ideas or opinions on environmental issues.

5.3. Developing Language-focused Environmental Activities and Projects

Developing language-focused environmental activities and projects is another key strategy for optimizing college English teaching from the perspective of eco-linguistics. These activities and projects can help students to develop their language skills while also increasing their understanding of the impact that language has on the environment. There are some examples of language-focused environmental activities and projects to be suggested in the following.

First is environmental writing. As one of traditional learning practice in the English class, writing about environmental issues can help college students to develop their language skills while also increasing their understanding of the impact that language has on the environment. For example, teachers can assign argument essays, which are also connected with CET-4 and 6 writing trainings. It can be also like green posts on campus events as discussed earlier that require students to research and write about a specific environmental issue.

Following up is debate training on green topics. Debating is a very effective method of training younger learners for cultivating critical thinking as well as applying their language knowledge and skills logically. For example, teachers can assign in-class mini debates on environmental issues such as wildfires in Chongqing and California or deforestation in Brazil and Indonesia, which require students to research and prepare arguments from different perspectives.

The ability of green storytelling is also in the limelight of language-focused activities.

It is strongly connected with the language outputs like speaking and writing for practice. For example, teachers can assign mini-projects that require students to write some persuasive stories that

illustrate the impact of environmental issues on different communities.

Another interesting way of developing environment-focused language skills is filmmaking. This younger generation is excelled at video-making than traditional writing or presentations to voice up their opinions. Thus, English teachers can assign off-class projects that require students to create some mini-video or films about certain environmental topics like green commuting and then uploading these materials to online websites such as Bilibili or Tiktok. Both language application and green action are implemented in real-time cases.

5.4. Promoting Intercultural Communication and Understanding through Eco-Linguistic Perspectives

Promoting intercultural communication and understanding through eco-linguistic perspectives is another important strategy for optimizing college English teaching. As illustrated earlier in the literature review, eco-linguistics recognizes the importance of understanding the relationship between language, culture, and the environment, and promotes intercultural communication and understanding as a means of preserving linguistic and environmental diversity. That is the very reason that this field of intercultural communication and understanding needed to be integrated into college teaching and learning on green topics.

Initially is literature comparison on Environmental topics. Like the unit of Anglo-American English literature does, in this case, university teachers for teaching college English can assign simpler reading tasks about environmental literature written by different authors from different English-speaking countries, such as England and Australia, which can help students to understand the diverse ways that different cultures view and approach on environmental issues. More importantly, this method encourages students to read environmental reading materials from different cultures can help to promote intercultural communication and understanding.

Then comes environmental language learning. The purpose of this intercultural teaching is to connect with language efficiency. In this context, English teachers can incorporate environmental vocabulary and expressions from different cultures into the curriculum, for example, jargons in British English and American English, which can help students to understand the linguistic and cultural diversity of environmental discourse. It focuses on language efficiency as the mainstream in the college English classes as usual.

Another suggestion is about intercultural activities on sustainability. The same activities discussed above can also be intercultural. Teachers can assign cultural activities like mini-festivals or exhibitions on green topics in the class or on campus. In either way, the purpose of this cultural activity is about deepen students' understanding on green issues as well as experience the cultural diversity of environmental practices and perspectives.

Last but not least is intercultural case study. The ability of conducting case study is the ultimate combination of language usage with environmental trainings. Thus, teachers needed to be very patient in each conducting steps of case study for targeted students. In details, students are led to explore conventional ways of teaching English in Chinese classrooms, for example, like assigning reading and writing assignments seperatively. Meanwhile, students are encouraged to think about how eco-linguistic activities such as language games and simulations to be integrated into college English. Upon these initial findings on Chinese teaching method, students are required to assess the same teaching or learning application in western countries, particularly in English-speaking countries. For example, how college English teachers in the United States to apply eco-linguistic activities, such as environmental debates and language simulations, into their English classes. Most importantly, students are demanded to think about the difference in this intercultural context on the same green case study. It provides a logical frame for students to rethink the same topics such as environmental

promotions, social awareness, critical thinking skills in the intercultural context, which deepen their understanding of environmental issues and the role of language in shaping our relationship with the environment.

6. Conclusion

Overall, eco-linguistics is a critical perspective for understanding the relationship between language, culture, and the environment. It recognizes the important role that language plays in shaping our perceptions and attitudes towards the environment and highlights the need to preserve linguistic and environmental diversity. In the context of college English teaching, the integration of eco-linguistic principles into the curriculum and lesson plans can help to promote environmentally aware language learning and encourage students to become responsible global citizens. By encouraging students to become environmentally aware through language learning, developing language-focused environmental activities and projects, and promoting intercultural communication and understanding through eco-linguistic perspectives, college English teachers can help students to develop a comprehensive and nuanced understanding of the relationship between language, culture, and the environment.

While this paper has assessed some problems and possible solutions from different perspectives on eco-linguistics in language teaching, there is still a need for further studies to evaluate the effectiveness of eco-linguistic activities in promoting environmental awareness and critical thinking skills, and to explore the potential of eco-linguistic activities for promoting intercultural communication. Future research in eco-linguistics in language teaching could focus on the development of new eco-linguistic activities and materials, the evaluation of the effectiveness of eco-linguistic activities in different language teaching contexts, and the exploration of the potential of eco-linguistic activities for promoting language learning and environmental education.

In conclusion, the integration of eco-linguistics into college English teaching is essential for promoting environmentally aware language learning and for preserving linguistic and environmental diversity. By adopting an eco-linguistic perspective, college English teachers can help students to develop a deeper appreciation for the role of language in shaping our relationship with the environment and encourage them to become responsible global citizens.

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