

Language, Culture, and Ecology: Investigating ECLA Levels at Graduate-Level Education

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Abstract – Ecological Critical Language Awareness (ECLA) is a concept that has recently been present among higher education students and graduates, looking into the interconnectedness of language, culture, and ecological knowledge. The study explores the level of ECLA among master's and PhD students enrolled in the academic year 2023-24 at the Faculty of Biotechnical Sciences, St. Kliment Ohridski University- Bitola. N. Macedonia. According to the findings from a questionnaire verified in previous research, the study investigates the ECLA levels, their relationship to linguistic dynamics, and the factors influencing their development. The study's results are provided from data collected from 12 participants and reveal varying ECLA levels, whereas exposure to cultural and linguistic experiences has been identified, providing an overview of reflective practices and the educator's role as a critical factor.

Keywords –Ecological Critical Language Awareness, higher education, environment education, linguistic diversity

I. INTRODUCTION

Recently, the Ecological Critical Language Awareness (ECLA) has gained expanding recognition within the interconnectedness between language, culture and ecology (Kramersch, 2009; Canagarajah, 2013). Due to the fact that we nowadays live in societies that are and tend to become diverse and interrelated at many levels, understanding the language seems as crucial in the attempt to nurture inclusive and equitable learning environment (Holliday et al., 2010). The concept of ECLA goes far from the general idea of linguistic competence, accentuating the holistic comprehension of the language in terms of the social, cultural and environmental scopes.

Scholars such as C. Kramersch have strongly emphasized the significance of the ecological viewpoints in the foreign language education, demanding a different approach towards more environmentally conscious language practices (Kramersch, 2009). Similar to that S. Canafarajah has investigated the role of the language in enhancing the ecological relationships, emphasizing the need for critical language awareness when dealing with the urgent environmental issues (Canagarajah, 2013). The paper aims to extensively explore in the field of ECLA in terms of higher education, specifically focusing on distinguishing the linguistic structure and its implication in the development of the ecological consciousness. As inspired by the work of Cano et al (2019) in the Iranian EFL context, this research seeks to implement and use similar methodologies to different educational settings.

The aim of this work is to investigate the ECLA levels among master’s and PhD students and to further examine the relationship between the ECLA concept and the linguistic structure in context of foreign language proficiency. The author aims to explore and determine the levels of ECLA, its role in linguistic dynamics and what are that factors to be influencing the development of ECLA among second and third cycle students. Addressing these objectives and questions the study provides an opportunity to point out the specifics in expanding the use of ECLA content literature and inform pedagogical practices for the purpose to foster linguistic diversity and inclusivity in higher education environment.

II. MATERIALS AND METHOD

Adaptation of Questionnaire

In designing the questionnaire for this study, the author was inspired by Cano et al.'s (2019) works on Ecological Critical Language Awareness (ECLA) in the Iranian EFL context. The author meticulously modified the particular items chosen to be in accordance with the research aims and questions, and did not duplicate the entire questionnaire. Within the process of adaptation of the original questionnaire, the author thoroughly reviewed the original version and made the necessary amendments to be in accordance with the applicability of the study. The author attempted to maintain the integrity of the questionnaire construct, tailoring a suitable language structure for higher education setting. Considering the absence of explicit permission for the original author of the questionnaire, the author focused on ensuring ethical and academic standards. The questionnaire has been reviewed and refined with adequate subset of participants in order to confirm the comprehensibility and clarity of the survey questionnaire. The adapted version of the questionnaire was rigorously validated in order to assess its consistency and rationality regarding the research construct. The author implemented qualitative and quantitative methods in order to ensure the appropriateness of the study objectives and research questions.

Participants

For the purpose of this study the author invited the first and second cycle students (MSc and PhD) from the Faculty of Biotechnical Sciences, St. Kliment Ohridski University- Bitola, N. Macedonia enrolled in 2023/24 academic year to participate the research on the topic of ECLA. Since the focus of this research was given on a specific group of Biotechnology students, particularly due to the nature of their MSc and PhD programmes, and the practical limitations of conducting research in an academic setting, the author was limited to carry out the survey with a sample size of 12 participants. Even though the target group may seem small, it was sufficient for conducting detailed qualitative analysis, enabling the idea to explore various aspects of Ecological Critical Language Awareness (ECLA) within this particular group.

III. RESULTS

Table A- Demographic details of the participants

Category	Number of Respondents	Percentage	Category	Number of Respondents	Percentage
Age 18-24	4	33.3%	Age 18-24	4	33.3%
Age 25-30	3	25%	Age 25-30	3	25%

Table A presents the demographic details of the participants, offering insight into the composition of the study population. The participants in this study were distributed across different age groups, with the majority within the 30-35 age range (41.7%). This age distribution reflects a diverse sample, covering individuals at various stages of their academic and professional path. The gender distribution among participants indicates a slight imbalance, with a higher representation of female respondents (58.3%) compared to male respondents (41.7%). This gender distribution may influence the perspectives and experiences shared in the study, highlighting the importance of considering gender dynamics in the analysis and interpretation of findings. The age distribution suggests a notable concentration of participants aged 30-35, which might be indicative of the demographics of the particular academic program being investigated or of specific features unique to the study program. Understanding the age

composition of the sample can provide insights into the life stages and experiences of the participants, influencing their perspectives on ecological critical language awareness and related issues.

Levels of ECLA among Students

Table 1: Opinion on Anthropocentrism Statement

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I think human beings are the most important creatures on Earth.	0	9	2	1	0
I think plants and animals are worthy only because humans can make use of them.	2	1	3	4	2
I think protecting humans should be our only concern in ecosystems that support all life.	1	2	4	5	0
I think we should protect other species and nature in ecosystems that support all life.	4	6	2	0	0
I think we should care for the environment and nature more than we do for humans.	3	3	4	2	0
I think humans are the most important part of complex ecosystems.	2	2	5	2	1

Analysis of the survey responses revealed varying levels of Ecological Critical Language Awareness (ECLA) among graduate-level students. A majority of participants demonstrated a basic understanding of the interconnectedness between language, culture, and environment, as evidenced by their responses to items related to cultural sensitivity and environmental awareness. This aligns with Kramsch's (2008) statement that understanding the interconnectedness of these elements is foundational to ecological perspectives in language education. However, there was also a notable quantity of participants who demonstrated a limited awareness of these connections, indicating potential gaps in ECLA development. This gap is reflective of Byram's (1997) findings that cultural awareness in language learning often requires more explicit and integrated approaches within the curriculum.

Relationship between ECLA and Linguistic Dynamics

Table 3: Awareness of Global Environmental Issues

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe I have enough information about global environmental issues such as climate change, pollution, etc.	0	5	5	2	0
I often talk about global environmental issues with my friends or family.	0	3	9	0	0
I don't think that I need to know about global environmental issues.	2	2	4	4	0
I think the first step to solving global environmental issues is to know about them.	0	7	4	1	0
I think being aware of global environmental issues is pointless because they	0	3	4	3	2

are not serious problems.					
I don't think global environmental issues need to be highlighted and discussed.	0	3	4	5	0

A significant finding of this study was the positive correlation between ECLA levels and the ability to manage linguistic dynamics within the educational context. Participants with higher levels of ECLA demonstrated greater adaptability and sensitivity to linguistic diversity, facilitating more effective communication and collaboration in multicultural settings. This supports the views of Canagarajah (2013), who emphasizes that heightened language awareness fosters better intercultural communication skills. Additionally, participants with higher ECLA levels were more adept at recognizing and addressing linguistic inequalities, a crucial aspect highlighted by Pennycook (2010) in his work on language and social justice. This highlights the crucial role of ECLA in promoting inclusive linguistic practices and fostering intercultural understanding among graduate-level students.

Factors Influencing ECLA Development

Table 4: Responsibility for Air Pollution

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I think we are the most responsible for polluting the air by burning fossil fuels.	3	7	1	1	0
I think human beings are responsible for destroying the Earth.	3	6	2	1	0
I don't think I am motivated enough to do something about global environmental issues.	1	4	4	3	0

Several factors were identified as influential in shaping the development of Ecological Critical Language Awareness among students in higher education. These included exposure to diverse linguistic and cultural experiences, engagement in reflective practices, and access to supportive learning environments. David Crystal (2003) highlights the importance of such exposure, arguing that "exposure to diverse linguistic

environments can significantly enhance one's understanding and appreciation of language's role in society." Paulo Freire (1970) emphasizes the role of critical pedagogy in fostering reflective practices, asserting that "critical pedagogy empowers students to question and transform their social realities," which is essential for developing a deeper understanding of ecological issues through language. Additionally, the role of educators in promoting ECLA through innovative pedagogical approaches is crucial. Stephen Sterling (2001) discusses the necessity of innovative pedagogical approaches in sustainable education, stating that "innovative pedagogical approaches are essential for integrating ecological awareness into the curriculum and fostering a holistic understanding of environmental issues." Educators who adopt such approaches can significantly enhance students' awareness and appreciation of linguistic diversity and its ecological implications.

Sincere gratitude is extended to all participants who took part in completing the questionnaire. For further reference, the detailed results of the survey conducted via Google Forms are available. https://drive.google.com/file/d/1ufYsv56IDpAvBQrwx_f_Ne0kSB_GVr1VZ/view?usp=sharing

IV. CONCLUSION

The demographic characteristics of participants in this study offer detailed insights into the complex nature of Ecological Critical Language Awareness (ECLA) in higher education settings, particularly among master's and PhD population. The observed gender distribution, with a higher representation of female respondents (58.3%) compared to male respondents (41.7%), emphasizes the importance of taking into consideration gender dynamics in understanding ECLA. Gender-related factors could influence the perspectives and experiences shared in the study, stressing the necessity of thoroughly exploring ECLA. Additionally, the predominant presence of participants aged 30-35 provides understanding of the life stages and experiences influencing ECLA perceptions. Insights gained from the age composition of the sample shed light on the diverse perspectives and priorities of individuals within this demographic group, thus enriching the depth of analysis on ECLA and related issues. Likewise, several factors identified in this study emerge as influential in shaping the development of ECLA among graduate-level students. Exposure to diverse linguistic and cultural experiences, engagement in reflective practices, and access to supportive learning environments are highlighted as fundamental in fostering ECLA. The role of educators in promoting ECLA through innovative pedagogical approaches and curriculum design is accentuated, emphasizing the importance of institutional support in enhancing students' awareness and appreciation of linguistic diversity. These demographic and contextual insights further support the significance of fostering linguistic diversity and inclusivity within higher education institutions. By linking demographic considerations, such as gender dynamics and age composition, with broader conclusions on ECLA and its influential factors, this study offers a comprehensive understanding of the complex relationship between language, culture, and ecology in educational contexts. These insights are crucial for shaping teaching methods and policy decisions that promote inclusive learning environments and enhance graduate-level students' ecological awareness.

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