



RESEARCH PAPER

A Study of the Bidirectional Causality Relationship Between English Language and Environment: Looking Through the Lens of Ecological Discourse Analysis (EDA)

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ABSTRACT

Ecolinguistics is the sub-field of Sociolinguistics which deals with language and environment. "Environment" has been highly acknowledged and studied with special reference to language because it is recognized that environment affects, shapes and reshapes language in situations and circumstances where it is used. Likewise, it is quintessentially true that language also highly affects environment in many ways. Therefore, these effects and influencing mechanisms between language and environment make it imperative to investigate bidirectional causality relationships between the two i.e., language and environment. In order to enunciate these relations between language and environment data are taken from one of the leading Pakistani English Newspapers "DAWN" for the analysis of English language through the lens of Ecological Discourse Analysis (EDA). Furthermore, from the chosen newspaper selected opinions and editorial pages are analyzed from the perspective of Ecological Discourse analysis (EDA) in order to unfold socio-cultural, economic, ideological and political stories established in environment through English language. In this study qualitative paradigm is followed. For data analysis and interpretation Stibbe's (2015, 2019 and 2022) evaluation model and appraisal patterns are used in order to explore, expand and extend the bidirectional causality relationships between English language and environment. The study revealed that there is crisscross and bidirectional relationship between English language and environment. They (English language and environment) are intrinsically and intricately interlocked. Therefore, they are considered inseparable in nature i.e., they are feeding one another in multifarious ways especially, environment in all its colours and shapes bring varieties to English language when it is used in context(s) i.e., also called language environment and ecosystem. Based on the major findings of this research study it could be suggested and recommended for further researches conducted in future to study English language from the perspective of environment and environment from the perspective of English language while using various research methods, techniques, data analysis procedures and approaches along with Ecological Discourse Analysis (EDA).

KEYWORDS Ecolinguistics, Sociolinguistics, English Language, Language Ecology, Ecosystem, Environment, Ecological Discourse Analysis (EDA) in Pakistani Context

Introduction

Ecolinguistics is the nascent sub-branch of Sociolinguistics which studies the mutual-correlations between language and environment (Cheng, M. 2022). There is a strong relation between language and environment because language is used in psychological, socio-cultural and physical environment in ecosystem. This ecosystem provides context to the various uses of language. Language is ubiquitous i.e. it commonly exists everywhere in

physical environment in ecosystem all the time. It has great effects on environment in which humans live and its otherwise is true as well. These effects of language on environment or ecosystem are studied in Ecolinguistics. For instance, how language is used in environment and how socio-cultural, ideological, political, psychological and economic stories are constructed in physical environment via language. These stories are based on people perceptions, thinking and beliefs. There lies bidirectional causality relationship between English language and environment in order to highlight these effects the study in hand is intended. Language affects environment and environment affects language. In the context of this study these effects would be called mutual influencing mechanisms.

This research study tries hard to further expand and extend these influencing mechanisms in the field of Ecolinguistics. For this purpose, two major approaches are taken into consideration. The first approach takes into account the effects of environment on language which is originated by Haugen's (1972 cited in Cheng.M, 2021). Therefore, this approach is also called Haugenian approach or the ecology of language/language ecology. The second approach focuses on the effects of language on environment. This approach is marked by Halliday's (1990 cited in Cheng. M, 2021). This is also called "ecological linguistics" or "Hallidayan approach" (Fill 2001 cited in Cheng .M, 2021). (See literature review section for detail discussion on these approaches).

Language is used in socio-cultural, psychological and physical environment in ecosystem. Ecosystem is defined as all living creatures; especially human beings live in a particular area considered in relation to their physical environment. Language is one of the core components of ecosystem. There is co-existence and interaction between language and environment. Alongside, language also exists with humans in society, who listen to it, speak, read, write, transmit and promote it to their other offshoots and to their younger generations (technically called language transmission). So, when language takes place in physical environment for the purpose of communication and interaction it affects the environment and environment affects it (language)as well. To date, several studies (for example, to mention many among them are: Lazear, (1999). The relationship between culture and language, Bucholtz, M., & Hall, K. (2004), Language and identity and Mandler & Kessen (1959), the language of psychology) have investigated and explored the relationship of language with culture, identity, psychology, philosophy etc. But there is still more room available for researchers to study language with reference to environment and ecosystem. Therefore, the study in hand attempts to unfold the correlations between English language and environment i.e. to study the stories established via English language in environment with which we humans live and the stories we desire and want to establish/create in environment through English language particularly in the context of Pakistan and generally across the world. These stories could be the stories of happiness, success, socio-cultural changed, political, ideological, economic and educational development and growth.

Literature Review

Many researchers, language and linguistic experts study language with reference to environment and ecosystem in order to develop some insights in the new field i.e. called Ecolinguistics. In this section, the first portion is devoted to the definitional aspects of Ecolinguistics and second part will shed light on the history, ecology and approaches to the study of Ecolinguistics. The International eco-linguistics Association defines eco-linguistics as a field of inquiry which focuses on the understanding(s) of environment and language. Their effects on each other and the role language plays in environment. Eco-linguistics is very valuable field that encompasses language, environment, ecosystem, human beings, society and culture and how these all are getting close and closer together and how segregations occur between and among them. In environment, language is used as a tool to have discussions on and talks about the ecosystem degradations and up gradations.

There is a small body of literature that is concerned with theoretical framework of eco-linguistics. The main aim of this framework is to study the "Diversity and Harmony, Interaction and Co-existence" (He and Wei 2018a; Wei 2021 cited in Cheng. M, 2021). It implies that language cannot be separated from physical environment, environment could be comprehended through language and for it (environment) also gives resources to the study of language. Environment and language have similar relations like the strong relations between language, culture and communication, where language works as a tool for communication. Communication is considered a process which includes both language and culture. Culture is broader than language and communication. Communication is smaller than culture and bigger than language. It exists somewhere in between culture and language. (Gul et al.,2023 and Gul et al., 2022(c) and Afaq.,2022).

Chau et al., (2022) reported the "Practical Applications of Ecolinguistics" where they discussed the history and approaches in Ecolinguistics followed by various experts and researchers to study human effects and impacts on the climate and vice versa. It implies that Ecolinguistics is processual, dynamic, environmental, contextual, intentional, symbolic and ubiquitous field of inquiry. It means that Ecolinguistics is ongoing, continuous, and ever changing in nature. It is comparatively a new field of studies that encompasses language usage in environment by human beings and they are affected by the use of language in environment and environment is also affected by them.

The main focus of Ecolinguistics is on the safety of environment through the use of language, linguistic expressions and the tales/stories exist with humans in their environment. Johnson (2022) brought this idea to give skills and knowledge to people to control and protect environment from forces that work together to make dirt in environment: to eradicate social problems and environmental problems from environment which cause health issues and bring social crisis to the ecosystem. In the same vein, he used a "your environment action" which emanates that environment works and acts in its own way on human beings and at the same time humans also act and react towards environment in many ways. It indicates that there lie strong correlations between language and environment like the relations between language and culture, language and society, language and communication (Gul et al.,2023 and Gul et al., 2022(c)).

Many experts in the field of Ecolinguistics stated that Ecolinguistics is still young field and very little written in it and about it. As the world is shrinking owing to the high technology and transgressing both physically and virtually in many ways add much more to the field of Ecolinguistics. Eco-linguists developed two approaches to study Ecolinguistics from two dimensions. These two approaches are ecology of language and ecological linguistics. The focus of first approach is ecology, environment and ecosystem with reference to language and the second focuses on language with reference to environment. For instance, how environment affects language when it is used. The concept of ecology of language was originated by Haugen in 1972. He viewed ecology of language as to study language or any language in interaction in environment. This approach of ecology of language was emerged based on the shortcoming in sociolinguistics term. It means sociolinguistics failed in defining language with reference to context and environment. As a results Ecolinguistics emerged as sub-branch of linguistics (Garner, 2015). Ecology of language also refers to the study of language in multi-cultural and multi-lingual societies where language is used for interactions in physical environment. Ecological linguistics or Ecolinguistics as a discipline was accepted in the first half of 19th century (1970s). In 21st century, linguists became keenly interested to study language from the ecological perspectives in order to have deeper insights into language. They opined that the structural and grammatical approaches are not enough to bring a sound definition and explanation of language. It is imperative to study language in external landmark rather than structural landmark (Gul et al.,2022(b)and Gul et al.,2022(c)).

Ecological linguistics studies mainly language in its environment through signs and symbols in which intension is embedded. It gives importance to language features, codes and contacts through which linguistic choices are maintained and developed an approach to understand language in environment (Garner.2015, Ali et al., 2022 and Gul et al., 2022(b)). Language and ecology or ecosystem mean language ecology and linguistic ecology became Ecolinguistics later. They study of language interaction and transaction in environment. According to Kangas, et al., (2017) and Sabih-Ul-Hassan et al.,(2023) before the emergence of Ecolinguistics as an independent field of studies many linguists attempted the plea of sociolinguistics which studies language with reference to society and culture where language is used for the purpose of communication (Gul et al.,2023 and Gul et al., 2022(a)) Furthermore, they refer to ecology to say that it is the context or language environment where communicative activities through language take place. Ecolinguistics also studies issues related to language in its socio-cultural, economic, political settings. Broadly speaking, Ecological-linguistics is a complex whole and creates complex relationships that refer to language, environment and the speakers of that language. There is a strong correlation between English language and environment

Material and Methods

This predominant qualitative research study explores the correlations between English language and environment i.e., social, psychological and may be physical environment through discourses produced in English language in Pakistani context from the perspective of Ecolinguistics.

Pages from Dawn English newspapers are analysed in order to measure the relations between English language and the environment in which it is used/spoken. These documents (Pages from DAWN newspaper) would inform researcher regarding the perceptions, thoughts, thinking of people in the given research context. For instance, to know that how through written discourses in English language mental-cognitive stories/models develop.

Data Collection

As mentioned earlier that the study follows qualitative research paradigm. The data for the current research study was collected from English Newspapers, in Pakistani context. The selected pages from Dawn newspaper would give appropriate data because one can get a wide range of rhetorical and linguistic expressions for analysis.

Categories of Analysis

Ecological Discourse Analysis takes into consideration lexicon and grammar as two themes for the analysis of discourses, agents, participants, situations, circumstances and rhetorics, metaphors, framing, or narrative and stories ([Harré et al. 1999](#); [Mühlhäusler 2003](#); [Stibbe 2015](#)).

Table 1
Nine Types of Stories originated by Stibbe (2015)

Sr	Type of Story	Explanation	Linguistic Expressions
1	Ideology	Stibbe (2015) believes that "Ideology is a tale about how the world is and ought to be shared by group members.	Ideology implies discourses, especially a unit of linguistic patterns a community uses.
2	Framing	Stibbe (2015) illustrates framing as "a story utilizing a frame, a pack of knowledge	Framing implies triggering words that impart a frame to the brain.

		about an area of life, to structure another area of life."	
3	Metaphor	According to Stibbe (2015), "metaphor is a story that uses a frame to structure a distinct and different area of life."	The metaphor implies trigger words that convey a well-defined frame to the brain.
4	Evaluation	Stibbe (2015) defines Evaluation as a story about whether an area of life is good or bad.	Evaluation implies appraisal structures such as structures of language which address a subject of life in a positive or negative way.
5	Identity	Stibbe (2015) elaborates on identity as "a story about what it means to be a particular kind of person."	forms of language which characterize people
6	Conviction	A tale about whether a specific depiction of the world is valid, dubious or incorrect.	Conviction implies facticity structures. For Excerpt linguistic properties Which portray descriptions of the world as valid, dubious, or incorrect.
7	Erasure	Stibbe (2015) defines erasure as "a story in that an area of life is unimportant or unworthy of consideration."	Linguistic features fail to address a specific domain of life or, on the other hand, mutilate it.
8	Saliency	According to Stibbe (2015), Saliency is "a story that an area of life is important or unworthy of consideration."	Language features render importance to the subject of life.
9	Narrative	Stibbe (2015) defines narrative as "a structure which involves a sequence of logically connected events."	Narratives in the form of a text, for example, an oral or written storytelling, or other types of temporals or logically associated recounted series of events.

Procedures for Data Analysis

From the selected pages of DAWN newspaper, the titles/headings and the leading or topic sentences are analysed from the perspective of ecological discourse analysis (EDA) i.e., how through these titles/headings and leading sentences stories are established in environment via language in case of this study English language. Inasmuch as what type(s) of established stories (the stories that we already have with which we live in environment) ecosystem and what type(s) of stories we desire and want to res-establish and recreate in environment in Pakistani context. These stories could be socio-cultural, economic, political, ideological and could be the stories of happiness and success. What type of slogans, diction, contents and lexicon are used by the writers to create/fix stories in people's minds in Pakistani context via English language.

Results and Discussion

Table 2
Political Stories and Economic Stories

Political Market (in the context of Pakistan)	Performing a political wonder
Institutions as Battle Ground (educational and political departments)	Let History be the Judge Road to Perdition Cultural invasions,
Ali Wazir's Release (Current political leader)	Juggling Judicature I do not count years but my victories.

Khan versus Bajwa (Khan responsible for politics and Bajwa responsible for the country protection) Political Stability (Political sustainability) The Economy of an Elitist State (refers to the elite and upper strata) Big Capital an Unequal World: The Micro-politics of Wealth in Pakistan (Again refers to the high class in Pakistan) The Culture of Exemptions The elite capitalism in Pakistan.	The state of Pakistan Polluted Coastline Pak-China ties are beyond reproach Monarchies, Dynasties, Institutions Power to the Parties leaders. Price of the elite Capture Pakistan Cultures
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The selected stories are classified based on the lexemes, words and terms used by the writers which enable researchers to put them in particular group of the discourse. For instance, political jargons and terminologies used in the headings and leading sentences in all of the above selected columns.

Data in table No 1 describe political and economic stories i.e., through newspaper titles/headings the researchers came to enlist special elements, lexemes and vocabulary to reach to the political tales which exist in ecosystem in physical environment via language. These are the established stories with which we human beings live by because they have great influence on them as members of particular society and culture. The following leading and topic sentences also help us to validate our knowledge regarding the economic and political stories.

Table 3
Leading/Topic Sentences

Leading Sentences Published from 15th, Feb, 2023 to 28th Feb, 2023	
The story is about a country where elites completely control politics and economy. A lot of people think that the answer lies in the consistent economic growth. Mr. Wazir’s ordeal is the very antithesis of what a society based on the rule of law looks like. The unfolding drama brings into focus the controversial legacy of the former army chief. Imran khan now blames retired Gen Qamar Bajwa, despite piggybacking on him on his way to power, for all his miseries.	All that sounds like a dark comedy-an illustration of the sordid power game that characterises our politics. It is an ironic twist as well. The news of the passing away of Gen Pervez Musharraf was received in Pakistan with grief by a vast but silent majority.

As data could be seen in table No 3 in the form of titles and topic sentences refer to economic and political stories exist in environment in Pakistani context. It implies that when English language is used in physical, socio-cultural environment it greatly affects human’s environment i.e., psychological, and socio-cultural environment. It entails that language has the power to shape and re-shape humans’ attitudes and behaviours and to make them able to accept the changes they have in their language due to their surroundings i.e., the ecosystem they have. Likewise, it is also true that language through language writers construct mental models in the minds of the people who are reading the stuff available to them via language.

Table 4
Socio-cultural Stories

Socio Cultural Stories: Published from 15th, Feb, 2023 to 28th Feb,2023	
A culture of neglect	The world our men live in
A bad influence	Voicing Concerns
Teaching History Islam	Without awareness the no social changes
Politics and State	Two nations Scammers and Jobs
The Pakistan Experience	Discriminatory policy

Data in table No 3 show that the socio-cultural stories lie in the topic/titles of newspaper in order to take attention of the people in Pakistan to discuss cultural and social issues in society via language. It also aims to collect data through language regarding the socio-cultural issues in particular context and solve those issues through the use of language.

Table 5
Leading/Topic Sentences

Leading Sentences Published from 15th, Feb, 2023 to 28th Feb,2023	
It is painful to see Mohenjo-Daro beset with a hot of threats.	The ideological strand, the hostile strand, the empirical strand
We watch these days a politician handcuffed and smoking a cigar on television channels while in police custody.	Girls, on the, are expected to be compliant.

Data in the above table No 5 explain and extend social cultural stories or simply social stories present in ecosystem in physical and cultural environment. These socio-cultural stories cover a long range of stories i.e., related to education, society, and human rights etc.

Social Stories

Title: Equity in Class

NAME-CALLING, jokes targeted towards particular **ethnicities**, demeaning struggling kids by calling them **slow learners** are all examples of rampant **micro aggressions** that are regarded as harmless jokes. **Our education system** is not for the as a faint-hearted friend carelessly remarked, as if being able to tolerate dismissive comments is somehow a benchmark of courage in our society. Anyone deemed to be too sensitive to such remarks is not thick-skinned enough - sensitivity is a sign of **weakness** rather than emotional intelligence. With **International Women Day approaching**, with its ion would be a good place to start, except that the divide starts right there Wi embracing equity& theme, one wonders where we can begin to scratch the surface of deeply embedded structural biases. **Early childhood** care and **educate teachers being more tolerant of mis-demeanours** by boys and prone to letting them overstep boundaries other hand easily. When we consider embracing equity, we may want to look at helping children think about it as an urgent need and perhaps draw up a **school charter of concrete ways students** can work towards it. A pledge by each child to change a little something, be it a perspective or a **behavioural pattern**, may be a **good start towards teaching** them to take ownership of their beliefs and actions. It may also be a chance to unlearn a few things. When we talk of equity, **rampant ageism comes to mind**. Unlike **other cultures**, we are heavily biased **towards those with experience**. While experience is indeed a great teacher, it cannot be followed blindly in a world that is increasingly demanding new ways of working and being. When the young **present opportunities for experimentation**, experience must submit to innovation. We often fall back on this has always worked for us as the rationale to **avoid exploring new pathways**. In **school life**, this has meant holding on to assessing students learning based on age-old expectations. The truth is, experience sometimes is a **regressive teacher**. If we are to think about equity in class. rooms, all students deserve the same level

of support, respect and care from **their teachers**, regardless of their gender, socio-**economic background or ability**. Life lessons are learnt and mindsets are shaped in the formative years spent in classrooms, and teachers have more power than they imagine. **Much of that power lies in the language used in classrooms**. It can Encourage or demotivate within seconds. It is not only to scathing remarks. Very often, the brighter ones the eager beavers that always have their hand raised - are told to act too smart (but why not?).

Social and Economic Stories

Title: Disparity Marginalises Economic Children

Economic disparity is another factor that marginalises children whose sense of belonging is compromised by their **social background**. In a country where a is synonymous with wealthy curriculum design would have to look at narratives in texts that often depict economic privilege as the only marker of success. **Addressing inappropriate** remarks about students' backgrounds is one-way teachers can ensure a culture of respect for all. Another avenue to consider is giving a voice to students who hesitate to speak up. Encouraging personal responses, validating feelings and addressing difficulties gently should be prioritised over the race for grades. Equitable classroom practices have a direct bearing **on academic performance across all school levels**. Whilst establishing behavioural expectations, many teachers overlook the need for diversity in opinion and the benefit of **celebrating individual differences**. **Embracing equity** begins with decision to cultivate a just, inclusive and accepting environment for all children. Anyone, anywhere can take **the initiative in small and significant ways**. It doesn't require resources but it needs a strong focus on change and a **willingness to work consciously** and consistently towards it - as early as kindergarten, when children begin to notice differences in hair and skin colour, **physical abilities and emotional reactions**. Real-life examples from nature - fruit and trees - with their similarities and differences might be a good place to start. Interestingly, within the same school, there might be vast differences **in classroom culture** and very often that has to do with the strategic priorities of a teacher who has chosen to model equity and **consciously maintained an equitable classroom**. **A reflective teacher** would think about how gender neutral her comments are, how often everyone gets to participate in discussions and activities and how well the students interact with each other.

Findings and Discussion

As data shown in the above taken from the "DAWN" newspaper pages i.e., in the form of titles/headings and leading/topic sentences in order to examine the relationships between English language and environment. The recurrent topics/headings and leading sentences created some themes related to the relationships between language and environment in which it is being used. To study environment through the lens of ecology or ecological discourse analysis we tried to focus on language diction, choice of words, forms, structures which contribute to the use of language in environment. So, when language is used in its social, cultural, physical, extrinsic, intrinsic, external and internal contexts, these uses of language create some important stories in the minds of people, these stories add to people narratives, beliefs, to their perceptions, to their life styles and to their patterns of thinking.

Through the use of specific words, phrases, sentences or we can say through language in newspaper titles/headings the writers wish to build political stories related to politics in Pakistan, economic stories, Pakistan economy is being discussed, the current status of economy of Pakistan is depicted through these writings, socio-cultural references were found out in the analysis of text in order to depict social and cultural issues exist in the country along with human beings.

As could be seen through the data in tables that the highest number of stories described in newspaper pages are political, secondly, economic stories and lastly, socio-cultural stories. It implies that in ecosystem in Pakistani context in our discussion mostly politics is included. Political issues are discussed in many ways with reference to the past and present situations of Pakistan or with reference to the previous government and the current government. Likewise, stories related to economy, the current scenario of Pakistan economy and the past picture of Pakistan economy is presented.

Similarly, socio-cultural stories described social-cultural issues in Pakistan, what is/was going on in present and in past times. The main themes are: politics, society, culture and economy. Ecolinguistics aims to build the masses beliefs and ideologies to look into issues through the lens of language and in order to shape and reshape, construct and reconstruct their ideologies and identities. Now, it is clarified based on the findings of the study that language affects environment that is stories get establish through language in environment that add to the people's thinking, thoughts and mental processes are developed, beliefs and ideologies are built via language. Language works/functions as a tool in order to develop mental models in the minds of its readers and listeners in a context in which it is being used. When all these happen in some situations in physical environment in ecosystem then some stories are developed with these, we human live by and some stories we want to establish/re-establish in environment.

Major Recurring Themes

1. Political Stories (56%) (related politics, elite classes, government etc)
2. Economic Stories (22%) (Economy, past and current scenario)
3. Social Stories (12%) (Social issues solution)
4. Cultural Stories (10%) (culture, language and communication issues)

Conclusion

From the above discussion and findings, it could be concluded that there is strong correlation between English language and environment. English Language affects environment and environment affects language. When language is used in environment in ecosystem, it shapes and reshapes thinking patterns of people, their perceptions, beliefs, and ideologies through the political, ideological, economic, social and cultural stories and narratives. "Environment" has been highly acknowledged and studied with special reference to language because it is recognized that environment affects i.e., shapes, reshapes, construct and reconstruct language in situations where it is used. It implies that there is bidirectional causality mutual relationship between English language and environment. There are political, socio-cultural and economic established stories exist in environment with which humans live by and some other political, socio-cultural and economic stories they desire to establish or re-establish in environment through the usage of language. It is concluded that there is criss-cross and seamless connection between English language and environment. They are feeding one another. So, they cannot be studied in isolation. They are inseparable in nature. They are intrinsically and intricately interlocked in such a way that they (English language and environment in case of the current study) cannot be independently taken into consideration rather in correlations.

Recommendations

As we have discussed that experts and researchers reported that the field of Ecolinguistics is still young and very little is written in it and about it. It implies that many studies can be conducted in the field of Ecolinguistics in future. Language can be studied

from the perspectives of environment and environment can be studied from the perspectives of language, while using various models, processes, questions and approaches etc along with Ecological Discourse Analysis (EDA) in order to investigate bidirectional causality between language and environment in various contexts. Furthermore, data for Ecolinguistics studies could be collected from various sources such as YouTube, social media, face book and Twitter, text books.

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