Ecological discourse analysis of green content in English language textbooks in Pakistan

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Abstract: This study has explored the constructive and destructive discourse of green content in the textbooks, designed by the Sindh Textbook Board, and taught in public schools of Sindh, Pakistan. English textbooks for Grades 6 to 10 were selected to carry out the process of data collection and analysis. The data were analyzed by using the categorization framework of Ecological discourse analysis (EDA). The constructive discourse, related to the environment, was categorized into themes and the categorization of eco-lexicons was made to identify the destructive discourse in the textbook. The results found that the constructive discourse related to the environment was present in the textbook; Eco-centric actions and ecological themes. Apart from this, linguistic elements; Euphemism, passive Voices, and nominalization were also identified in the textbooks which encourage destructive behavior by missing the agents or concealing the real culprits behind ecological degradation. Additionally, green content in the textbooks represents a human-centered approach rather than an eco-centric approach in English textbooks. The findings of the study suggest that there is a need of evaluating ecological areas in ELT textbooks to incorporate positive ecological discourse so that constructive change must be brought through education in ELT textbooks.

Keywords: Ecological discourse Analysis, Secondary English textbooks, Constructive discourse, Destructive discourse.

Introduction

From Asia to Africa, Europe to America, the ecological order is on the verge of collapse. Environmental Degradation has brought the attention of academia and the research fields including linguistics to raise ecological awareness and address the environmental issue. Eco linguistics, a sub-branch of linguistics has attempted to play its role in addressing environmental issues through education. According to Stibbe (2015), eco-linguistics is the system of relationships between the environment, language, and agents. That is why, in international protocols and national policies, ecological awareness has become the heart of educational policies. As per the report of the UN environmental program,
environmental education (EE) provides basic ground for environmental awareness. Due to this, it has become an important part of the educational plan as the world is facing the grave issue of climate change. Pakistan is no exception in this case and the country experienced deadly floods this year i.e., 2022. United Nations (UN) report 2022 has also highlighted that Pakistan is likely to experience more disasters due to climate change in the next three years. To mitigate ecological destruction, the National policy of climate change and Sindh climate change policy 2022 stressed the incorporation of ecological content in education. It would bring active participation in the community. Professor Wangari Maathai has rightly said, "You cannot protect the environment unless you empower people, you inform them, and you help them understand that these resources are their own and that they must protect them."

This study aims to explore the constructive and destructive discourse of green content in English textbooks. To illustrate, Constructive discourse is the type of ecological discourse that provide environmental awareness and promote eco-centric actions. However, destructive discourse is the ecological discourse that promotes destructive behavior and fails to identify the real perpetrators behind ecological degradation. For the identification and examination of the discourse, Ecological discourse analysis is used in the research to find green content in textbooks. Zhou and Haung (2017) have considered Ecological Discourse Analysis as an important section of cultural discourse studies that helps to explore green discourse and the interaction between humans and nature. Indeed, textbooks are a powerful tool for discourse analysis and are used as a significant tool to analyze green content. This study has identified and analyzed the ecological content in the English language textbooks for grades 6 to 10, designed by the Sindh textbook board (STBB). It aims at identifying ecological themes and linguistic elements that encourage constructive and destructive behavior among pupils. Indeed, language has an important role to play in this regard. Muhlhausler (2018) has rightly pointed out, language is interconnected to the world that it both constructs or is constructed by it. The current study’s objective is to find ecological themes in the ELT textbooks by (STBB) which provide ecological awareness and promote eccentric actions. Also, it brings attention to the linguistic elements which encourage destructive behavior or conceals the actor’s responsibility. The findings of the study may help course developers to incorporate positive discourse in ELT textbooks.

As language can play important role in maximizing constructive action. It is also an essential channel to respond to the growing climatic and ecological crisis" (Goulah, 2017).

Research questions:

1) What ecological themes are used in English textbooks (6-10) that promote ecological awareness and eccentric actions?

2) In what way do the linguistic elements, used in textbooks, encourage environmental degradation?

**Literature Review:**

Ecological degradation has necessitated academic research in different countries because the text has remained a significant tool to identify ecological issues (Buzo, 2010). Many studies are carried out in western and eastern countries to evaluate the ecological text in textbooks. Heather Hickman and Brad J. Portfilio in their book “The new politics of the textbook (2012)” have rightly said “Textbooks can help or hinder our ability to face the environmental challenges of a changing world”.

Cristovoa (2022) evaluated ecological text in Brazilian EFL textbooks. His study made assertions, though the subject matter is taken from foreign material, it hardly brings the attention of learners towards ecological issues. Another study is carried out in Pakistan by Majeed, et al (2022). The study analyzed secondary ELT textbooks used in public schools in Punjab. It found that activities in textbooks call learners to take responsibility for our earth-planet and act quickly to address environmental issues. Moreover, Bistrom and Lundstrom (2020) analyzed the ecological discourse in the textbooks and found that the textbooks used in a Swedish school, limit the role of people in sustainable development.
In their study, Hookoomsing and Ooze rally (2020) explored ecological education in the Mauritian context. Stories from Grade 3 were analyzed for ecological discourse analysis in the study. It was discovered that 92 instances of lexical elements in ELT textbooks showed damaging discourses. The textbook’s narratives portrayed attitudes and ideologies that support destructive behavior. The study goes on to say that green text is present in Mauritius textbooks, but it failed to address environmental problems. Stibbe (2017), in his study, highlights that Eco linguistics tended to focus on the negative impacts of language. However, positive discourse analysis (PDA) can be used to promote constructive behavior towards nature.

Furthermore, Xiong (2014) analyzed Chinese EFL textbooks. The study found that less than 4% of the unit content of five popular series of EFL textbooks concerned environmental matters. Where environmental topics were made evident, the content survey of the textbook materials indicated the textbook developers were more interested in treating students as observers or only potentiated actors rather than encouraging real, active participation in any environmental action. Also, a Critical analysis of the ecological discourse in Japanese EFL books was done by Stibbe (2014). 26 ELT textbooks were used as samples to examine green content. According to Stibbe’s analysis, ELT textbooks fail to condemn divisive discourse that ignores the ecological catastrophe. Additionally, Japanese textbooks do not determine a strong understanding of ecology.

Nkwetisama (2011) investigated the importance of language literacy and ecological education in Cameroun. He examined teachers’ perspectives on environmental education. He noted that Cameroonian students and teachers lacked critical thinking abilities when it came to environmental education. He concluded by emphasizing that EFL or ESL instruction should not only focus on the acquisition of language skills but also support students’ use of critical thinking techniques to increase ecological consciousness.

However, few studies have been conducted in the Pakistan context. Such as, two studies were found in Punjab, Pakistan context. One study is conducted by Zahoor and Janjua (2020) on primary textbooks designed by the Punjab curriculum and textbook board (PCTB). After analyzing primary school textbooks concluded that language plays a key role in cultivating learners’ perceptions and ideologies regarding ecological destruction. In primary textbooks, ecological themes are more focused on nature as a commodity. Another study is carried out by Majeed, et al (2022). The study analyzed secondary ELT textbooks used in public schools of Punjab, designed by PCTB. It found positive discourse in the textbooks. That is, activities in textbooks call learners to take responsibility for our earth-planet and act quickly to address environmental issues. As per my knowledge, no significant study is carried out in the context of Sindh, Pakistan. Therefore, this study reflects Sindh’s context by analyzing secondary textbooks, designed by STBB.

**Research Methodology:**

In this study, a qualitative method was employed to find the results of the study. Uwe fick (2018) in his book an introduction to qualitative research argued that in qualitative research object is examined in its entirety not in variables. Therefore, it provides the right direction to carry out an eco-critical analysis of the textbook. As per the nature of the research problem, quantitative research is not well suited because it has controlled variables to study which makes it difficult to explore the findings of the particular situation.

**Data collection**

Data is collected through nonprobability sampling. Among other types, purposive sampling has been selected to carry out data collection. J. Francis Rummel in his book Research defines purposive sampling as a “Purposive type of non-probability sampling has helped to get in-depth knowledge of environment and language. It is usually used in
qualitative content analysis where the researcher seeks to get thorough knowledge of specific social phenomena, behavior, or activity”

**Theoretical and analytical framework:**

Data is retrieved from English language textbooks (ELT), designed and published by the Sindh textbook board, and used in Sindh’s public schools. Secondary textbooks of English from grades 6 to 10 were selected as samples to analyze data and get desired results of the study. Using the categorization framework of ecological discourse analysis (EDA), the study has examined how ecological themes and contents are represented in English textbooks. The study has also analyzed the linguistic elements in ELT textbooks which make the pupils’ participation, in conserving the environment, a choice rather than a responsibility. The qualitative content analysis has been done through the EDA framework of categorization. In categorization, each unit of analysis must be coded, or allocated to one or more categories. According to Tisher (2000), the classification is viewed as a more or less legitimate operation on variables. Passive voices, agency, and euphemism are the three language structures that are used in the content analysis as categories. Also, Milless and Larouz (2018) emphasized the need for categorization in identifying constructive and destructive discourse in textbooks. That is why the present study attempted to analyze constructive data through ecological themes present in the textbooks. And, the destructive data was analyzed from ecological content through categorization i.e., Euphemism, passive voices, and missing agents.

**Results and Discussion:**

Ecological discourse in ELT textbooks, designed by STBB:

In secondary ELT textbooks, designed by STBB, ecological content has been found in the following units. At least one unit was based on ecological themes, followed by eco-centric activities. The below-mentioned table shows the ecological content, found in all five secondary English textbooks.

<table>
<thead>
<tr>
<th>ELT Books with the year of publication (designed by Sindh textbook board-STBB)</th>
<th>Units</th>
<th>Total no: of pages</th>
<th>Environmental Content present in textbooks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My English Book 6 (2021)</td>
<td>6</td>
<td>123</td>
<td>12 pages</td>
</tr>
<tr>
<td>2. My English Book 7 (2021)</td>
<td>7</td>
<td>171</td>
<td>18 pages</td>
</tr>
<tr>
<td>3. My English Book 8 (2022)</td>
<td>7</td>
<td>149</td>
<td>8 pages</td>
</tr>
<tr>
<td>4. Secondary stage English – Book one for XI (2022)</td>
<td>8</td>
<td>222</td>
<td>12 pages</td>
</tr>
</tbody>
</table>
Constructive Discourse in ELT textbook:

After analysis of data from secondary textbooks, published by STBB, the following themes were identified in the textbooks.

1. Clean environment:
   The ecological theme “clean environment” has been covered in the English Book for grade 6. The first unit of the English textbook “Practicing Cleanliness,” has highlighted the importance of cleaning the environment. It also suggests activities to clean parks, villages, and cities. The first unit has also brought the attention of the readers by showing how individual behavior, such as putting rubbish into the environment can cause harm to the ecological landscape. Additionally, it emphasizes the use of posters to educate the public. Another unit in the English textbook of grade 9 calls for a clean environment by banning plastic. In Unit 1.4 of English for Grade 9, “The formal letters” discusses the negative impact of the environment. The writing exercise puts a strong emphasis on how plastic use affects the people, and the environment, and how it makes fertile land barren.

2. Pollution:
   The “Environmental pollution” theme is covered in the English Book for grade 7. Unit 1 titled “Effects of human actions on the environment” calls for a plan of action to prevent environmental pollution in exercise 1.1. Further, Exercise 1.2 of unit 1 identifies the malaria problem, a problem related to pollution, and its prevention by addressing the issue of pollution. Along with this unit, Unit 4 of book 7 (English) highlights the effects of pollution. The number of effects of land, water, and noise pollution on individuals, including diseases is discussed in Unit 4.4. English book 2 of grade 10 also discusses types of pollution. That is, unit 1.5 for grade 10 offers a discussion of a range of environmental issues, including air pollution and land and noise pollution.

3. Climate change:
   The theme of climate change was identified in the English textbooks of grades 7 and 10. This theme shows the relationship between the cause and effect of climate change. Ecological content in Unit 3.1 “Awareness of Crisis, Accidents and Natural calamities” indicates the disasters and their impact on human beings. Also, the 7.3 unit titled “Heavy Storm hits city” discusses the impact of the disaster on people’s lives, livelihood, and infrastructure. English book for grade 10 in Unit 4.4 “cause and Effect Essay” evaluates the relation of climate change with its impact.

4. Physical landscape of nature:
   Unit 2.1 of Book 8 of English, titled “My Blessed Beautiful Pakistan,” examined the natural landscape of Pakistan in a poem, including its rich plains, grain farms, huge Karakoram, desert-brown scenery, and snow-topped mountains. Sindh’s biological ecosystem is explained in a chapter of the 10th-grade English textbook titled “My Travel Diary: Journey to Gorakh Hill Station.” This unit has the travelogue of Gorakh hill station, explaining the beautiful nature of the province.
5. Use of resources

Exercise 10 of unit 5 uses an ecological theme in the use of punctuation in the English book for grade 6. The exercise indicates the correct use of a comma (,) in the text. There are numerous benefits of growing trees, including clean air, summertime shade, and limbs for tying a swing. Also, the planting of trees to prevent air pollution is emphasized in Unit 4.4. Besides, in the English book for grade 10, the normal rain rate is highlighted in unit 4.4. It is stressed, if resources are not properly managed, the country could be destroyed no matter how beneficial the rain is for the environment and people. For instance, floods in 2022 in Pakistan, due to heavy rainfall, brought great human, economic and infrastructural loss to the country.

6. Eco-centric actions.

The 4.1 exercise of reading comprehension in English book 6 involves actions including using dustbins and reading the rules of the park to clean the country so that environment can be kept clean. Additionally, there is a task in unit 1 in the same book that encourages children to create posters to keep home, city, school, and park clean. It is recommended that these posters be displayed in various classes. This positive attitude promotes considerate behavior toward mother earth. Moreover, in book 7 of English, Students are instructed to list the sources of pollution in the exercise. By doing so, pollution can be reduced in the country. In addition, it calls for individual participation and governmental action to stop pollution. Further, Pre-flood, during, and post-flood actions are covered in Unit 3: Awareness of Crisis, Accidents, and Natural Calamities. The exercise of essay writing in Unit 4.4 offers some suggestions to reduce environmental pollution. Among these, different actions were suggested at the state level: a ban on deforestation, media awareness, and legal enforcement. In the English textbook for grade 9, the government’s role in reducing plastic use through law enforcement and public awareness is highlighted in unit 1.4. In the same way, in unit 5.1(grade 9), the healthy lifestyle section advises the readers to adopt a hygienic lifestyle to avoid diseases.

Destructive discourse in ELT textbooks (grades 6 to 10)

“One strategy that constructs a destructive ideology is erasure, the expulsion or marginalization of an otherwise important area of life” Stibbe (2015, p.146) in this context, linguistic elements including euphemism, passive voices, and missing agents are analyzed to ignore the human action in the destruction of the environment.

1. Euphemism:

In the context of ecological education, euphemism is used to look for polite and positive attitudes towards the environment. It also avoids violations committed by perpetrators of destroying nature (Tal, 2013). The retrieved data indicates; very few euphemistic expressions are used in the ELT textbooks. However, The use of euphemistic terms in the text discourages offensive behavior. In three textbooks, out of five, only seven euphemistic terms were identified in the text.

<table>
<thead>
<tr>
<th>S no:</th>
<th>Euphemism</th>
<th>Conventional Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rubbish Heap</td>
<td>Trash due to human actions</td>
</tr>
<tr>
<td>2</td>
<td>Polluted Environment</td>
<td>Industrial waste due to human activity</td>
</tr>
</tbody>
</table>
Table 2: Euphemisms identified in green content

<table>
<thead>
<tr>
<th>No.</th>
<th>Euphemism</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chemical waste</td>
<td>Chemicals are thrown into the river by people</td>
</tr>
</tbody>
</table>
| 2   | Passive voices:    | According to Kahn (1997), passivization disguises the action of the performer while emphasizing the importance of the action. As a result, it failed to highlight the real culprits behind ecological destruction. In English textbooks, published by the Sindh textbook board (STBB), passive voices are used in a way that does not highlight the real actors in the deteriorating environment from pollution, particularly in Sindh. Passive voices are especially used in the pollution theme. The examples, from retrieved data, mentioned below will help you understand how passive voice works in texts. Example:  
  - Pollution is caused by many things.  
  - Air pollution is caused by Smoke  
  - The use of plastic bags is going up every year by 15%. |
| 3   | Missing agency:    | This study assumes that the absence of agency in environment texts of the English ELT textbook, by STBB, renders the agent or person’s responsibility and makes the agent unidentifiable neglecting who commits what. It significantly affects ecological education. Additionally, this linguistic element does not help to comprehend ecological issues since it may not acknowledge the role of the offenders in environmental degradation. An agency-related exclusion means that the purpose of environmental education in secondary school ELT texts is insufficient to increase ecological consciousness among students.  
  (missing Agents)  
  | Pollution is caused by many things |                                                                 |
  | Malaria has become a big problem in our area |                                                             |
  | Smoke is emitted from vehicles and factories |                                                          |
Table 3: Missing agents in the green content

<table>
<thead>
<tr>
<th>Agents are missed in ecological themes in English textbooks. Comparatively, it is more frequently used in the text than euphemisms and passive voices in ELT textbooks, designed by STBB. Such as, euphemism and passive voices are 7 and 8 respectively. However, 11 agencies were missing cleanliness and pollution themes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing garbage heap in the neighborhood</td>
</tr>
<tr>
<td>There will be more pollution problem</td>
</tr>
<tr>
<td>There will be more garbage in the town</td>
</tr>
<tr>
<td>Pollution is caused by various factors</td>
</tr>
<tr>
<td>Pollution is all around us</td>
</tr>
<tr>
<td>Plastic shopping bags are being used in Pakistan</td>
</tr>
<tr>
<td>The use of plastic bags is going up every year by 15%</td>
</tr>
<tr>
<td>Purposeless honking on the roads</td>
</tr>
</tbody>
</table>

In brief, environmental text in secondary textbooks has focused on the impact of the environment and its solutions. Therefore, the causative factor is missing in the environmental text. Thereby passive voices and nominalization are widely observed in the study.

Conclusion:

This study evaluated the ecological content from textbooks to identify and explore constructive and destructive discourse in ELT secondary textbooks, published by STBB. Six ecological themes were identified in the textbooks. Based on the results of this study, it has concluded that the environmental discourses of the selected textbooks propagated a human-centered perspective rather than an environment-centered perspective. Though many eco-centric actions are encouraged in the textbooks, the use of language in some ecological content depicts human action as a choice rather than a responsibility. Such as, in English book 7, Unit 1.1 of reading comprehension named Can we do anything? The text evades the human responsibility to reduce pollution caused by anthropogenic activities. The findings have made it possible to draw comprehensive conclusions regarding the status of EE in ELT textbooks in Sindh, Pakistan. Its implementation requires a lot of reflection to align environmental texts with educational goals. Palmer, J. (2002) has rightly said, “It is essential to realize that the world of the human habitat is not just a world of objects; it is a world of values. The moral purpose of environmental education is to enable the citizen to understand these values, to criticize them and where necessary to change them.” Hence, the present study would help course developers in incorporating positive discourse in ELT textbooks.

References


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