



An ecolinguistic analysis of environment texts in Moroccan English language teaching textbooks

Mohamed Mliless* and Mohammed Larouz

Moulay Ismail University, Faculty of Arts and Humanities, Meknes, Morocco.

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ABSTRACT

In Morocco, many textbooks pertaining to different teaching disciplines integrate environment education (EE). For instance, textbooks used to teach English in high school include distinct units to promote the principles of environmental education and to empower students' awareness regarding recurrent environmental problems. The aim of the present study was to analyze 14 environmental texts from an ecolinguistic perspective by examining seven English language teaching (ELT) textbooks used in Moroccan high schools. Specifically, this study aimed at examining how euphemism, agency and passive voice are used in environment texts to sensitize students about environmental issues. The present study was also meant to examine the extent to which the ELT textbooks used in Morocco really reflect the principles of ecolinguistics. To this end, the study adopted a content analysis to examine EE in textbooks. The findings obtained reveal that the prevalence of euphemism mitigates the hazardous reality of environmental issues in the texts, and that the absence of agency obscures meaning in texts. Also, the presence of passive voice in narratives hide individuals' responsibility as perpetrators of destructive actions to the environment. These findings have important pedagogical implications on the elaboration of environment units in ELT textbooks.

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INTRODUCTION

Undoubtedly, environment education (EE) prepares environmentally conscious students' with environmental values that permit control and restraint of behavior towards the degradation of nature. Many countries adopt teaching methods to develop environmental based concepts and knowledge about the environment by integrating environmental issues in education. As mentioned in its 19th principle, the United Nations Conference on the Human Environment held in Stockholm in June 1972 declared that states should insert environmental issues in education to develop necessary bases of young and adult generations towards the protection and improvement of the environment (United Nations, 1972, p.5). Similarly, an international

symposium held in Belgrade in 1975, responded sensitively to complex and ever-changing relationships between humans and nature assuming that EE might solve environmental problems and design new conditions to avoid their appearance. In the same vein, the 1977 Intergovernmental Conference of Tbilisi considered that EE is an essential element to globally and permanently solve environmental issues by specifying goals and recommendations to implement EE. Equally important, it should be noted that EE was first presented in the Intergovernmental Conference of Tbilisi in 1977 admitting that EE which is the result of reorienting and articulating various disciplines, experiences, and educational programs, aims to facilitate the integration of the perception of the environment and to make possible more rational actions to the disposition of society (UNESCO-PNUE, 1977). The same thing can apply to the Second International Congress on Education and Environmental

*Corresponding author. E-mail: m.mliless@edu.umi.ac.ma.

Training held in Moscow in 1987 located EE in the context of sustainable development maintaining that it is an efficient educational and training tool that needs to be integrated to promote social and cultural change for all people. On equal basis, the United Nations Conference on Environment and Development held in Rio (June 1992) confirmed that EE need to be part of textbooks in order to improve the ability of learners to handle environmental and development issues. Later on, Goffin (1993, p.71) mentioned that the International Congress on Education and Training on Environment held in Moscow 1987 redefined EE as being “an ongoing process through which individuals and communities take awareness of their environment and acquire knowledge, values, skills, experiences and will to act individually and collectively to solve current and future problems of the environment”. Furthermore, Goffin (1998) added that EE allows deep understanding of the environment, promotes positive behavior, and assesses the impact of humans on the environment. Finally, it should be noted that the Second Francophone Forum for Education on the Environment, Planet EE 2, held in France (November 2001), perceived that EE is a tool around which all actors must be mobilized, to come together for sustainable development in a fair, solitary, and responsible world.

The Moroccan Ministry of National Education is not an exception in the whole operation. It is highlighted in Zerrouqi et al. (2016) that the Moroccan ministry of education has made of EE an educational priority by providing many teaching programs for primary, middle, and high school to raise students awareness to the problems of environment and to teach them love and preservation of nature. At the primary school, the objective of EE programs and textbooks is to target students' awareness of environmental issues (Ben Brahim, 2002). In addition to the role of textbooks, that of teachers' is important to promote EE culture among Moroccan students. In many teaching disciplines, including Natural Sciences, History-Geography, Arabic, French and English, Moroccan teachers bare the teaching responsible of EE though they contemplate about the lack of professional development that hampers teaching. In this framework, many studies (Ben Brahim, 2002; Zerrouqi et al., 2016) invoked that Moroccan teachers still complain about the lack of pedagogical tools, the presence of which might allow them to improve students' awareness towards environmental issues. Despite their willingness to act, teachers affirm that they still have little or no knowledge and experience in EE teaching.

Objectives of environmental education

Before delving into discussing the objectives of EE, it is noteworthy that EE has general objectives (UNESCO-

PNUE, 1977) and specific objectives (Goffin, 1998). As far as the general objectives are concerned, it is important to note that EE is a learning process that makes humans understand the environment, behave in a positive way, properly assess the environmental impact on their mode of life, and promote active participation in public life in the goal of promoting a quality environment. They are usually referred to as civic actions that target the behavior of individuals and groups in order to preserve the environment according to the imperatives of development. EE is also meant to help individuals and groups to be aware of global environment problems. According to (UNESCO-PNUE, 1977, p.26-27), the general objectives can be outlined as follows:

- Help groups and individuals acquire varied experiences as well as acquaintances of the environment and related problems.
- Help groups and individuals to acquire values, feelings of interest for the environment and motivation required to actively improve and protect the environment.
- Help groups and individuals acquire necessary skills for identification and solution environmental problems.
- Give groups and individuals the opportunity to actively contribute to the solution of environmental problems.

On the other hand, Goffin (1998, p.94-96) provided specific objectives of EE according to the following categories, namely, a) knowledge (*savoir*), b) know how (*savoir être*) and c) know how to act (*savoir agir*). On equal basis, Sauve (1994) presupposes that methodological models particular to EE must include ‘*cognitive*’, ‘*affective*’, ‘*pragmatic*’, and ‘*moral*’ approaches. For Sauve, the ‘*cognitive*’ approach helps students understand the environment based on the principle that the development of knowledge determines attitudes and strengthens senses and motivations to act.

As for the ‘*affective*’ approach, Sauve advances that the development of attitudes and feelings prompt new supportive behaviors to the environment; this approach is often associated with discovery and knowledge of nature. To give this element more impetus, Sauve adds a third element he calls the ‘*pragmatic*’ approach to supplement EE and to develop students' skill in understanding and resolving environmental problems. Finally, the ‘*moral*’ approach favors the development of moral values inherent in supportive behaviors and actions. For Sauve, the integration of this approach in EE is important because it enables students to acquire the abilities to analyze values, justifies right conducts and activities, and helps them to take appropriate decisions to preserve and protect the environment (Sauve, 1994).

LITERATURE REVIEW

This section reviews some theoretical and empirical

studies which talk about the principles of ecolinguistics, experiences of countries which integrated the environment issue in textbooks, and the implications of linguistic features in environment texts.

Ecolinguistics: Definitions

Since Haeckel (1886), ecology has become a fundamental discipline of biology that examines populations and living organisms which interact with one another and form a kind of unity with the environment. In the same vein, Trim (1959) and Haugen (1971) opened the door for many studies to explore the role of language in society, particularly the relationship that binds ecology to language. Later on, ecolinguistics, a branch of linguistics which came into existence in the 1990s (Derni, 2008), was defined “as the study of interactions between any given language and its environment” (Haugen, 2001, p.57). This definition reflects Haeckel’s notion of ecology within the life sciences as “the total science of the organism’s relations to the surrounding environment, to which we can count in a wider sense all ‘conditions of existence’” (Haeckel, 1866, p.286). Other perspectives in ecolinguistics are mentioned in Halliday (2001, p.199) claiming that “classism, growthism, destruction of species, pollution and the like [. . .] are not just problems for the biologists and physicists. They are problems for the applied linguistic community as well”.

Actually, the tenets of ecolinguistics underpin that the study of linguistic structures through the perspective of macrolinguistics, including pragmatics and cognitive implications, brings into light the role of ecolinguistics in the environment. In relation to the environment discourse, ecolinguistics plays a valuable role in exposing and questioning the texts, contributes to the search for new ones, and examines ideologies, metaphors, frames and variety linguistic forms of language. These elements contribute not only to ecological destruction, but they help in the search for new forms of language that inspires people to protect the natural world (Stibbe, 2015).

Environmental education in textbooks

Many countries have integrated EE in textbooks. In this context, it is important to refer to Guillemette et al. (2008), which reflects on pollution in French ‘*Science de la Vie et de la Terre*’ (SVT) textbooks. Undoubtedly, linguistic features in texts, if they are meticulously adopted, assure that different parts of texts are cohesively and coherently aligned; otherwise deficiency or overuse of structures may strongly buffer meaning of texts. Actually, Guillemette et al. (2008) reveals that textbooks contain little information on the wider environment, rarely offer opportunities to think about environmental choices, and

provide little incentive skills for critical environmental thinking. In turkey for instance, Gürsoy (2010) highlights the efforts of the Turkish Government to promote and integrate EE in ELT lessons in primary school, argues that when EE is presented as a constituent of foreign language lessons, children develop environmental awareness and meaningful second/foreign language learning. Similarly, Nkwetisama (2011) on the role of EFL/ESL teachers of environmental education and the integration of EE in language teaching in Cameroun, argues that EFL/ESL teaching should not only be limited to the improvement of learners’ language proficiency but also need to be devoted to enable students develop critical thinking strategies that can be useful to the teaching of environmental sustainability. Elsewhere, Ghouati (2012) assumes that the integration of environmental issues in the Algerian national textbooks were neither well-organized nor well-structured, which made the content not given its due concern. He went further to claim that environmental issues should not be limited to language courses but to content courses as well. Equally important, Young (2016) on the improvement of EFL teachers’ lesson plans on EE units posits that the lessons should not only strengthen students’ language skills, but they need to be designed to bolster students’ linguistic competence while connecting with the natural environment and members either in class or in the community.

As far as the Moroccan context is concerned, Ben Brahim (2002) admits that Arabic textbooks aim at developing communication skills and critical thinking skills in the students. She also assumes that French programs contribute to the improvement of students’ knowledge on EE given the fact that topics are oriented towards the acquisition of basic knowledge about the environment components. It should be noted that if Ben Brahim (2002) examined Moroccan ELT textbooks, she could have made a distinctive and inclusive work on Moroccan pedagogical materials in the three languages. In addition, Agorram et al. (2013) address a comparative study on the issue of ecology and EE in Moroccan and Italian textbooks. The study argues that textbooks focus on content rather than the development of students’ thoughts, which is contrary to the goals of environmental education. Despite the environmental and cultural differences, ecological topics are treated in the same way in Italy and Morocco. In an attempt to explore the pedagogical styles adopted for the implementation of EE in Moroccan high school textbooks of physics/chemistry and biology/geology, El-Moussaouy et al. (2014) acknowledges that the absence of EE is due to the fact that the learning activities which are dominated by pure informative style cannot help learners to construct skills that would help them adopt a positive behavior towards the environment. For example, some students might get involved in cleaning their schools and their neighborhood.

Table 1. Conventional words and proposed euphemic alternatives from (Schultz, 2001, p.113-114).

Theme	Proposed euphemisms	Conventional words
Agriculture	Sterilized land	Land protected from destructive exploitation
Forestry	Clear felling	Fuel reduction burning
	Controlled burning	Authorized burning
Timber industry	Harvest	Farming or gardening
Climate	Global warming	Human-induced increases in CC2
	Greenhouse effect	Climatic dislocation

Similarly, a study by Zerrouqi et al. (2016) investigates the situation of EE in Moroccan earth sciences textbooks (*Science de la Vie et de la Terre*) and reveal that environmental pollution texts which are interrupted in the second year, are less developed in the third year and focus on regional pollution and neglect global pollution problems.

Linguistic structures in environmental texts

The present study investigates the extent to which euphemism, agency, and passive voices support the argument advocated by ecolinguistics. This argument stems from the concept of 'language robustness' mentioned in Puppel (2007) which presupposes that language may have either a positive or a negative load. According to Wiertelwska (2011, p.143), the concept of language robustness means that languages with weaker robustness may become extinct in favor of those with stronger robustness. Contrarily, in the case of a positive course of language competition, such a tremendous reinforcement of a given natural language may take place that this language takes the role of a hegemonic leader and becomes a global language.

In addition to the sixteen factors proposed by Puppel (Wiertelwska, 2011, p.144), the present study considers that euphemism, agency, and passive voice when used in environment narratives may strongly affect their meanings. Now, let us first clarify the function of these terms in environment writing.

Euphemism

Euphemism refers to soft positive or negative expressions (Rawson, 1981) to substitute unpreferred, unsuitable, or impertinent expression (Hornby, 2005; Holder, 2008) or indirectness of various kinds which language users employ to avoid mentioning of words likely to cause offence (Cruse, 2000, p.367). Therefore, to construct euphemistic expressions, language users might state their arguments clearly and omit any extra data that are not necessary for readers to understand (Allan, 1991). In

the language of the environment, the use of euphemism which has been investigated from many perspectives is inappropriate and needs to be avoided because it could lead to confusion or misinterpretation (Lutz, 2012a,b). To explain the use of euphemism in industrial discourse, Schultz (2001) provides some examples that mitigate the charge of language such as '*improving on nature*', '*value-adding*' to imply that there is value in the products of human endeavor than in nature's creations (See Table 1 illustration).

Agency

The Longman Dictionary of Applied Linguistics define agency as "a philosophical term referring to the capacity for human beings to make choices and take responsibility for their decisions and actions" (Richards and Schmidt, 2010, p.18). Grammatically, the term is interpreted as constraining or enabling agency of certain agents and participants in society when they are purposeful and consciously engaged in activity (Leipold and Winkel, 2013). In the environment discourse, the presence or the absence of agency means the denial of representation, participation, responsibility, transparency, and legitimacy of individuals whose behavior limits or aggravates environment crisis.

In Alexander (1996), three examples are provided from a NIREX advertisement to explain that agency could be expressed in different ways.

- a. *Britain produces* radioactive waste every day.
- b. The safe disposal of *our radioactive waste*.
- c. Some of the most stringent *safety requirements in the world will have to be met* (Alexander, 1996, p.138)

As indicated in the examples, Alexander notices that agent shift in '*Britain produces*' (example a) and '*our radioactive waste*' (example b) implies that every citizen is implicated in the production of nuclear waste. However, in the last example agent deletion through passivization '*safety requirements will have to be met*' is used to divert attention from the human actors who have to carry out the disposal process. Its deficiency hinders meaning-

making and obtrudes students' awareness about environmental issues (Gerbig, 1993; Alexander, 1996; Goatly, 1996; Schleppegrell, 1996, 1997; Leipold and Winkel, 2013; Bland, 2014).

In environment language, the deletion of agency may occur through nominalization, a deliberate intention used to put less emphasis on affected nature or human beings (Goatly, 1996). On equal basis, Schleppegrell (1996) reckons that middle school environmental education texts use nominalization to represent or suppress agency in the discussion of environmental problems. In addition to industrial narratives, agency has been investigated in consumerism texts (Bland, 2014).

Passive voice

Although the terms 'agency' and 'passive voice' may overlap and therefore can be used interchangeably, they are used in the present study with different meanings and interpretations. Hence, as it has been alluded to previously, where agency has been referred to as a linguistic item that constrains or enables certain agents and participants in society when they are purposeful and consciously engaged in activity. Passive voice on the other hand, is usually referred to as a vague language that is difficult to comprehend. Its use in environment language is meant to report environmental issues is likely to hinder students' awareness of the topic, to prevent students from assimilating real perpetrators of environment problems, and to veil responsibility of subjects who commit environment disasters as it has been claimed by Lutz (1988) when he stated that the use of the passive voice:

...makes the bad seem good, the negative appear positive, the unpleasant appear attractive or at least tolerable. It is language which avoids or shifts responsibility, language which is at variance with its real or its purported meaning. It is language which conceals or prevents thought. Double speak is language which does not extend thought but limits it (Lutz, 1988).

From an ecolinguistics prospective, the use of passive voice in environment narratives is understood as connected to language and power (Kahn, 2001) found out that biologists constantly use passive voice to avoid the appearance of responsibility. Finally, Stibbe (2015 p.168) who discusses the ramifications of passive voice in the stories of poultry industry, mentions that very low activation was used through the stories to illustrate the reality of animals described in texts as "affected participants having something done to them". Moreover, Stibbe adds that chickens are described in the same manner as they are most of the time represented in the passive voice: "chickens 'are hung' upside-down, 'are

shackled', 'are exposed to steam, 'are showered' with water and 'are weighed' individually" (Stibbe, 2015, p.168).

METHODOLOGY

If some scholars investigated the treatment of environmental issues in second language learning materials (Jacobs and Goatly, 2000) by investigating activities that contained animals in English as an additional language course books (Jacobs et al., 2016), the present study examines some linguistic structures, namely euphemism, agency, and passive voice in Moroccan high school ELT textbooks. Particularly, it attempts to explain that the exaggerated use of euphemism, the concealment of agency, and the over adoption of passive voice could influence meaning in environment texts by hiding responsibility of individuals who exploit and destroy the environment. To achieve this aim, the study uses 14 texts to analyze the distribution of linguistic structures. To explore this issue, the following research questions are formulated.

1. Does the presence of euphemism change the impact of human activities perpetrated on the environment?
2. Does the absence of agency obscure language acts and conceal responsibility of human activity?
3. Does the use of passive voice disguise individuals and groups who perpetrate destructive actions to the environment?

To answer these research questions, the following hypotheses are formulated in order to explain that the three linguistic expressions when excessively used or concealed, the meaning in texts is distorted and consequently students fail to realize the responsibility of individuals and groups as who cause the degradation of the environment.

1. The fact that euphemism substitutes vague or indirect words to express offensive and harsh terms, its overuse changes human destructive activity towards the environment.
2. The lack of agency in describing perpetrators' destructive actions on the environment obscures the effect of language related to direct measures of responsibility.
3. The excessive use of passive voice disguises human's responsibility as perpetrators of destructive actions to the environment.

Corpus

It is axiomatic that the publication of textbooks in

Table 2. Description of English language teaching textbooks.

Textbook	Year	No. of pages	No. of units	Environmental education units	
				Title	No. of pages
Gateway to English	2006	154	10	Ecology	13 (8.4%)
Ticket to English	2014	160	10	Environment and ecology	13 (8.1%)
Outlook	2016	134	10	Keep our environment clean	12 (8.9%)
Ticket 2 English	2016	176	10	Sustainable development	16 (9%)
Ticket English	2017	80	10	Environment and ecology	6 (7.5%)
Insights into English	2017	175	10	Sustainable development	10 (5.7%)
Ticket 2 English	2017	176	10	Sustainable development	16 (9%)

Table 3. Number of words and sentences in environment texts.

Themes	Words	Sentences
Deforestation	502	28
Pollution	1243	71
Energy	537	31
Total	2282	130

Morocco is supervised by the Ministry of National Education which delegates committees of experts to evaluate and selects manuscripts for publication. The choice of the seven textbooks in the present study (Gateway to English, 2006; Ticket to English, 2014; Outlook, 2016; Ticket 2 English, 2016, 2017; Insights into English, 2007) is ascribed to the fact that they are the ones used and adopted to teach English in Moroccan high school. It should be borne in mind that these textbooks incorporate distinct units on environment issues. To examine how euphemism, agency, and passive voice are used in environment texts, the present study analyzes 14 environmental texts from an ecolinguistic perspective. For this aim, environment texts, which take the form of one paragraph or more, are adopted as units of analysis to study the use of linguistic structures.

Corpus description

The textbooks include units on environment education that students could be expected to have awareness about. For instance, the description of textbooks (Table 2) indicates that most of texts introduce a diversity of themes on EE to favor the development of students’ skills and attitudes on environment preservation within a multidimensional perspective including the global, the natural, and the human among others. In this realm, the table shows that EE, which exists in all ELT textbooks, occurs in discrepant number of pages. For example,

‘Ticket 2 English’ edited in 2016 and 2017 have the highest amount of pages to teach the issue of environment N=16, meanwhile *Insights into English* has the lowest number of pages N=6. Concerning the number of units in textbooks, the same table shows that each textbook contains ten units among which one unit is dictated to environment.

Differently, It is evidenced from the Table 3 that the texts have N=2282 words scattered in N=130 sentences. More specifically, texts on pollution take the lead with 1243 words in 71 sentences meanwhile deforestation texts have the least number of words and sentences respectively with 502 and 31. For more details consider Table 3.

Nature locality and elements of themes in ELT textbooks’ texts

In relation to environment issues proposed in ELT textbooks, the present study notes that the nature, the locality, and the themes of texts are important in order to explain the implication of EE in Moroccan context. Categorically, Table 4 shows that human intervention is nature is present in 10 texts among which four texts (all on pollution) show humans’ involvement in the degradation of the environment, while two texts report that environment problems happened naturally.

Concerning the locality of environment problems, Table 4 show that most of environment texts are global (N=11) while two texts only are local and national. As far as themes of texts are concerned, the topics fall under the themes of ‘Deforestation’, ‘Pollution’, and ‘Energy’. For instance, texts on ‘Deforestation’ focus on the importance of trees, causes of deforestation, and effects of deforestation. Similarly, ‘Pollution’ texts discuss causes and effects of global warming, the impact of waste and rubbish abandonment on natural resources, human exploitation to marine life, and the quality of human health which is affected by air and traffic pollution. Finally, ‘Energy’ texts highlight the benefits of the nuclear power

Table 4. Environmental themes in of English language teaching textbooks' units.

Themes and subthemes	Nature	Locality	Elements of subthemes
Deforestation			
	Natural	Global	Causes of deforestation Effects of deforestation Importance of trees
Pollution			
Global Warming	Human	Global	Ice and glaciers melting Rise of oceans level Effects of greenhouse gases
Waste rubbish	Human	Global	Degradation of environment Exploitation of natural resources Waste management
Marine life	Natural	Global	Exploitation Human impact
Global pollution	Human	Global	Quality of human health Diseases related to air pollution
Pollution	Human	Local	Traffic air pollution
Energy			
Nuclear power	Human	Global	Safe, clean, efficient No air pollution No greenhouse gases emissions
Nuclear Energy	Human	Global	Preserves the environment Lower impact on nature Non emitting of toxic waste Inexpensive No effects on global warming No effects on sufferings of humans
Solar energy	Human	Global	Safer and renewable
Nuclear energy	Human	Global	Safe, clean, efficient No air pollution
Renewable energy	Human	Global	No greenhouse gases emissions Safer and renewable
Sustainable development			
	Human	National/Global	Empowerment of women and youth Navigating the net Sustainable development across the world UNESCO's campaign education

which is the texts described in many texts as safe, clean, and having lower impacts on nature.

In addition to the nature, locality and theme of texts other information are provided to explain the content of texts. Actually, the information presented in Table 5 indicate the following: a) the majority of texts are about pollution and the use of natural resources, b) the images and photos used in environment units largely depict pollution topics, c) the empirical figures adopted in text to

explain environment units are related to pollution in different places of the world, d) the ecological concepts in environment units are related to pollution, ecosystem, and recycle, and e) the exercises attached to environment units are about vocabulary that depict ecosystem and cycle words. Additionally, the present study observes that direct human actions on the environment are detected in many environmental issues namely pollution and use of natural resources in urban

Table 5. Data in English language teaching textbooks according to Caravita et al. (2008) cross grid.

Data	Ecosystem and cycle	Biodiversity	Pollution	Use of resources	Total
Texts	2	2	5	5	14
Images	20	23	70	19	132
Photos	3	7	9	3	22
Exercises	49	32	29	7	117
Empirical data	2	4	6	2	14
Conceptualization	56	16	74	41	178
Natural environment					
Urban	1	1	4	4	10
Rural	-	-	1	-	1
Natural environment					
Local	-	-	1	-	1
Global	3	-	-	5	8
Human impact					
Negative	-	-	4	2	6
Positive	-	-	1	4	5
Humans in images	23	10	65	9	107

Table 6. Occurrences of euphemism, agency and passive voice in themes.

Themes	Euphemism	Agency	Passive voice
Deforestation	25	3	15
Pollution	50	2	27
Energy	52	3	18
Total	137	8	52

areas which manipulation and degradation are caused by human intervention.

Procedure

It should be noted from the outset that a traditional narrative differs from an environment narrative one in the sense that the former has beginning, middle and end, and takes place over time while the later appears in everyday life, in news, advertisements, conversations with friends, the weather forecast, and manuals or textbooks (Stibbe, 2015). To deal with the use of the linguistic structures (euphemism, agency and passive voice), the present study relies on content analysis (CA), a procedure that could be applied to study oral or written communication in literature, rhetoric, ethnography, cultural studies, sociology and political science among other fields of inquiry (Krippendorff, 2003) by examining characteristics and components of texts with reference to meaning, context and intentions in messages (Prasad, 2008). The central tool adopted by CA is categorization:

“every unit of analysis must be coded, that is to say, allocated to one or more categories; Categories are understood as the more or less operational definitions of variables” (Titscher et al., 2000, p.58).

RESULTS AND DISCUSSION

Environment texts in Moroccan high school ELT textbooks focus essentially on learning English as a foreign language. In the present study, the adoption or concealment of some linguistic structures including euphemism, agency and passive voice in environment texts renders environment units of those textbooks incongruent with the pedagogical aims of EE.

Linguistic structures in environment texts have the potential to impact students’ awareness of environment problems on the level of meaning construction. Generally, the results of the present study (Table 6) indicate the following:

- Euphemism is largely used in environment texts of

Table 7. Occurrence and frequency of euphemism in texts.

Themes	Subthemes	Euphemism	Total and frequency
Deforestation	Untitled text N°1	-	25 (18.2%)
	Untitled text N°2	7	
	Untitled text N°3	14	
	Untitled text N°4	4	
Pollution	Global warming	11	50 (37%)
	Waste rubbish	12	
	Pollution	10	
	Marine life	7	
	Global pollution	10	
Energy	Nuclear power	7	52 (37.9%)
	Nuclear energy	8	
	Solar energy	11	
	Nuclear energy	10	
	Renewable energy	16	

Table 8. Some existing examples in texts as well as suggested ones.

Existing sentences in texts	Suggested sentences
<i>Extinction of wild life species</i>	<i>Killing of wild life species</i>
<i>Manipulation of the forest</i>	<i>Destruction of the forest</i>

Moroccan high school ELT textbooks;
 - Agency is approximately inexistent in the texts, and
 - Passive voice expressions are adopted in texts on a large scale.

To explain more, the frequency of euphemism, agency and passive voice in texts occur according to different frequencies. For instance, euphemism comes first with N=137 occurrences followed by passive voice N=60, and agency which has fewer positions in texts N=51.

Euphemism

The results in the present study show that the use of euphemism in environmental texts in the textbooks under study occurs in ‘Energy’ texts with N=52 and in ‘Pollution’ texts with N=50 while less occurrences take place in ‘Deforestation’ texts with N=25 positions. Among themes, texts on renewable energy have much euphemistic structures N=16 followed by solar energy texts N=10. Moreover, pollution due to ‘waste and rubbish’ activities comes first with N=12 expressions followed by ‘global warming’ texts. Finally, ‘Deforestation’ themes, mainly the ‘third untitled text’, have the largest number of euphemistic structures N=16. For more details see Table 7.

Based on the idea that euphemism is a substitution of

vague or indirect words to express offensive and harsh expressions, their overuse in the texts mitigates the gravity of human destructive activities perpetrated to the environment. As grounded in the tenets of ecolinguistics mentioned in (Stibbe, 2015), the present study judges that the excessive use of euphemism is in fact an anti-pedagogical. Undoubtedly, the language of texts, which is said to promote students’ awareness and critical thinking towards the preservation of the environment as well as being a means to denounce destructive behaviors that threaten the equilibrium of the ecosystem, becomes vague and ambiguous due to euphemistic structures. To illustrate more, some examples taken from the texts under study illustrate that the use of euphemism really mitigates strong mental perceptions about environmentally disastrous activities. For example, words appearing in italics in Table 8 show how euphemism substitutes strong and unsuitable expressions in weak terms.

In the illustrations (Table 8), euphemistic terms (extinction, manipulation) decrease the impact of human activities and make meaning in the sentences incongruent with the principle of ecolinguistics which stipulate that the pedagogical aim of environment texts is to promote the stories which celebrate the protection of the natural environment. Of importance to the present study, the element of euphemism is a tool through which

Table 9. Occurrence of agency in environment texts.

Themes	Subthemes	Agency	Total
Deforestation	Untitled Text N°1	-	3
	Untitled Text N°2	-	
	Untitled Text N° 3	2	
	Untitled Text N°4	1	
Pollution	Global warming	-	2
	Waste rubbish	1	
	Pollution	-	
	Marine life	1	
	Global pollution	-	
Energy	Nuclear power	1	3
	Nuclear energy	1	
	Solar energy	1	
	Nuclear energy	-	
	Renewable energy	-	

it is possible to decipher what factors render environment texts incompatible with the aims of EE. Given the fact that malignant presence of euphemism downplays and hides the realities of who manipulate what, and for what purpose. Comparatively, many studies examined euphemism in environment texts the use of which is judged inappropriate since it is a form doublespeak. In Moroccan ELT texts, the inappropriateness of euphemism is mirrored against Lutz (2012b) who notices that its presence in many texts mislead readers and makes them fail to notice and perceive the reality behind corrupt thought. In the same direction, Schultz (2001) examination of euphemism in agricultural environment claims that the language is replete with expressions which portray the industrial activities as benign and beneficial to the natural environment. To explain this phenomenon, Schultz concludes that a) neutral words have connotations complimentary to exploitation, where as the reality they represent is very different, and b) unpleasant things were euphemistically substituted by pleasant names. Finally, Mühlhäusler and Peace (2006, p.463) admits that euphemism is qualified as an unpleasant phenomena to promote environmental degradation since it replaces existing terms like “to harvest for to hunt, landfill rather than rubbish dump, to cull instead of to kill or take the form of formalized collocation, as in sustainable development or green business”.

Agency

Central to environment language is the role that some linguistic structures have in environment texts, namely agency. In the texts under study, agency occurs with less

frequency if compared to euphemism. Theoretically, agency which is a grammatical structure (like passive form or nominalization) may constrain or enable agency of certain participants in society from being purposeful and engaged in activity (Leipold and Winkel, 2013). In relation to the issue at hand, the results indicate that agency is detected eight times across 137 sentences. Although it is less frequent, agency if compared to the other elements, its distribution across categories shows that it is used in ‘Energy’ and ‘Deforestation’ texts with three occurrences each. As for ‘Pollution’ texts, agency is almost inexistent with N=2 appearances (Table 9).

The concealment of agency in the texts indicates that responsibility of destructors of the environment is veiled, a process that weighs a lot on the clarity of texts’ meaning. Being relatively absent in environment texts, the present study assumes that the denial of agency in environment texts in Moroccan ELT textbooks makes subjects’ and individuals’ responsibility unknown and meaning related to who commit what on whom incomplete. The pedagogical implications of this process have negative repercussions on students’ understanding of environmental issues as they may fail to realize perpetrators’ responsibility made incomplete and hidden by agency denial. As a matter of fact, deficiency related to agency means that the pedagogical aim of ELT texts in Moroccan high school textbooks is incongruent with the principles of ecolinguistics as well as the objectives of UN on EE principles reflected in environment narratives. To illustrate the implication assigned to the lack of agency in the texts contained in Moroccan ELT textbooks, the following examples below are extracted from the analyzed texts to concretize the findings.

a. Waste and rubbish is what **people** throw away (Ticket

Table 10. Frequency and occurrence of passive voice in environment texts.

Themes	Subthemes	Passive Voice	Total and frequency
Deforestation	Untitled Text N°1	2	5 (25%)
	Untitled Text N°2	3	
	Untitled Text N° 3	7	
	Untitled Text N°4	3	
Pollution	Global warming	7	27 (45%)
	Waste rubbish	5	
	Pollution	6	
	Marine life	5	
	Global pollution	4	
Energy	Nuclear power	1	18 (30%)
	Nuclear energy	5	
	Solar energy	6	
	Nuclear energy	3	
	Renewable energy	3	

- to English, 2014, p.24)
- b. **Poor people** and **loggers** are responsible of forest deforestation (Gateway to English, 2006, p. 101)
- c. Sea levels are **rising** (Ticket English, 2017, p.24)

The examples show that the subject who ‘*throws away*’ waste and rubbish, who cause ‘*deforestation*’, and who make sea ‘*levels rise*’ has been suppressed. This linguistic activity has a crucial impact on students understanding of potential destructors of the environment. This is in correlation with previous empirical studies related to the denial of agency in environment writings (Gerbig, 1993; Schleppegrell, 1996; Bland, 2014).

For Gerbig (1993, p.63) environmental problems related to Chlorofluorocarbons (CFCs) and ozone depletion are behind non-malignant skin cancer, a reality that was constructed through a language in which “the ergative choice expresses a self-caused process for which no -not even an implicit- agent is retrievable”. More precisely, Gerbig noticed a shift in industry writings because of the avoidance of agents, actors, persons, or things responsible of actions. Instead, he adds that the responsibility of agents was masked by passive voice structures to reduce agents’ behavior into actions produced by unknown persons. To conclude, Gerbig argues that such wrong attributions of responsibility are common in other environment texts where he found that the pronoun ‘*we*’ replaced causers of environmental problems and that it is up for ‘*us*’ to change ‘*our*’ behavior to solve these problems.

In a different context, Schleppegrell (1996) deduced that where agents are not specified in the materials, students overwhelmingly use generic and indeterminate agents such as ‘*people*’, ‘*humans*’, ‘*we*’, or ‘*us*’. As a recommendation, Schleppegrell resumed his study by

notifying that social agents and perpetrators of environmental crisis need to be specified if students are to gain a clear understanding of environmental issues.

Finally, Bland (2014) on the language of green consumerism revealed that the discourse used by industries concealed corporate accountability and directly attributed responsibility for environmental consequences to individual consumers.

Based on the findings of the present study, the content provided in environment units should be adequately presented otherwise Moroccan high school students may miss with meaning. In fact, this study stipulates that not only the denial of agency abstruse meaning, but also the prevalence of passive voice in texts actually blurs doers of actions.

Passive voice

Concerning the distribution of passive voice in texts, the results communicate that ‘*pollution*’ texts include many passive forms (45%), ‘*energy*’ texts have (30%), and ‘*deforestation*’ texts have (25%). More precisely, some subthemes namely solar energy texts have much passive voice structures N=6, ‘*untitled text three*’ on deforestation has N=7 passive forms, and pollution text has N=6 passive structures (Table 10).

Overall, the aim of environment texts in Moroccan ELT textbooks is a) to expand students’ learning abilities, b) to reinforce their engagement towards complex environment issues, and c) to help them realize intricate links that shape and characterize the relationship between the humans and the natural. In this framework, the texts are meant to teach students how to preserve the ecosystem, a knowledge that teachers work hard to transmit to

students to make them realize that human intervention may critically impact nature particularly when they excessively exploit the resources. In textbooks under study, environment texts illustrate that humans' inappropriate exploitation of the natural resources lead to hazardous ecological results such as pollution, deforestation, extermination of species, and global warming. Nevertheless, the rhetoric used to describe this relationship seems inaccurate since the presence or the absence of some linguistic feature which hides the responsibility of individuals and firms makes meaning ambiguous and vague. Based on the results displayed in Table 10, this study concludes the following: because the presence of passive voice in environment texts disguises doers of actions, environment units in Moroccan ELT textbooks are contrary to the pedagogical aims of EE. To back up this argument, the following examples are presented to explain how passive voice operates in texts.

- a. Marine life **has been** largely open for *exploitation* (Ticket English, 2017, p.24)
- b. State of ocean life **has become alarming** (Ticket English, 2017, p.24)
- c. Many species **have been** or are **being driven** towards *extinction* (Insights into English, 2007, p.144)

For instance, example (a) which talks about the exploitation of marine life does not provide the subject or the agent who provoke the action. Similarly, in example (b) the passive structure assigns self-destruction to the ocean life the state of which is becoming alarming. On equal basis, example (c) is grammatically correct and illustrates the extinction of microscopic or large species but it remains meaningless because it does not provide any information on the doers of action.

In line with Stibbe (2015), passive voice expressions generally occur in environment texts when the object of a sentence becomes its subject to make meaning vague and hard to understand. In this situation, Stibbe's argument underpins that the reason behind this choice is to hide the responsibility of individuals and groups whose harmful acts are disastrous to the environment. In the context under investigation this process surely impacts students' cognition because of the obstruction of meaning due to the presence of passive voice. Elsewhere, Lutz's (1990) on active voice denial admitted that the use of passive voice in discourse falls under the realm of doublespeak, a form of communication through which discourse users pretends to communicate but really do not. The argument developed by the present study, which claims that passive constructions hide responsibility of doers, this in conformity with Kahn (2001, p.242) who stipulated that the lack of active voice and purposeful use of euphemisms obscure language in the scientific literature as it reduced it to a passive, soulless voice devoid of morality and responsibility. More than that,

Khan assumed that passive constructions make actors of actions disappear and "replaced by the deed itself, sterile and isolated, and apparently accomplished without human input". Grounded in Lutz notion of doublespeak, the presence of passive voice in Moroccan ELT environment texts means that learners forcefully cannot grasp the meaning of texts to describe environment crisis. It should be noted that the use of passive voice in environment units in Moroccan ELT textbooks is against the vocation of EE pedagogy which recognizes that environment texts must enhance students' awareness towards environment issues and promote their sense of citizenship endowed to protect and preserve the environment.

IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

In the Moroccan context, school is the privileged place for the development of EE, the implementation of which needs a convenient pedagogy in all schooling stages to empower children, adolescents', and adults' attitudes towards environmental issues and to improve their behaviors and lifestyle choices towards the environment. In this framework, the Tbilisi report of 1977 and the UNESCO-PNUE (1977) recommended that schools need to organize systemic actions in primary and secondary education to provide students with knowledge and know-how principles to understand the environment. Since then, EE in many places over the world has become a pedagogical tool meant to educate, inform, and instill protection of the environment, utility of the ecosystem, and fragility of its components. In the US, state of Ohio, some guiding principles are put forward to enhance good practices of EE based on the idea that "good EE helps people learn how to evaluate information and points of view for themselves in order to make informed decisions" (Meredith et al., 2000, p.2). Literally, the present study perceives that some principles included in Meredith et al. have to inspire Moroccan decision makers to adjust EE to the international pedagogical standards: a) to set the stage of EE based on environmental education, learners, and educators, b) to install firm guidelines for the content to be integrated in EE learning, and c) to provide professional development for teachers to become effective environmental educators.

In the Moroccan context, EE is inserted at different levels of the Moroccan school via programs and extracurricular or socio-educational activities. Though many actions have been undertaken by Moroccan stakeholders to integrate EE in education, some challenges mentioned in Ben Brahim (2002), Agorram et al. (2013), El-Moussaouy et al. (2014) and Zerrouqi et al. (2016) hinder the process: a) the absence of a clear national EE program, b) the lack of training and didactic

materials in the field of EE despite the efforts made by the Moroccan educational system and different public and private sectors, and c) the Moroccan school is not sufficiently and permanently opened to their external environment.

Though there is a continuous debate on integrating EE in many textbooks at different teaching levels, the Moroccan Ministry of Education and textbooks designers need to take the following recommendations into consideration in order to ameliorate the pedagogical orientations of EE.

1. The establishment of permanent national structures to implement EE.
2. The establishment of structured and distinct EE programs based on a coherent methodology, pedagogical material, and teaching aids.
3. The elaboration of EE manuals, textbooks, and units needs to be supervised by specialized committees.
4. The provision of EE training program for teachers.
5. The environment units need to include regional and national environment issues.

Conclusion

Many texts on environmental issues are included in Moroccan ELT textbooks to foster the pedagogical aims of EE among Moroccan high school students and to help them understand the reality of the connection that holds man to nature. Actually, ELT textbooks designers in charge of integrating EE in Moroccan ELT textbooks tend not to give much importance to the texts they choose and/or write, particularly those which are incompatible with the goals of EE pedagogy. This critical analysis adopted in this study allows to comprehensively drawing a distinct conclusion on the state of EE in the Moroccan ELT textbooks, the implementation of which needs a lot of reconsideration to make environment texts in line with the pedagogical objectives of EE. In addition to the amelioration of environment units and texts, other factors which may hamper EE in the Moroccan context need more improvement. For instance, untrained human resources and inefficient materials resources may be obstructive to the integration of EE in Morocco. For instance, teachers give the impression that they have never been introduced to EE. Clearly, these challenges may be attributed to the lack of teachers' training in EE. Therefore, an inclusive approach to promote EE in ELT textbooks needs to take into consideration the evaluation of environment units which need to involve global, national, and regional ecological issues. Being focused on global issues, Moroccan students may fail to apprehend national and regional issues which are facing the Moroccan society today.

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