



## Research Article

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# Evaluating Environmental Contents in Comprehensive Passages in Junior Secondary School English Language Textbooks Used in Cross River State, Nigeria

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## Abstract

Serious concerns have been raised by many stakeholders in environmental issues including Cross River State Government, educationists, non-governmental organisations and even, the international funding agencies, about the quality and level of environmental information that can be accessed in both print and electronic media. This has become imperative because proper understanding of the origin of the present environmental challenges is the key to minimise the on-going abuses in future. This study was undertaken to investigate the level of environmental awareness issues contained in comprehensive passages present in English Language textbooks used by Junior Secondary School students in Cross River State, Nigeria. The study involves counting and analysing the number of passages dealing with environmental issues in 27 textbooks based on the four types of environments: abiotic, biotic, neutral and social. Two research questions were formulated and used to guide the study. Observed data were analysed using simple percentage technique. Results show that issues concerning the environment were reflected in all the textbooks but sometimes in an undesirable proportion. It was concluded that the practice of emphasising social and abiotic environments issues at the detriment of others do not auger well for proper development and impartation of environmental awareness to students.

**Keywords:** Environmental sensibility, Environment, English Language textbooks, Secondary Schools, Comprehensive passages, Cross River State

## 1. Introduction

Cities and towns in the Third World countries including Nigeria are continually challenged by widespread environmental problems that have existed for a long time. In Calabar, these environmental problems originate mainly from those that are of ecological in nature and scope. Abiodun (2018) itemised the prevailing environmental challenges in Calabar to include deforestation, soil degradation, waste disposal and water contamination. The persistence of these problems has, over the years, led to the development of secondary challenges of varying extents and dimensions like land degradation, soil and gully erosion, plastic pollution, global warming, surface water contamination, loss of wildlife and biological diversity. Presently, local authorities and sometimes, with support from the World Bank and other donor agencies are spending huge amounts of their financial resources in contending with the challenges posed by these problems to the society. In Calabar, soil and gully erosion, plastic and water pollution and deforestation are the most prevalent environmental challenges.

The primeval forests and rich water resources including the adjoining Mangrove Swamps that adorn the landscape of Cross River State were once a veritable natural asset that provided congenial shelter for a good number of organisms, some of which were sustainably exploited and used as food and their extracts used for medicinal purposes by both the traditional and orthodox practitioners. In addition, these environments were home to a wide range of resources some of which were renewable (e.g., wood, timber, fish and wildlife) and non-renewable (e.g., limestone, oil, metallic ores). Next to natural resources (e.g., clean water, operational watersheds, biological diversity and scenic beauty) are ecological service which evolves as the natural functioning of the eco-system. These, helps to regulate climate, supply of valuable species of plant and animals, formation of soil and increased soil yield (Myers, 1986). A combination of the renewable resources and their ecological counterparts has been described as the biological resource endowment of Cross River State.

Cross River State has, in recent times, witnessed resurgence of environmental challenges that range from flooding, gully erosion to rising temperatures attributable to climate change. Some of these challenges have been optimally predicted by some state institutions like the Nigerian Hydrological Services Agency that successfully forecasted the flooding of the area and other parts of Nigeria in 2019. These episodic flooding have led to continuous erosion of the top soil, loss of soil fertility, initiation of gully erosion and other land degradation problems in areas like Edim Otop, Nyangasang, Ikot Uduak and many other areas in Cross River State (Abiodun, 2018, Akpan et al., 2009). Grinsted and Christensen (2021) reported that the earth's rising surface temperature, which has resulted in rising sea level, is a major fallout of climate change. Thus, it becomes befitting for environmentalists and other stakeholders in the environmental sector to create and spread awareness on environmental matters to everybody irrespective of age and social status in order to save the earth.

The importance of awareness campaigns as a tool for mass mobilisation, educating and enlightenment on environmental issues was first advocated, given official recognition and consequently, adopted by the international community at the first United Nations Conference on Human Environment (UNCHE) in 1972. The conference drew world attention to the menace of ecological problems such as flood, erosion, loss of biodiversity and recommended that concerned organisations should, after proper consultation and agreement, take all necessary steps to embark on multi-dimensional enlightenment and awareness campaigns in both formal and informal education centres. Carter and Bora (2010) reported that out of the 26 principles contained in the UNCHE declaration, principle 19 particularly calls for massive and all-encompassing awareness programmes to be taken to all manners of persons (young and old) and households. Ilesanmi (2006) observed that proper implementation of environmental policies and education programmes require granting empowerment rights to the youths and that without taking environmental education to schools, major decisions might remain unrealisable. Koffi (2020) reiterated that environmental education should be taught at all levels in schools. The Tbilisi declaration (1977) supports all-inclusive education, implying that the younger population including students in Junior Secondary Schools

(JSSs) must not be left out. Finally, the awareness programme should also be directed at capturing the attention of the general public with a view to enlightening them on simple steps that must be taken to manage and control their environment (Blackburn, 1983).

English Language is the main vehicle through which messages and other information are communicated to a large portion of the population in many English speaking countries including Nigeria (Federal Republic of Nigeria, 2014). Besides English Language being the official language of communication and instruction in Nigerian schools, it is also the language used in teaching most school subjects (Federal Republic of Nigeria, 2014). Generally, educators acknowledge English as an important tool for communication and a necessary tool for academic success. This makes it imperative that the English textbooks should contain appropriate and adequate information about environmental policies and issues. Umoh (1997) asserts that since English reader is the most reading textbook, it becomes necessary that the contents of comprehensive passages present in them be varied so as to expose the readers to other disciplines apart from those that bear on language which they are intended for. Teachers depend largely on textbooks as the only accessible instructional materials. As Rahmawati (2018) reported, textbooks used in classes are often the teachers be-all and end-all. Snezana and Snezana (2013) observed that textbooks used in teaching English Language in schools do not usually have any deviation from content. With these facts in mind, the researchers embarked on a study to evaluate the environmental contents of comprehensive passages available inside English Language textbooks used in JSSs in Cross River State. It is intended that the extent to which environmental issues are included in the textbooks will help students to understand issues concerning the environment, develop positive thinking and the right sense of judgement for posterity and sustainability.

## 2. Statement of Problem

This study was prompted by the fact that environmental problems in Cross River State, like the rest of other states in Nigeria, are endemic, and has been existed for a long time. There are many identifiable environment problems that confront Cross River State and all of them are mainly of ecological in nature and scope. These problems include deforestation, soil degradation, waste disposal, flooding, water contamination and pollution among others, which have over the years given rise to secondary challenges like gully erosion, loss of soil fertility, wildlife and biological diversity losses. From the ecological point of view, soil erosion and deforestation are indeed the most serious nationwide environmental problems. The international declaration on Environmental Education such as the Stockholm, Belgrade and Tbilisi Declarations advocate Environmental Education for all in order to create awareness to enable them to become more responsible about environmental issues. The question is whether textbooks used in JSS have adequate contents on environmental issues that will enable the readers to be aware of what is going on in his environment becomes imperative. In the context of this research, the problem is whether the JSS English Language textbooks used in public schools in Cross River State, Nigeria has enough contents on environmental sensibility.

### 2.1 Purpose of the study

The study is aimed at generating and analysing information on the environmental awareness contents of comprehensive passages available in some selected textbooks used in public secondary schools in Cross River State, Nigeria.

### 2.2 Research questions

1. What is the distribution ratio of the biotic, neutral and abiotic environment in the English Language textbooks used in the study area?
2. What is the sequence adopted in projecting environmental issues in each of the JSS

textbooks used in this study?

### 2.3 Significance of the Study

The study is considered very timely and shall be of immense benefit to the textbook writers, teachers of environmental education, Ministry of Education in their text prescription and students, governmental agencies and the general public.

To the textbook writers, the study may provide relevant answers to the degree of environmental awareness among the writers in African content. From the point of view of inter-disciplinary studies, this research throws light on how English textbooks may be a source of environmental awareness. It could make writers and potential writers know the direction to take when writing, to make their work marketable and popular in the field of environmental concern and awareness. Through that, it will help in minimising the environmental awareness problems in Cross River State and the country at large. The study would also help in exposing students' awareness levels on environmental matters to Educational Administrators and other policy makers.

### 2.4 Scope of the study

The research was limited to some selected textbooks used in JSSs in Cross River State, Nigeria. Although the study may be a reflection of what really obtains in the population used in the study, generalization can only be limited to the sample population from which the sample is drawn and on which data are based and not beyond the specified population.

## 3. Literature Review

Literature was reviewed based on environment awareness issues documented by other authors. The review deals with concept and empirical works of other researchers related to this study. Sarmah and Bhuyan (2015) performed an analysis of Environmental Education components in textbooks used from Classes V to VII in Assam State, India.

Komane (2005) conducted a research on the assessment of environmental awareness among secondary school students in Maborane District. He observed that the level of environmental awareness was unsuitable to solve some environmental problems. Sivamoorthy and Nalini (2012) conducted a study on the level of environmental awareness and practices among college students in India. The findings showed that there was no significant relationship between environmental awareness and environmental practices among secondary schools students in Maborane District. In the same vein OzemandKaramustafaoglu (2006) observed from their study on the level of environmental assessment on textbooks used by some secondary schools in Turkey that there was gross inadequate information in those textbooks that lead to environmental awareness.

Ilesanmi (2006) also found out from his analyses of data generated from respondents on the importance of Environmental Education among the Junior and Senior Secondary students.

Yalcinkaya and Cetin (2017) investigated Secondary School students' environmental attitude and opinions about Environmental Education in the city of Nigote in Turkey using descriptive, quantitative and qualitative research techniques. It was observed that there was significant difference.

Little and Green (2009) opined that education for sustainable development is essentially an invitation of change in the way we educate children and adults with the aim of ensuring a sustainable future. They affirm that it is a strategy and action plan to better equip people with skills, knowledge and motivation to handle environmental problems.

Gunduz and Erdogan (2017) confirmed that successful integration of Environmental Education into the school curriculum will depend on the specific conditions, aims of education and socio-economic structure of a particular country.

#### 4. Research Methodology

##### Research Design/Population/Sample

The research design used in this study is the survey research design. The researchers used purposeful sampling technique to select nine from the sixteen English Language Textbooks recommended for use in each class between JSS 1-3 in Cross River State. The study was conducted between September, 2017 and August, 2020. The textbooks used were

1. New Oxford Secondary English Course 1-3
2. New Concept English for Junior Secondary Schools 1-3
3. Communicative English for Junior Secondary Schools 1-3
4. Junior English project for Junior Secondary Schools 1-3
5. Brilliant English for Junior Secondary Schools 1-3
6. English network for Junior Secondary Schools 1-3
7. English Studies Junior English Today 1-3
8. Intensive English for Junior Secondary Schools 1-3
9. Extensive Modern English for Junior Secondary Schools 1-3

This gives a total of twenty-seven (27) textbooks.

In order to carry out this research work, the researchers applied “rating scale” in order to help the researchers make a concise analysis on the contents. The contents of each passage were studied to find out the level of environmental awareness it reflected. For instance, the total of biotic, abiotic, social and neutral environments were identified and recorded. This procedure was used for the nine textbooks series studied and rated, calculated and summarized for each of the three classes in JSS. The data collected comprised the total number of passages, the environments and the accompanying passages were processed and analyzed to evaluate how many types of environment reflected each level of awareness. All environments of the same type in each book were added together. Statistical analysis adopted was simple percentages. Finally, a Box-Whisker plot was used in presenting the results observed across the four types of environment.

#### 5. Results

The researchers read and analyzed each reading comprehension passages in all the selected JSS English Language Textbooks 1-3. Data were collected as follows based on the research questions:

1. What is the distribution ratio of the biotic, neutral, social and abiotic environment in the English Language textbooks under study?
2. What is the sequence adopted in projecting environmental issues in each of the JSS 1-3 readers under study?

##### 5.1 Research question 1

What is the distribution ratio of the biotic, neutral, social and abiotic environment in the English Language textbooks under study?

The total number of comprehensive passages dealing on environmental issues that were found inside English Studies books 1, 2 and 3 used in JSS 1, 2 and 3 classes respectively, are respectively 1(5.6%), 5(18.5%), and 4(18.2%) for abiotic, 0(0%), 0(0%) and 0(0%) for biotic, 0(0%), 1(3.7%) and 3(13.6%) for neutral and 17(95.2%), 21(78%) and 15(10%) for social environments respectively (Table 1). In Communicative English books 1, 2 and 3, the numbers of comprehensive passages dealing on the subject matter of environmental awareness were observed to be 0(0%) for abiotic, 2(11.1%) for biotic, (5.6%) for neutral and 15(83.3%) for social issues, making a total of 18 passages representing 100%. Corresponding counts in books 2 and 3 were 2(11.1%) and 0(0%), 0(0%) and 0(0%), 1(5.6%) and 1(4.8%) and 15(83.3%) and 20(95.2%), resulting in a total of 18 and 21 passages respectively.

The total number of comprehensive passages that were found to be focusing on environmental topics in New Oxford English books 1, 2 and 3 were observed to be 8 each in books 1 and 2 while none was found in book 3. Their specific distributions in Books 1, 2 and 3, are as follows for abiotic, biotic, neutral and social issues: 2(25%), 1(12.5%) and 0(0%); 0(0%), 0(0%) and 0(0%); 1(12.5%), 0(0%) and 0(0%); 5(62.5%); 7(87.5%) and 0(0%).

Extension Modern English Books 1, 2, and 3 captured the spread of comprehensive passages that centred on environmental awareness as 3(10.3%), 6(20.7%) and 8(27.6%) for Table 1

**Table 1:** Distribution ratio of environmental awareness

Classes	English Language Textbooks	Types of environments								Total passages	
		Abiotic		Biotic		Neutral		Social			
		Counts	%	Counts	%	Counts	%	Counts	%	Counts	%
1	English Studies 1	1	5.6	0	0.0	0	0.0	17	94.4	18	100
	English Studies 2	5	18.5	0	0.0	1	3.7	21	77.8	27	100
	English Studies 3	4	18.2	0	0.0	3	13.6	15	68.2	22	100
2	Communicative English 1	0	0.0	2	11.1	1	5.6	15	83.3	18	100
	Communicative English 2	2	11.1	0	0.0	1	5.6	15	83.3	18	100
	Communicative English 3	0	0.0	0	0.0	1	4.8	20	95.2	21	100
3	New Oxford English 1	2	25.0	0	0.0	1	12.5	5	62.5	8	100
	New Oxford English 2	1	12.5	0	0.0	0	0.0	7	87.5	8	100
	New Oxford English 3	-	-	-	-	-	-	-	-	-	-
4	English Network 1	5	25.0	0	0.0	0	0.0	15	75.0	20	100
	English Network 2	1	5.0	0	0.0	1	5.0	18	90.0	20	100
	English Network 3	7	35.0	1	5.0	1	5.0	11	55.0	20	100
5	Junior English Project 1	2	11.8	0	0.0	0	0.0	15	88.2	17	100
	Junior English Project 2	2	11.1	0	0.0	2	11.1	14	77.8	18	100
	Junior English Project 3	2	11.8	0	0.0	0	0.0	15	88.2	17	100
6	New Concept English 1	3	16.7	0	0.0	2	11.1	13	72.2	18	100
	New Concept English 2	4	21.1	0	0.0	2	10.5	13	68.4	19	100
	New Concept English 3	2	11.1	0	0.0	2	11.1	14	77.8	18	100
7	Intensive English 1	1	5.0	0	0.0	1	5.0	18	90.0	20	100
	Intensive English 2	3	15.0	0	0.0	2	10.0	15	75.0	20	100
	Intensive English 3	0	0.0	0	0.0	5	25.0	15	75.0	20	100
8	Brilliant English 1	0	0.0	0	0.0	0	0.0	20	100.0	20	100
	Brilliant English 2	7	35.0	1	5.0	2	10.0	10	50.0	20	100
	Brilliant English 3	0	0.0	0	0.0	2	10.0	18	90.0	20	100
9	Extension Modern Eng 1	3	10.3	0	0.0	2	6.9	24	82.8	29	100
	Extension Modern Eng 2	6	20.7	0	0.0	3	10.3	20	69.0	29	100
	Extension Modern Eng 3	8	27.6	0	0.0	3	10.3	18	62.1	29	100

abiotic, 0(0%), 0(0%) and 0(0%) for biotic, 2(6.9%), 3(10.9%) and 3(10.9%) for neutral and 24(82.8%), 20(69%) and 18(62.1%) for social issues, making a total of 29 passages in each textbook.

In English Network book, comprehensive passages describing environmental issues were found to be 5 counts representing 25% for abiotic, 0 counts representing 0% for biotic, 0 counts representing 0% and 15 counts representing 75% for social issues, making a total of 20 passages. Corresponding counts in English Network book 2 were observed to be 1 passage representing 5% for abiotic, 0 passage

representing 0% for biotic, 1 passage representing 5% for neutral and 18 passages representing 90% for social environment, resulting in a total of 20 passages. Finally, in English Network book 3, 7 passages, representing 37%, were counted for abiotic, 1 passage, representing 5%, were counted for biotic, 1 passage, representing 5%, were counted for neutral and 11 passages, representing 58%, were counted for social environment, making a total of 20 passages.

In Junior English Project 1, counts of comprehensive passages that focus on various aspects of environmental awareness were: abiotic 2 passages representing 11.8%, biotic 0 passage representing 0%, neutral 0 passage representing 0% and social environment 15 passages representing 88.2%, resulting in a total of 17 passages. In Junior English Project 2, passage counts for abiotic were 2 (representing 11%), biotic 0 (representing 0%), neutral 2 (representing 11%) and social environment 14 (representing 78%), leading to a total of 18 passages. In Junior English Project 3, a total of 18 comprehensive passages describing environmental issues were counted and their distribution were abiotic 2 (representing 11.8%) and social environment 15 (representing 88.2%). No passage was found to be dealing on biotic and neutral environment issues.

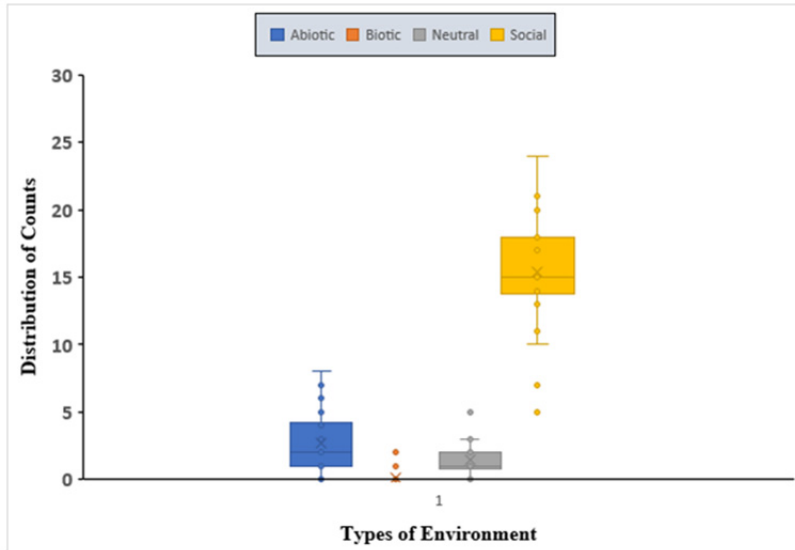
Of the 18 comprehensive passages found to be concentrating on environment subject matter in New Concept English Book 1, 3 (16.7%) passages were found to be focusing on abiotic (11.1%) on biotic and 13 (72.2%) on social environment while none was found dealing on neutral environment. In New Concept English Book 2, 4 (21.1%) passages deal on abiotic, neutral 2 (10.5%) passages deal on neutral while social environment had 13 passages representing 68.4%. Of the 19 passages, no passage dealt on biotic environment. New Concept English book 3 had 2 passages (representing 11.1%) on abiotic, 2 passages (representing 11.1%) on neutral and 14 passages (representing 77.8%) on social environment. None of the 18 passages found in the book dealt on biotic environment.

In Intensive English books 1, 2 and 3, none of the textbooks studied has any comprehensive passage that discusses any issue on biotic environment. However, the distribution of the number of comprehensive passages spotlighting other environmental awareness issues were observed to be 1 (5%), 3 (15%) and 0 (0%) for abiotic, 1 (5%), 2 (10%) and 0 (0%) for neutral, and 18 (90%) 15 (75%) and 15 (75%) for social environment respectively. All the three textbooks had 20 passages each that focusses on environmental issue.

Each of the Brilliant English textbooks 1, 2 and 3 used in JSS 1-3 has twenty comprehensive passages that draws attention to the environment. The distribution of the comprehensive passages with respect to the various types of environment are 0 (0%), 7 (35%) and 0 (0%) for abiotic, 0 (0%), 1 (5%) and 0 (0%) for biotic, 0 (0%), 2 (10%) and 2 (10%) for neutral and 20 (100%), 10 (50%) and 18 (90%) for social environment.

Extension Modern English book 1, 2 and 3, where 29 comprehensive passages were counted in each of them, a total of 29 comprehensive passages were found to be spotlighting environmental issues. In Book 1, their spread across the four types of environment are 3 passages, representing 10.4%, for abiotic, none for biotic, 2 passages, representing 6.9%, for neutral and 24 passages, representing 82.7%, for social environment. In Extension Modern English book 2, the comprehensive passages were counted as 6 (20.7%) passages for abiotic, none for biotic, 2 (10.3%) passages for neutral and 20 (69%) passages for social environment. Finally, in book 3, the passage counts were 8 (27.6%) for abiotic, none for biotic, 3 (10.3%) for neutral and 18 (62.1%) for social environment.

The minimum and maximum numbers of comprehensive passages with environmental contents available in English Language textbooks used by students between JSS 1 and JSS 3 are 0 and 8 for abiotic, 0 and 2 for biotic, 0 and 5 for neutral, and 5 and 24 for social environments. The Box-Whisker plot (Figure 1) shows the distribution of environmental contents of the various types of comprehensive passages. At all levels of studies in JSS, comprehensive passages with environmental contents are heavily skewed in favour of social environment. These social contents might not have been originally intended to spotlight environmental matters but showcase the rich cultures of the people.



**Figure 1:** A box-whisker plot showing the distribution of comprehensive passages on the various types of the environment

These results show that the distribution of comprehensive passages that focus on environmental subject matter across English Language textbooks used by JSS students is awfully in consistent across textbooks and classes. Comprehensive passages available in English Language textbooks used by JSS 1 students concentrated more on social issues than on other aspects of the environment. Only 17 comprehensive passages focus on issues concerning abiotic environment while 2 and 7 passages concentrated on biotic and neutral environments, respectively. The types of environmental awareness described in comprehensive passages present in English Language textbooks used by JSS 2 students vary widely with varying contents. In all the textbooks read, social environment issues were given highest attention with 133 passages concentrating on them. This was followed by 31, 14 and 1 passages that focus on abiotic, neutral and biotic subject matters, respectively. The coverage of comprehensive passages that focus on environmental issues in English Language textbooks recommended for use by students in JSS 3 is 126 for social, 23 for abiotic, 17 for neutral and 1 for biotic.

The persistent trend of having insignificantly small numbers of comprehensive passages documenting biotic contributions to environmental challenges does not appear to be a healthy approach towards getting the younger population to be properly informed, educated and enlightened about the causes of the present environmental challenges. This is because the overarching goal of recognising and consequently, adopting awareness campaigns globally as a behaviour-change tool for public education and enlightenment (de Vries, 2020) on environmental issues may remain untenable if the younger population is not well informed, enlightened and educated about the contributions of anthropogenic activities as the leading cause of environmental challenges (global warming, deforestation, soil degradation, air pollution, soil and water contamination) (Akpan et al., 2018, de Vries, 2020; Ben et al., 2021) that confront the environment assuming that public enlightenment and behavioural change have a direct relationship as expected from the linear or national choice models (Hornsey & Fielding, 2020). This catch-them-young approach may provide the stimuli needed in bridging the knowledge-to-action gap that are essential for general cognitive and behavioural change towards environmental issues by individuals or groups or society at large (Lorenzoni et al., 2007; Nelson et al., 2018, 2020; de Vries, 2020). However, concentrating the bulk of the comprehensive passages on social issues at the expense of the biotic contributions, which is at the heart of these



challenges, may not give the students enough enlightenment and associated behavioural and cognitive changes to become environmental ambassadors.

### 5.2 Research Question 2

What is the sequence adopted in projecting environmental issues in each of the JSS 1-3 textbooks under study?

Generally, the sequence adopted in projecting environmental issues are abiotic, social, neutral and biotic. It is observed that, the author did not follow this sequence. It is also observed that in English Studies 1 the author projected the social environment first before the abiotic environment. The same trend follows in English Studies 2 as well as 3. It is observed also in Communicative English 1, 2 and 3 that the author following the same trend starting with social environment then the neutral environment.

In English Network 1 and 2 the same sequence was observed starting with the social to abiotic environment but a little deviation in English Network 3 which projected the social, neutral and the biotic environment.

**Table 2:** Sequence used in projecting environmental issues in comprehensive passages

English Language Textbooks used in JSS 1-3			
English Studies 1	S	A	
English Studies 2	S	A	N
English Studies 3	S	A	
Communicative English 1	S	N	
Communicative English 2	S	N	
Communicative English 3	S	N	
New Oxford English 1	A	N	S
New Oxford English 2	S	A	
New Oxford English 3	S	S	S
English Network 1	S	A	
English Network 2	S	A	N
English Network 3	S	N	B
Junior English Project 1	S	A	
Junior English Project 2	S	N	A
Junior English Project 3	S	A	
New Concept English 1	S	A	N
New Concept English 2	N	S	A
New Concept English 3	S	N	A
Intensive English 1	S	A	N
Intensive English 2	S	A	N
Intensive English 3	S	N	
Brilliant English 1	S	-	-
Brilliant English 2	A	S	N
Brilliant English 3	S	N	
Extension Modern English 1	S	A	N
Extension Modern English 2	S	N	A
Extension Modern English 3	S	N	A

B = Biotic, A = Abiotic, N = Neutral, S = Social

In Junior English Project 1, the author projected the social environment before the abiotic. In book 2 there was a little deviation, the author projected the social, neutral and lastly the abiotic environment and Book 3 projected the social environment and then the abiotic environment.

In New Concept English, it is observed that the author projected the social environment first, followed by the abiotic and lastly the neutral environment. There was a deviation in New Concept English 2 as the author projected neutral, social and abiotic environment last. New Concept 3 projected the social, neutral and abiotic environments.

In Intensive English Book 1 and 2, the author adopted the same sequence. The author presented the social, abiotic and neutral environments but a slight deviation in Intensive 3 as the author projected first the social and then the neutral environment.

In Brilliant English Book 1, the author projected only the social environment while in Book 2 the author projected the abiotic, social and neutral environments. In Extension Modern English, the author projected the social, abiotic and neutral environments and a deviation in Book 2 and 3 where the same sequence were presented; the social, neutral and lastly the abiotic environments.

A cursory look at the table revealed that, each book series feature more of the social environment than the biotic, abiotic and neutral environment. In as much as there must be development through deforestation, the authors should try as much as possible to project if not the environment in its totality, at least the neutral environment. The featuring of abiotic and neutral environment is necessary for this level to promote sustainable development among students.

One of the goals of the National Policy on the Environment is to raise public awareness and to promote understanding of essential linkages between environment and development and to encourage individuals and community participation in environmental effort (FEPA, 1989). The implementation of this policy therefore will lead to:

- i) The publication and dissemination of relevant environmental data.
- ii) Establishment of adequate environmental standard.
- iii) The monitoring and evaluation of behavioural and attitudinal changes in the environment.

In the forward to Nigerian Environmental Study and Action Team (NEST, 1991) definitive study of the Nigerian environment, Dr BukarShaib, Chairman of the governing board of the Federal Environmental Protection Agency (FEPA) made this point that the aim of Environmental Education would be achieved only if there is adequate communication.

Featuring more of neutral and biotic environment is necessary for this level because one can use text that feature more of neutral and biotic environment to teach environmental awareness in secondary schools than those that featured more of the abiotic, social and neutral environment in them. This is because texts with neutral and biotic features will help the students to really appreciate nature and lead them to conservation of our biodiversity loss. This can also help them to really appreciate nature and the creation of conservation clubs in their various secondary schools. Featuring of the biotic and neutral environments is necessary for who would like to aspire to become environmentalist; such featuring is a correct counselling strategy on decision-making exposure for the students.

In the above Table 2, the nature of distribution is abiotic, neutral, biotic and social environment. The researchers found that the distribution of neutral and biotic was lopsided with the biotic being very low and presented only one environment in the entire series which is English Network Book 3 followed by the neutral environment. The social and abiotic environment types are mostly emphasised in all the textbooks studied with social environment being the highest featured. From the above observation, one can say that the variation and distribution of the different environments is not steady or even. These neglected aspects could be used in teaching environmental awareness to students. If environmental awareness should be learnt in secondary schools, then there must be some conscious effort made to emphasize and develop the spread of other environments in the students' English Language textbooks. It is important to develop in the students the type of skills and techniques which will help them to develop in full positive and friendly attitudes towards the environment so that they may live a meaningful life for themselves and for the community as well as

for posterity. Some students may leave the school for further academic studies. In either case, they will need to use the experiences and skills got from these books if the contents are valid enough.

## 6. Conclusion

From the result of the study, it was very clear that the level of awareness in the JSS 1-3 readers used in Cross River State, Nigeria cannot be said to be high enough to bring about the desired change of attitude through understanding, respect, and responsibility action about issues on the environment.

Environmental awareness refers to the sensitization of people on environmental issues and actions that will lead to a change in behaviour and attitude. This is very vital if we must conserve our resources for the present and future generation. The low level of environmental awareness in the JSS 1-3 readers in /cross River State, Nigeria requires that conservation education be integrated into the various English language text as much as possible. Environmental awareness should constitute a life-long education that is responsive enough to changes in the world we find ourselves. This awareness will help students understand the major problems of the world and the provision of skills and attitude needed to play a productive role towards improving life and protecting the environment.

## 7. Recommendations

The researchers are not here to condemn or prescribe any of the English textbooks used in JSS 1-3 in secondary schools in Cross River State, Nigeria. The conclusion drawn from the findings and results of this research work have given the researchers the urge to make some recommendations to the authors of secondary English language textbooks.

1. Writers of secondary English language textbooks should present environmental issues in their books to cover the four different environments especially the neutral and biotic environment as much as possible.
2. They should emphasize on the teaching of environmental issues on the JSS 1-3 students using the English language textbooks as a medium for teaching environmental issues.
3. Conservation clubs should be spelt out in the various readers used so that the students will imbibe the ethics of environmental issues as they used these readers.
4. The celebration of the world environment day (5th June) should be effectively advertised in the various English language readers so that the students will be sufficiently aware of the importance of the celebration. The celebration of related events like the world habitat day should be given more prominence. Similarly, the observance of national programmes like the national tress planning campaign, green carnival and monthly environmental sanitation day should be treated with more seriousness than is presented in the case of their various readers.

From the above recommendations, the researchers wish to say that by and large, awareness creation is the immunization needed to protect us from consequences on environmental degradation. To be able to achieve this, a lot need to be done through awareness activity, to relate culture, beliefs and religion to environmental conservation and for posterity sake.

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