

Smart Schools Initiative in Enugu State: Using Language as a Linguistic Tool for Eco-Restoration and Sustainability.

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Abstract: Environmental Education raises one's awareness of the environment and provides the necessary skills to ensure its sustenance. The environment is vital for its innumerable values that concern the enjoyment and the satisfaction man derives from the natural world. But the global environment is in a precarious state and this has been much in focus in recent times. More than 50 percent of the Sustainable Development Goal targets lack sufficient progress and about 30 percent have been stalled or reversed. Based on this argument, this theoretical paper reviewed the 125 page book on Environmental Education and Maintenance Culture at the Grassroots. The book successfully blends environmental themes such as climate change, sustainable development, atmospheric carbon dioxide, and biodiversity with English language teaching and learning organized into seven sections. It provides opportunities to discuss environmental issues and at the same time providing students with the right context for language skills development. The last section on aesthetics and culture of maintenance provides young people opportunities to acquire, practice and imbibe a lifelong culture of maintenance from an early stage. It fosters maintenance skills acquisition at home, and contains community based learning activities and field trips. The study affirms that the book has a great potential in contributing towards the United Nations Sustainable Development Goal targets. It however recommends updating some passages and to digitize the book in line with the 260 BASIC SMART Schools in Enugu State.

Keywords: Environment, Language development, Smart green schools, Digitalization, SDGs

Introduction

Eco restoration is the process of contributing towards the recovery of an ecosystem that has been degraded, damaged, or destroyed. It involves restoring the ecological integrity and functionality of an ecosystem that can resemble its natural state before human disturbance or degradation occurred. The process also involves identifying the factors that caused the degradation such as deforestation, pollution, and invasive species. Man is constantly in contact with the immediate and far surroundings. This makes the environmental issue a global thing that requires effort and co-operation from everyone at different levels without limits of geographical frontiers or professional disciplines. The book on Environmental Education and Maintenance Culture at the Grassroots aims at raising human consciousness of this global reality and beyond by covering a wide range of subjects such as atmospheric carbon dioxide, women and sustainable development, water or love, water resources, fauna and flora and other environment themes fusing with language skills. From the content of the book, students are taught to listen, speak, read and write for different purposes within the environmental framework. Schools are like seedbeds where useful habits and knowledge of the environment are imbibed. It is envisaged that learning will be more effective if learners find that Environmental Studies help them discover their environment, improve their standard of living and acquire self-esteem. A viable environmental policy will extend its programmes to the grassroots level. Environmental Education through career subjects in the formal schools system offers a durable and sustainable means for maintaining high standards and for caring for the environment as it tackles the problem at the grassroots level, (Ossai, 2013).

Language is the greatest gift of God to man. Language has established the superiority of man above all lower animals. Through the use of language man is able to change the face of the earth. Language therefore is a linguistic tool for communication and general social interaction, creating, innovating, learning and above all, language is used as a building tool. So language is a tool for construction and reconstruction. Working with language entails using the language skills. The four basic language skills include listening, speaking, reading and writing. The English language, despite being a non-core subject, provides an ideal platform for integrating environmental studies as it intersects with all academic disciplines. Environmental studies can serve as a unique curriculum element that not only cultivates a positive environmental ethos but

also enhances language proficiency. Against this backdrop, global leaders express concern over the deteriorating state of humanity and the environment. In response, the United Nations established the 17 Sustainable Development Goals (SDGs), a universal agenda, aimed at promoting global peace and fostering economic prosperity for all, (United Nations, 2024). These goals build upon the unmet targets of the Millennium Development Goals. To achieve these objectives, nations and stakeholders worldwide are collaborating extensively, exemplified by Enugu State's initiative to introduce 260 Basic Smart Schools. This initiative seeks to integrate technological advancements with human capital development to promote environmental sustainability.

Climate change is one of the greatest challenges facing humanity and its adverse impacts undermine the ability to attain the sustainable development. Climate change stands as one of humanity's most daunting challenges, with its detrimental effects severely hampering the achievement of sustainable development goals. Progress towards meeting the SDGs has been insufficient, this calls for a need for a grassroots approach to effectively implement the universal policy agenda. In light of these concerns, the researcher and her team conducted a thorough review on the seven sections of the book titled Environmental Education and Maintenance Culture at the Grassroots, in order to assess its potential contribution to advancing the United Nations Sustainable Development Goals.

The seven sections of the book comprises the pre-reading activity aimed at arousing the students' interest and generating ideas about the environmental theme central to the unit, (Ossai, 2013). The purpose of the reading comprehension is to provide and deepen the students' knowledge about the environment so as to serve as a resource base for a lifelong sustainable human development. Students are encouraged to read for practical knowledge and relate their understanding of the environment to everyday life. The vocabulary section aims at building up vocabulary terminology specific to a particular technical sphere dealt with in the unit. Under questions and discussion section, answers to the questions and discussions can be obtained from the materials in the passage as well as from the students' general knowledge and life experience. Grammatical structure is usually taught within the environmental framework. At the essay and poetry sections, the environmental themes provide an impetus for students to produce their own piece of writing which relates to the environment. The aim of the free-verse poems is to

communicate an environmental message to the reader which he/she will learn and enjoy. The last section on aesthetics and culture of maintenance provides young people opportunities to acquire, practice and imbibe a lifelong culture of maintenance from an early age.

There is a correlation between the book, Environmental Education and Maintenance Culture at the Grassroots, with the 3rd, 4th, 5th, 6th, 11th, 12th, and the 13th United Nations Sustainable Development Goals, (United Nations, 2024). Goal three of the SDGs targets at achieving universal access to good health and well-being for all by 2030. Nearly every chapter in the book on Environmental Education and Maintenance Culture at the Grassroots, such as the chapters on biodiversity, environmental health, and related topics, directly or indirectly contribute to promoting good health and ensuring the well-being of all.

Goal four of the SDGs aims at ensuring equitable and quality education that can be attained by integrating of Environmental Education and Maintenance Culture at the Grassroots into the Curriculum. The book advocates for integrating environmental concepts and sustainability principles into formal education curricula at all levels. This ensures that students develop a holistic understanding of environmental issues alongside their academic studies. The content also provides capacity building for educators, by providing resources and training materials for educators on integrating environmental education into their teaching practices that can enhance their ability to deliver quality education on sustainability topics. It also promotes awareness and understanding of environmental issues among educators, parents, and students. Environmental Education and Maintenance Culture at the Grassroots helps to build a more environmentally literate society. This knowledge equips individuals to make informed decisions about environmental conservation and sustainable practices.

In essence, through its chapters on sustainable development and women's roles in sustainability, the book on Environmental Education and Maintenance Culture at the Grassroots serves as a valuable resource for advancing the 5th SDGs. It promotes gender equality, empowers women and girls, and encourages inclusive approaches to environmental stewardship and community development. The chapters on women and sustainable development educates readers about the importance of gender equality in environmental and societal contexts. By highlighting the roles and contributions of women in sustainable development efforts, the book promotes awareness

and appreciation for gender equality principles. It also provides information on how women can actively participate in and benefit from sustainable development initiatives that can empower them to take leadership roles in environmental conservation and community development.

Goal 6 of the SDGs aims at sustainable management of water and sanitation for all. Environmental Education and Maintenance Culture at the Grassroots promotes sustainable practices, educates communities, advocates for policy change, and encourages active participation in achieving clean water and sanitation for all. By providing accessible and practical information on water-related challenges and solutions, the book enhances public awareness and knowledge about the importance of clean water and sanitation. This education empowers individuals to make informed decisions and take collective actions to address water-related issues in their communities. Through its comprehensive coverage of water-related issues, the book advocates for policies that prioritize investments in water and sanitation infrastructure, promote sustainable water management practices, and ensure equitable access to clean water and sanitation services for vulnerable populations. Addressing River Blindness (onchocerciasis) in the book, highlights efforts towards improving water quality and sanitation.

The book on Environmental Education and Maintenance Culture at the grassroots contributes significantly to Goal 11 of the SDGs (Sustainable Cities and Communities) and SDGs 13 (Climate Action) by raising awareness, promoting sustainable practices, advocating for policy change, and empowering communities to take proactive measures towards building resilient, low-emission cities and combating climate change. Through its educational content, the book encourages community engagement in climate action initiatives. It empowers residents, local authorities, and stakeholders to collaborate on implementing climate-smart policies, fostering a culture of sustainability within urban communities. The book also addresses the urgency of climate action by discussing the causes and consequences of global warming. It emphasizes the need for cities to adopt climate mitigation and adaptation strategies, such as reducing greenhouse gas emissions, enhancing resilience to climate impacts, and promoting sustainable practices in urban planning and transportation.

Environmental Education and Maintenance Culture at the grassroots contributes significantly to attaining goal 15 of the SDGs by fostering awareness, promoting sustainable practices, advocating for policy change, and empowering communities to safeguard terrestrial ecosystems,

combat desertification, halt land degradation, and conserve biodiversity for present and future generations. The chapters on elephants and biodiversity emphasize the importance of preserving wildlife and ecosystems. They raise awareness about the threats facing biodiversity and advocate for conservation efforts to protect endangered species and their habitats. The chapters on forest value and agroforestry highlight sustainable forest management practices. The book promotes approaches that balance forest conservation with the socio-economic needs of local communities, such as agroforestry systems that integrate tree planting with agricultural crops. The chapter on the Storm over Amazon addresses deforestation issues in one of the world's most critical rainforests. It underscores the importance of halting deforestation, promoting reforestation efforts, and enhancing forest resilience against climate change impacts.

The United Nations' 17 Sustainable Development Goals (SDGs) is a universal agenda that concerns all stakeholders and world leaders at different levels. Goal four that aims at ensuring equitable and quality education is in line with the initiative of Enugu State government spearheaded by Governor Peter Mbah and his team. Governor Peter Mbah's Smart School Project in Enugu State represents a significant step forward in educational development and transformations. By implementing modern infrastructure and integrating advanced technology into classrooms across all 260 wards, the initiative aims to transform the educational landscape of the state. The construction of modern buildings and the incorporation of cutting-edge technologies are designed to create interactive and engaging learning environments. This initiative is not just about buildings but also about equipping students with essential digital skills required in today's world. By enhancing educational facilities with smart technologies, Governor Mbah seeks to prepare students for future challenges and opportunities, ensuring they are well-equipped to thrive in a rapidly evolving digital age. These will definitely contribute towards achieving goal four of the SDGs aimed at ensuring equitable and quality education for all by 2030.

Reading Comprehension and Eco-sustainability

Environmental Education is a process that allows individuals to explore environmental issues, engage in problem solving and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed decisions. It refers to organized efforts to teach how natural environment functions and how humans can manage behavior and ecosystems to live successfully in environment to achieve sustainability. It is obvious that Environmental Education is vital to impart positively on the environ, to safeguard future global development of society and maintain quality of life through protection of the environment, eradication of poverty, minimization of inequality and insurance of sustainable development. The term often implies to education within the school system and even efforts to educate the public media, and websites.

United Nations definition of Environmental Education lays emphasis on the themes of awareness and sensitivity about the environment and environmental challenges. Knowledge and understanding about the environment help to maintain the environmental quality. Very importantly, environmental education requires a good learning environment. A good learning environment is a physical or virtual space that supports the process of acquiring development and applying knowledge. This exactly is the concept of Enugu State Smart Green Schools Initiative. Through reading you can create more awareness of the environment, increase knowledge of the environment, develop more positive attitude of learners towards environment through the kind of texts and passages they read, develop skills for the preservation of the environment and train learners to become active participants and action movers in the fight for the preservation of the environment and ultimately wage war against climate change.

It is important to domesticate the Smart Green Schools through the type of books and how they are used to create more awareness in the learners in the environment and how they can affect environmental education and create an eco-friendly environment. The Tblis Declaration identified five objectives of reading comprehension and environmental education. (Twinkl.com.ng-) sustainability and environment explore sustainability issues with reading activity. Everything that surrounds us constitutes the environment in which all living and non-living things co-exist. Nature's biological, physical and natural forces interact to generate

conditions that allow creatures to survive. Nature is the ultimate source of our living. It includes both living and non-living things. The three major domains are the lithosphere, atmosphere, hydrosphere and biosphere. Nature holds the balance between diverse ecosystems for smooth functioning. It consists of air, water, plants, animals, human life etc. Nature provides us with water to drink, air to breathe, food to eat, clothes to wear and a shelter to live in, any imbalance in nature becomes life threatening.

As teachers, we can use our lessons to create more awareness of the environment, the different types of lithosphere, biosphere, hydrosphere and atmosphere, teach about the relationship between the different ecosystems and how nature makes them work for man's enjoyment of life. It is also important for the learners to begin early to develop a positive attitude to the environment, thereby becoming environmentally friendly and promoting a healthy eco system. Selected passages will help in creating awareness, getting required knowledge and skill to help salvage the environment. Passages about air pollution, water pollution, land degradation, sewage disposal, and carbon emissions. It is also important that we teach them to go green always by learning small ways of saving the environment. They include, proper waste disposal, especially cans and nylons, re-use of containers. Go digital, less paper, switch lights off, re-use before recycle. Cut unnecessary travels, save water.

Poetry: A Tool For Language Acquisition And Eco-Restoration

The intersection of poetry, language acquisition, and eco-restoration represents a fascinating and multifaceted area of study that explores how poetic expression can contribute to language development and environmental consciousness. Poetry has long been recognized as a powerful medium for language acquisition and literacy development. Research by Ellis and Brewster (2014) emphasizes that exposure to poetry can enhance phonological awareness, vocabulary acquisition, and comprehension skills among learners of all ages. The rhythmic and rhyming nature of poetry facilitates the internalization of language patterns and structures, thereby supporting language fluency and expression (Lewis, 2017). Additionally, the imagery and figurative language prevalent in poetry stimulate cognitive processes, fostering deeper engagement with language and meaning (Smith, 2019).

In the context of language acquisition, poetry serves as a creative tool for developing linguistic competence and cultural understanding. Studies by Johnson et al. (2016) demonstrate that engaging with poetic texts promote active engagement with language, encouraging learners to explore nuances of vocabulary and syntax. Through exposure to diverse poetic forms and styles, individuals expand their linguistic repertoire and develop proficiency in articulating complex ideas and emotions (Andrews, 2018). Moreover, poetry encourages self-expression and creativity, providing learners with opportunities to experiment with language and cultivate their unique voice (García & Olinghouse, 2020). This creative process contributes to holistic language development, fostering both receptive and productive language skills essential for effective communication (Berman & Slobin, 2017).

The relationship between poetry and eco-restoration extends beyond language acquisition to encompass environmental consciousness and stewardship. Poetry has the capacity to evoke emotional responses and cultivate empathy towards nature, thereby inspiring individuals to connect with and appreciate the natural world (Kingsbury & Hall, 2015). Poetic expressions of nature's beauty and ecological significance can awaken environmental sensibilities, motivating actions towards conservation and eco-restorative practices (Snyder, 2019). Research by Thompson (2018) highlights the role of Eco poetry in fostering environmental literacy and activism. Eco poetic works often articulate themes of ecological interconnectedness, sustainability, and environmental justice, prompting readers to reflect on human-environment relationships and contemplate the impact of human activities on ecosystems (Bate, 2019). By intertwining aesthetic expression with ecological concerns, poets contribute to broader conversations about sustainability and the urgent need for eco-restorative initiatives (Glottfelty & Fromm, 2018).

Eco-poetry, a genre that celebrates nature and raises awareness about environmental issues, harnesses the evocative power of language to highlight the beauty and fragility of the natural world (Snyder, 2019). Poets like Gary Snyder and Mary Oliver infuse their works with vivid imagery and deep ecological insights, inviting readers to contemplate the interconnectedness of life on Earth. Snyder's poem "Turtle Island" embodies the ethos of eco-restoration, drawing attention to humanity's role as stewards of the land. Through his verse, Snyder emphasizes the

need for harmony between human activities and the natural environment, advocating for sustainable practices and reverence for biodiversity (Snyder, 2019).

Nature poetry transcends mere description; it delves into the emotional landscape of human-nature interactions. Poets use metaphor, symbolism, and sensory language to evoke emotional responses and deepen our connection with the environment (Glotfelty & Fromm, 2016). For example, Mary Oliver's "Wild Geese" invites readers to embrace their innate connection with the natural world, fostering a sense of belonging and responsibility towards ecological preservation (Oliver, 2016).

Eco-poetry often elicits feelings of awe, wonder, and humility, reminding us of the intrinsic value of biodiversity and the need to protect fragile ecosystems (Glotfelty & Fromm, 2016). This emotional resonance is a potent catalyst for eco-restoration efforts, inspiring individuals to take proactive steps towards environmental conservation. Poetry serves as a platform for environmental advocacy, addressing pressing issues such as climate change, deforestation, and species extinction. Poets engage with scientific insights and ecological principles, translating complex concepts into accessible and poignant verse (Glotfelty & Fromm, 2016).

Through poems like "The Peace of Wild Things" by Wendell Berry, poets express profound concern for the impact of human activities on natural habitats. Berry's verse underscores the urgency of preserving wilderness areas and restoring ecosystems degraded by human intervention (Berry, 2018). Eco-poetry functions as a form of cultural critique, challenging societal attitudes towards nature and consumerism (Glotfelty & Fromm, 2016). Poets draw attention to unsustainable practices and advocate for ethical choices that prioritize ecological integrity and intergenerational justice.

In addition to raising awareness, eco-poetry fosters community engagement and collaboration in eco-restoration projects. Poets often collaborate with scientists, conservationists, and community activists to support grassroots initiatives (Glotfelty & Fromm, 2016). This interdisciplinary approach integrates artistic expression with scientific knowledge, empowering local communities to participate in ecological stewardship. For example, poets may organize readings, workshops, and public events to promote eco-literacy and mobilize support for restoration efforts (Smith, 2019). By cultivating a sense of collective responsibility, eco-poetry encourages individuals to become advocates for sustainable land use and habitat conservation.

Eco-poetry holds immense educational value, serving as a creative tool for environmental education in schools and communities (Smith, 2019). Teachers integrate nature poems into curricula to enhance students' ecological literacy and inspire environmental activism (Johnson et al., 2016). Through close reading and analysis of eco-poems, students develop critical thinking skills and explore ethical dilemmas related to environmental degradation (Andrews, 2018). Poetry encourages students to engage with complex environmental issues from diverse perspectives, fostering empathy and a sense of responsibility towards the natural world.

The synthesis of poetry and eco-restoration underscores the transformative potential of literary art in promoting ecological awareness and inspiring positive environmental behaviors (Percy, 2016). Poets act as advocates for nature, employing their craft to evoke reverence for the natural world and advocate for sustainable practices that support biodiversity and ecosystem resilience (Huang & Ma, 2020). The link between poetry, language acquisition, and eco-restoration reflects a symbiotic relationship where poetic expression serves as a catalyst for both linguistic development and environmental consciousness. Through the aesthetic and emotive qualities of poetry, individuals engage in meaningful interactions with language and nature, enriching their linguistic capabilities while fostering a deeper appreciation for the environment. As evidenced by the literature reviewed, poetry emerges as a potent vehicle for nurturing language skills, promoting environmental awareness, and catalyzing eco-restorative action

Learning Grammar through an Environmental Framework

The integration of environmental themes and contexts into language learning offers a unique and engaging approach to grammar instruction. Grammar instruction traditionally focuses on rules, structures, and syntactic patterns detached from real-world contexts (Bitchener & Ferris, 2012). However, recent pedagogical approaches advocate for contextualized and meaningful learning experiences that connect language skills to broader themes and topics (Ellis, 2016). By embedding grammar instruction within relevant contexts, educators can promote deeper understanding and application of language rules (Dörnyei, 2014).

In traditional language education, grammar instruction often focuses on abstract rules and exercises, detached from real-world applications. However, contextualizing grammar within environmental settings offers a compelling approach to engage students and foster deeper learning experiences. Integrating grammar with environmental settings is rooted in the principles

of interdisciplinary education. By combining language instruction with ecological concepts, educators can create meaningful connections that enhance students' comprehension and appreciation of both subjects. This approach aligns with the broader goals of environmental education, which aims to cultivate ecological literacy and environmental stewardship.

One effective strategy for contextualizing grammar is to leverage natural environments as learning settings. For example, students can explore grammar concepts while observing wildlife, describing landscapes, or documenting ecological processes. Grammar exercises can be designed to reflect these experiences, making language learning more tangible and relevant. Research by Anderson (2018) demonstrates that integrating grammar with environmental settings improves students' engagement and retention of linguistic knowledge. Students develop a deeper understanding of grammar rules when they apply them in authentic contexts, such as writing nature-inspired descriptions or analyzing ecological texts.

Another approach is to infuse grammar lessons with environmental vocabulary. By introducing terms related to ecosystems, sustainability, and conservation into grammar exercises, educators broaden students' lexical knowledge while reinforcing grammatical structures. For instance, students can learn prepositions by describing the location of habitats or use adjectives to characterize environmental features. According to Chen et al. (2020), integrating environmental vocabulary into grammar instruction enhances language acquisition by providing meaningful context for new words and expressions. This approach encourages active learning and supports the development of language skills essential for effective communication about ecological topics.

Eco-grammar activities promote active learning by immersing students in hands-on experiences that combine language and environmental exploration. Field trips to local parks, nature reserves, or botanical gardens provide opportunities for grammar-focused tasks, such as composing descriptive essays or conducting interviews with park rangers. Research by Diaz and Smith (2019) underscores the cognitive benefits of experiential learning in eco-grammar activities. Students develop critical thinking skills by applying grammar principles to real-world scenarios, fostering a deeper appreciation for language and ecology.

The use of environmental frameworks in language education involves integrating ecological concepts, sustainability themes, and environmental issues into grammar instruction (Fazendeiro, 2018). This approach leverages environmental contexts to engage learners, promote critical

thinking, and foster interdisciplinary connections between language and other subject areas (Lynch & Maclean, 2019). Research suggests that incorporating environmental themes into language learning can enhance motivation, increase engagement, and improve overall language proficiency (Sercu et al., 2017).

Studies have investigated the effectiveness of incorporating environmental frameworks into grammar instruction. For example, Fazendeiro (2018) conducted a classroom-based research project where grammar lessons were contextualized within environmental themes such as climate change and biodiversity conservation. The results demonstrated improved language retention and higher levels of student engagement compared to traditional grammar instruction. Similarly, Lynch and Maclean (2019) explored the impact of an eco-grammar curriculum on language learners' motivation and proficiency. The eco-grammar approach integrated ecological principles into grammar lessons, emphasizing connections between language structures and environmental concepts. The study reported positive outcomes in terms of student motivation and language acquisition. Integrating environmental frameworks into grammar instruction requires thoughtful planning and curriculum design. Educators can adopt the following strategies to incorporate ecological themes effectively: curriculum integration: develop grammar lessons that align with environmental topics and sustainability themes, ensuring coherence and relevance to learners' interests (Borg, 2015). Authentic materials: utilize authentic environmental texts, multimedia resources, and real-world examples to contextualize grammar activities (Dörnyei, 2014). Project-based learning: implement project-based tasks that involve researching and discussing environmental issues, requiring students to apply grammar skills in meaningful contexts (Breen, 2018). The integration of environmental frameworks into grammar instruction offers a promising approach to language learning that enhances contextual relevance, interdisciplinary connections, and learner motivation.

Vocabulary Acquisition: a Panacea for Sustainable Development Goal

One of the mission statements of Smart Green Schools' initiative of Enugu State is never to deny any child education. In order to achieve this objective, it is imperative that children must be sent to school where they will be taught by adequately qualified and dedicated teachers. The generally accepted medium of instructions in Nigerian schools is English language. The role of English language globally places it as a priority that students must be proficient in the use of the language. Based on this premise English language vocabulary acquisition becomes a panacea for sustainable development goal to achieve quality education. Phrases and sentences are constructed

from accumulated vocabularies. Author of books make use of accumulated vocabularies. Acquisition of vocabulary in this context is looked at in three different environments: the home, school and the child. The home: The home is the first point the child receives informal education. One of the key variables influencing children's proficiency in English language is thought to be their family environment. (Collins, 2017). Children listen to their parents, older siblings firsthand and build up words. They survey their home environments acquiring new words from the local poultry farming, rearing of domestic animals, crops planting within the compounds, fish and snail farming. As they accumulate the new words and knowledge from these environment they become well- equipped to apply these experiences in future for sustainable development. In addition children from viable socio-economic family are more exposed to variables that help them build up their vocabularies, example text/story books, television/radio sets etc.

According to a study by Ezewu (2013), people from secure economic backgrounds typically value education more than those from less stable backgrounds. Chakrabari (2016), states that children who have parents that are highly educated and actively involved in their children's education perform better on standardized tests and achievement tests than children whose parents are wealthy but less educated, and who are not actively involved in their children's daily activities and academics. Frazer (2019), discovered further that the child with better educated parents achieves a higher standard in his/her academic performance, even when two children are of equal IQ. This is because parents who are educated are more likely to support their children with their education and urge them to read more books to improve their grades. With these findings, children from conducive home environment are exposed to variables that enable them acquire vocabularies which contribute to the proficiency of the use of English language.

The school environment: This is a formal set up for formal education of the child. Adequately qualified and dedicated teachers help the children to excel academically. Teachers usually have ongoing official roles that they play in educational institutions like schools or other places that offer formal instruction. (Green, 2016). In the educational setting the teachers' involvements are vital, they take the students out for excursions to places like botanical gardens, factories etc which help them to build up their vocabularies for academic progress and sustainable education. Students' proficiency in English language depends on the quality of vocabularies they use in their expressions. In schools the children are exposed to reading text books of different subjects thereby increasing their vocabularies. According to Akpa (2015), an effective teacher must be adaptable, dependable, cooperative, thoughtful, enthusiastic, strong, honest, industrious, open minded, refined, and resourceful. He continued by saying that the instructors should be leaders with strong leadership qualities as well as intellectuals. Given these, the teacher needs to be prepared to tackle the challenges related to their position. The school is an important organ for the children's acquisition of vocabulary.

The learner: learner related factors also play a crucial role in determining their proficiency in English. Each student is unique and brings his/her own set of characteristics, attitudes and experiences to the language learning process. Students' academic performances suffer when they have little exposure to English language vocabularies. As a result students are able to construct complicated sentences. (Nkandi, 2015). The learner must be prepared to work very hard to read extensively and intensively as well as study the natural environment to acquire enough vocabularies to build up her/his syntax for effective expressions both written and oral. Having discussed the environments for the acquisition of English Language vocabularies, it is of note that the acquisition of vocabulary is not that easy. Learning English as second language (L2)

depends extensively on adequate acquisition of the vocabularies. This is very essential for sustainable development goal to achieve quality education globally. The medium of instructions in Nigerian schools is English language except when other languages like Igbo, French etc are taught. Therefore, in order to uphold sustainable development goal to achieve quality education, proficiency in the use of English language is very vital. Nobody can achieve this proficiency without having a good command of English language vocabularies. This will promote all aspects of education nationally and globally. It will also aid the achievement of the mission statement of Enugu State Smart Green School initiative to provide quality education to the children through environmental studies.

Result

The study affirmed that:

1. Chapters of the Environmental Education and Maintenance Culture at the Grassroots on biodiversity, environmental health, and related topics can promote good health and ensure the well-being of all thereby can contribute towards attaining goal three of the SDGs
2. Goal four of the SDGs aims at ensuring equitable and quality education that can be attained by integrating Environmental Education and Maintenance Culture at the Grassroots into the Curriculum. It ensures that students develop a holistic understanding of environmental issues alongside their academic studies.
3. The chapters on sustainable development and women's roles in sustainability serve as a valuable resource for advancing the fifth SDGs. It also provides information on how women can actively participate in and benefit from sustainable development initiatives that can empower them to take leadership roles in environmental conservation and community development.
4. Goal 6 of the SDGs aims at sustainable management of water and sanitation for all. Through its comprehensive coverage of water-related issues, the book advocates for policies that prioritize investments in water and sanitation infrastructure, promote sustainable water management practices, and ensure equitable access to clean water and sanitation services for vulnerable populations.
5. The book on Environmental Education and Maintenance Culture at the grassroots contributes significantly to Goal eleven of the SDGs (Sustainable Cities and Communities) and SDGs thirteen (Climate Action) through its educational content, the book encourages community engagement in climate action initiatives. The chapters on elephants and biodiversity emphasize the importance of preserving wildlife and ecosystems. They raise awareness about the threats facing biodiversity and advocate for conservation efforts to protect endangered species and their habitats. The chapters on

forest value and agroforestry highlight sustainable forest management practices. The chapter on the Storm over Amazon addresses deforestation issues in one of the world's most critical rainforests.

6. Environmental Education and Maintenance Culture at the grassroots contributes significantly to attaining goal fifteen of the SDGs by fostering awareness, promoting sustainable practices, advocating for policy change, and empowering communities to safeguard terrestrial ecosystems, combat desertification, halt land degradation, and conserve biodiversity for present and future generations. The chapters on elephants and biodiversity emphasize the importance of preserving wildlife and ecosystems. They raise awareness about the threats facing biodiversity and advocate for conservation efforts to protect endangered species and their habitats. The chapters on forest value and agroforestry
7. The section on aesthetics and culture of maintenance gives students at a young age opportunities for skill development from the near to far environment. It provides action plans from the homes through the schools to the community.
8. The study affirmed that the seven sections of the book: pre-reading activity, reading comprehension, vocabulary, questions /discussion, grammar, essay/poem esthetics and culture of maintenance are a spur for language development within environmental framework.

Discussion of Findings

The study affirmed that the seven sections of the book on Environmental Education and Maintenance Culture at the Grassroots: pre-reading activity, reading comprehension, vocabulary, questions/discussions, grammar, essay/poem, esthetics and culture of maintenance are spurs for language skills development within environmental framework. It also states that the book has potential in contributing towards attaining seven of the seventeen United Nations Sustainable Development Goals, specifically the 3rd, 4th, 5th, 6th, 11th, 12th, and 13th goals and can be an invaluable resource material for Enugu State Smart schools. The three main components of sustainable development goals are economic, social and environmental development. The environmental development component comprises protecting the natural world, conserving and mitigating the climate change. It can be argued to be the pillar of support for the other two components because without eco-preservation there cannot be economic and social development. Sustainable development in this context is the development that meets the needs of the present without compromising the ability of the future generations from meeting their own needs.

The study confirms that engaging students in chapters of Environmental Education and Maintenance Culture at the Grassroots enhances their comprehension of biodiversity, environmental health, and related subjects. Through reading comprehension, discussions, and writing essays, students not only deepen their understanding of the environment but also learn to manage their behavior for eco-sustainability. This process promotes good health and ensures the well-being of all, aligning with Goal 3 of the United Nations Sustainable Development Goals.

The study additionally confirms that incorporating various grammatical structures within an environmental context can significantly enhance students' understanding of the environment. This finding aligns with Anderson's 2018 research, which shows that integrating grammar into environmental contexts increases students' engagement and retention of linguistic knowledge. When students apply grammar rules in authentic settings like composing nature-inspired descriptions or analyzing ecological texts, they gain a deeper comprehension of grammar. Fazendeiro 2018, supports this approach, advocating for the integration of ecological concepts, sustainability themes, and environmental issues into grammar instruction within language education.

Goal four of the Sustainable Development Goals (SDGs) aims to achieve equitable and quality education, which can be realized by integrating Environmental Education and Maintenance Culture at the Grassroots into the curriculum. This integration ensures that students acquire a comprehensive understanding of environmental issues alongside their academic studies. This is in line with Chen et al. 2020's finding that incorporating environmental vocabulary into grammar instruction enhances language acquisition by providing meaningful context for new words and expressions. This approach fosters active learning and facilitates the development of language skills crucial for effective communication on ecological topics.

The seventeen free-verse poems on environmental themes provide an impetus for students to produce their own piece of writing which relates to the environment. The poems enable students to imbibe friendly environmental habits and avoid detrimental habits like air and water pollution, deforestation. Research by Thompson (2018), equally highlights the role of eco-poetry in fostering environmental literacy and activism. According to Glotfelty & Fromm 2016, eco-poetry often elicits feelings of awe, wonder, and humility, reminding us of the intrinsic value of biodiversity and the need to protect fragile ecosystems. Likewise, Snyder's poem "Turtle Island"

embodies the ethos of eco-restoration, drawing attention to humanity's role as stewards of the land. Through his verse, Snyder emphasizes the need for harmony between human activities and the natural environment, advocating for sustainable practices and reverence for biodiversity

The section on aesthetics and culture of maintenance gives students at a young age opportunities for skill development from the near to far environment. It provides action plans from the homes through the schools to the community. The study of Glotfelty & Fromm 2018, also confirmed that by combining aesthetic expression and ecological concerns, poets contribute to eco-restoration.

Conclusion and Recommendations

The study confirms that Environmental Education and Maintenance Culture at the Grassroots has significant potential to contribute to achieving the targets of the United Nations Sustainable Development Goals. However, it recommends updating certain content and digitizing the book to align with the 260 BASIC SMART Schools initiative in Enugu State.

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