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EDUCATING FOR SUSTAINABILITY: PRACTICAL STRATEGIES AND APPROACHES

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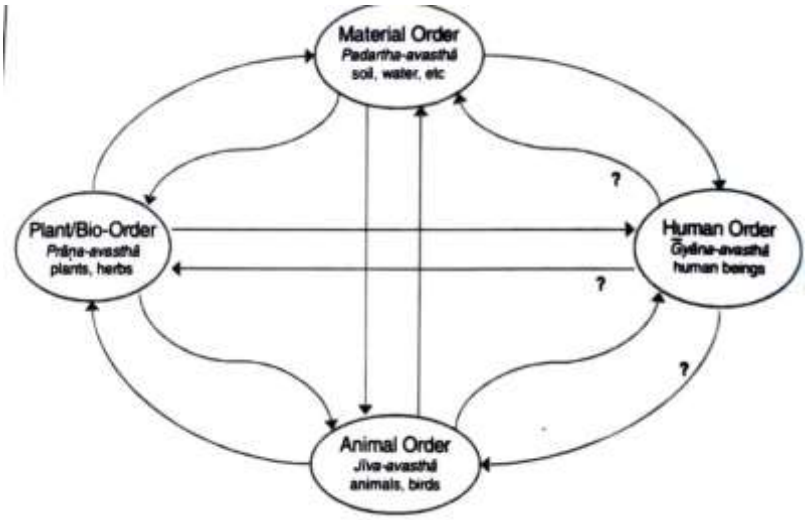
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ABSTRACT
Environmental awareness can help us contribute to a sustainable future. Schools are a good place to create environmental awareness among young children because that's the age when habits are formed, and these habits can help build a sustainable environment. This theoretical paper discusses various practices for building habits in students from the beginning, which can help develop a sustainable environment, and how these practices can be planned, executed, and adopted based on experiences and several studies.
KEYWORDS: *Sustainable Future, Environmental Education, Sustainable Lifestyle, Green School, Eco-friendly habits*

INTRODUCTION
"If you are planning for a year, sow rice; if you are planning for a decade, plant trees; if you are planning for a lifetime, educate people." This old Chinese proverb emphasises the importance of the environment and education. The environment can be defined as everything around human beings that affects them, except for their genes. Human beings and the environment are complementary; no one is complete without the other. There is always a give-and-take relationship between humans and the environment, but unfortunately, humans often exploit the environment to fulfil their needs and aspirations; they do not return anything to the environment, resulting in severe environmental changes. Such changes lead to a devastating future for this planet, compelling future generations to live miserable lives.

"*We hold the future in our hands. Together, we must ensure that our grandchildren will not have to ask why we failed to do the right thing and let them suffer the consequences.*" UN Secretary-General Ban Ki-moon, 2007.

Orders in Nature: Nature consists of four orders: the pranic order, physical order or material order, animal order, and human order. When we look at them, we find that there is a balance that exists between all four of them. All four orders are mutually fulfilling and thus maintain the natural balance of ecology, except for human beings, which take from all the other three orders but give nothing in return, disturbing the ecological balance and creating a bleak future for the coming generations.



Any system results from the coexistence and harmony among its components, whether natural or man-made. One cannot exist without the other, and to utilise each resource optimally and wisely, we need to have a clear understanding of resources, their types, and ways to use them, as well as a clear understanding of misuse and waste. To ensure a secure and

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harmonious environment for our future generations, it is essential to educate them about the interdependence of various environmental components so that they are prepared to protect and use it wisely.

We need to strike a balance between these orders to maintain a harmonious existence. As far as development, growth and improved quality of life are concerned, a process of evolution and development will continue. Still, it should be done while maintaining equilibrium among various orders. We need to consider a future that is balanced in terms of environmental, economic, and social considerations, and at the same time, contribute to improving the quality of human life. This type of approach is known as a sustainable approach, and the practices that promote and maintain these considerations are referred to as sustainable practices. This means that any society in which there are various physical resources to improve the life of the masses, which can provide food, shelter, safe drinking water and clean air to its people, should be called prosperous and advanced.

The role schools can play in achieving a sustainable future: Education is supposed to be the key to all development and growth, and it also serves as a potential tool to improve the quality of life. It changes the world's social, economic and environmental scenario. Among all the development goals, education is considered to have one of the highest long-term returns on investment. Every country prepares its future citizens according to its needs and the values it believes in, and then decides on the curriculum accordingly. Because education offers numerous benefits that intersect with all development goals, it is a vital tool for achieving sustainable human development.

Generally, it has been observed that people behave according to their thought processes, and their actions always define their personality. Therefore, to develop well-behaved individuals, it is essential to initiate desired changes in them at an early age and in a planned manner. Schools are the central places to impart education and create a learning environment that fosters the habit formation of students. Environmental Education is a global concern topic n with a common objective worldwide. Environmental education should be included in the curriculum from the time students are admitted to preschool, and it should not only be taught in the classroom; the school's environment should foster a culture where students naturally imbibe the value of setting and learning it. Not only should the syllabus being taught in the classrooms, but also the overall activities and infrastructure, be planned and executed so that students understand it correctly. Schools are where students spend almost one-third of the day and are very active and involved in various activities; therefore, schools can be utilized to develop a clear understanding of environmental ethics. Once students develop a proper understanding of their actions and their direct or indirect impact on the environment, it will be easier for them to adjust their actions in favour of sustainable development.

A few practices that can be adopted in schools to ensure a practical approach to environmental education and contribute to a sustainable future are mentioned below.

Paper Recycling: Paper recycling is not a new concept; practices have been around for a long time, but they must yield the desired results. In the past, students were content with the pre-used books of their older siblings, and they would often use the same set of books for at least three years. Nowadays, students get new books every year. There is a culture of buying the complete set of books, which, along with textbooks, includes various workbooks, practice books and stationery, etc. Students use only a few textbooks in each set. They remain blank, and next year, they are included in the set, bought by parents, and then the same story is repeated.

Another situation which appears every year is the wastage of paper in the old notebooks. It is observed that all the notebooks are never fully used, and the old notebooks with remaining blank sheets are given to the scrap dealer (kabadiwala).

This needs to be taken into consideration by schools. Schools are where active and objective-oriented learning occurs in a structured environment. Students read in books that paper recycling should be done, but they only know the theoretical part of it. Recycling paper is just a topic in their books, limited to writing answers and getting marks. Recycling and reusing paper should be taught so that it becomes a habit among students and reflects a cultural value. All school activities should be planned in a way that promotes the recycling and reuse of paper.

As far as paper reuse and recycling are concerned, the first major step will have to be taken by the school management by deciding on the books so cautiously that it does not need to be changed every year. Another way can be to develop their reading material for those subjects which might change.

Book banks exist in schools, but they often seem to be underutilised. School management, principals, and teachers should work together on this. Old students should be asked to donate their books, and new students should be asked to borrow books from the book bank.
Schools can have a policy of keeping the books in the school, and only students should carry notebooks. This will lessen the burden of bags, and a book-sharing habit will be developed among the students. Schools are the miniatures of society. We should create the same environment in our schools as we want in our community.

Sharing is a value that should not only be limited to the sharing of food, but should also be reflected in material things. If developed in students, this sharing habit will remain lifelong and help them improve their adjustment level.

At the end of every session, all the used notebooks should be brought to school on a fixed date. Students should then be asked to remove the blank pages from them and arrange them according to the size and quality of the paper. Now, these papers can be punched and tied with beautiful ribbons or threads, and then used as diaries. Alternatively, students can be taught to use spiral binding techniques or proper bookbinding work, and the notebooks thus formed can be used in subsequent sessions.

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Hardcovers of the old notebooks should be reused as file covers for students' various projects around the year. When they become proficient at it, they can even sell their creations in school exhibitions, and the best ones can be gifted to guests visiting the school on various occasions. Only those paper bags should be used willingly and happily by the school family that students in the school prepare. This will encourage them to use it even outside the school premises. The role of parents is also crucial in this type of activity. **Ugulu I and others** found a positive effect on students' recycling practices and ecological knowledge by asking them about their recycling habits.

Food Culture in Schools: We generate a significant amount of waste through the food culture we adopt. A few practices that can be adopted in schools to reduce the waste generated by food are given below:

a. Plastic-free environment - It can be made compulsory in schools for students to bring their meals in plastic-free tiffins and bottles. This can help not save both the health of students and the environment.
b. No use of aluminium Foils/Paper napkins- Instead of using aluminium foils, cloth napkins and handkerchiefs should be used to avoid wastage.
c. Local Food Day - As there are various celebrations in schools, there can also be a celebration of local food, in which students will be encouraged to bring only region-specific items in their tiffin boxes. This will grow a love for their indigenous food, and students will be encouraged to know their benefits and promote the local economy, and carbon footprint will be reduced.
d. Zero waste canteen: Creating a zero-waste canteen involves implementing practices and strategies to minimise or eliminate waste generation. This includes using only reusable utensils and tableware, implementing a composting system for food scraps and organic waste, and using compostable plates, cups, and utensils if reusable options are not feasible. Ingredients can be bought in bulk to eliminate unnecessary packaging waste, and installing water refilling stations can reduce the use of single-use plastic bottles. Students can be given potion sizes to eliminate food waste. Ingredients should be sourced locally to reduce the carbon footprint and support local farmers. Waste audits should be conducted regularly to identify areas for improvement and track progress. Powering the canteen with renewable energy sources can further reduce the environmental impact.

Sustainable Menstrual Products: Girls typically reach puberty while they are still in school; thus, schools can be a good place to teach them sustainable menstrual practices. Disposable menstrual products, such as pads and tampons, can pose environmental hazards due to their composition and improper disposal methods. Disposable menstrual products often contain plastic components, including wrappers, applicators, and packaging materials. The accumulation of plastic waste in landfills and oceans contributes to pollution and poses a threat to marine life. Disposing of used menstrual products in landfills contributes to the overall volume of non-biodegradable waste. The slow decomposition of these products can lead to long-term environmental impacts and occupy valuable landfill space. Some disposable menstrual products may contain chemicals, such as dioxins and synthetic fragrances, which can harm the environment. These chemicals may leach into the soil and water when these products break down, potentially affecting ecosystems. Disposable menstrual products require significant energy and raw materials, including wood pulp, cotton, and synthetic materials. The extraction and processing of these resources contribute to deforestation, energy consumption, and other environmental impact. Improper disposal, such as flushing tampons or pads down toilets, can lead to water pollution. Sewage systems may not effectively filter out these products, potentially contaminating water sources. There are no strict guidelines for disposing of menstrual waste in India, as it is neither considered medical waste nor plastic waste. According to the Ministry of Drinking Water and Sanitation of India, more than 12 billion sanitary pads must be disposed of yearly, a grave concern.

Peberdy, Jones and Green found in their study that most participants were unaware of the amount of plastic in disposable menstrual products and that there are other issues linked to their environmental impact that people are generally unaware of. Some participants were more aware of the problems than others, and the research suggests that those with a higher awareness are more likely to choose products that are less harmful to the environment. Schools can be a place to create such awareness in students.

Some alternative sustainable period products, such as menstrual cups, reusable cloth pads, and period underwear, are reusable options that can significantly reduce the environmental impact of disposable products. Educating users about their usage and proper disposal methods, such as wrapping and disposing of products in designated bins rather than flushing them, can help mitigate environmental hazards. Schools should provide facilities for the use and disposal of sustainable menstrual products. Raising awareness and advocating for sustainable alternatives can lead to broader, positive changes within the industry. **Pokhrel D. and others** found positive results from introducing menstrual cups to schoolgirls. Another study by **Van E**. found that school girls can easily switch to vaginal menstrual cups, which is a sustainable menstrual product.

Cloth Recycling: The clothing and textile sector is one of the oldest and most well-established industries. The rapid evolution of fashion, industrialisation, and technological advancements has led to a significant increase in the manufacturing of textiles, which is invariably accompanied by waste and pollution. According to estimates, the amount of solid waste produced by the 217 million urban residents is expected to increase from 83.8 million tons in 2015 to 221 million tons in 2030. Our current way of life is such that repeating the clothes is considered shameful; people post pictures of clothes on social media, and they do not want to wear the same attire again. Schools can adopt practices such as not requiring special attire for every special day or occasion and avoiding frequent uniform changes. Textile recycling has been introduced as a curriculum also by smartasn.org and got positive results. As school-going children outgrow their uniforms almost every session, uniform

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donation camps can be organised in schools. Schools can also organise workshops to teach students about cloth recycling. These environmentally friendly practices are crucial for protecting the environment and future generations.

Kitchen Garden: Plants and Humans complement each other, which our future generation must understand. India is an Agricultural country, and most of its population depends on plants to earn their living.

Gardening is done in almost every home but needs to be brought to the classrooms. Generally, every home has a few plants; some have well-managed, beautiful gardens, but in most homes, a gardener is appointed, and children barely get to spend time with the plants. The importance of plants is taught in classrooms, and students are often provided with information about food wastage and the hard work involved in growing crops. Still, they only read about it, and in many good schools, it is shown to them either in classrooms via videos or sometimes taken to the fields to observe it, but they rarely get a chance to experience it. Many students, especially those residing in urban areas, have yet to experience the feel of soil.

Our schools should plan a few activities which involve students directly in these activities. For example, the school should have a kitchen garden, and students should be given the opportunity to manage it. They should be taught to take responsibility for their plants. there should be one tree for each student to take care of. Seasonal crops should be grown in the school kitchen garden, and they should be taught about their nutritional and medicinal value and benefits of it. Every harvest is rich in the nutritive elements required by the body during a particular season; students should recognise and appreciate it.

Teaching about gardening and providing opportunities for hands-on experience to students can be time-consuming. To overcome this difficulty, a systematic syllabus for gardening should be prepared for each class. This syllabus should advance gradually in terms of content and difficulty level of activities as per students' standards and physical strength.

Regular association with plants will develop students' emotional connection with these natural living beings. This will help them be more sensitive towards plants and appreciate the dignity of labour involved in such activities. In their study, **Veronese D and Kensler L** suggested that school leaders believe there are benefits of going green and stakeholders support it. This way, the values associated with gardening, agriculture, and dignity of labour would be imbibed by students in a natural setting, which will be carried with them lifelong. A **pilot project on Kitchen Gardens in New South Wales aims** to help elementary school pupils develop a relationship with their food by teaching them about its origins and production process. **Gibbs L and others** reported that students' willingness to try new foods increases when they grow their own food. **Meltzer J.** reported a positive shift in students' eating habits through the kitchen garden project, an increase in their environmental knowledge, and an increase in their local food knowledge, which is a step towards a sustainable future.

Instructors appreciated the professional development opportunities offered by the Kitchen Garden Pilot initiative. Apart from providing education on environmental issues and sustainability, the professional learning activities facilitate the development of a cross-curricular approach.

Green Schools Practices: Green school practices can be a potential tool for sustainable development. **Kensler L**. in his study, found that whole system of green schools encourages the school community to become a vibrant place for together learning and can help participants live more sustainably. A "Green School" has components and procedures that foster environmental sustainability and awareness through various eco-friendly techniques, promoting resource conservation. It also meets a child's physical, mental, and emotional needs by guaranteeing a physically safe, emotionally secure, and mentally supportive school environment.

Since a green curriculum is holistic, it considers the broader context to provide a deeper understanding of how the world functions as a whole, how human activity has impacted it, and how this has affected both the system and ourselves. This requires a teaching-learning approach where children are provided time and space to explore and discover the different facets of the environment and facilitated to put together all the pieces to construct a larger picture. As suggested by NCERT, green practices encompass various initiatives that schools can adopt to teach students environmental ethics and contribute to a sustainable future. A study by **Thote and Gowri** concludes that there is a need for improved student comprehension and implementation of green school initiatives. There is a greater understanding of green school activities among students in the rural residential region. More integration should be taught in senior secondary schools, according to recommendations.

Other activities that can be carried out in Schools: Schools provide a direct learning environment, where a lot is being done in many schools, but not in all. Our schools, especially those in rural areas, consistently require a range of engaging activities. Eco clubs are organised in schools and conduct multiple training sessions, but they cannot create an effective environment. The following steps can be taken to develop a climate imparting green values.

1. Natural system of water purification - A natural method of water purification should be installed in the school premises, where it is visible to all students and allows them to understand the process by simply observing it. Little text is required to teach the concept.
2. Natural energy resources should be utilised the most. Solar panels must be installed at locations such as the parking area, the playground pavilion, and in the shade outside the canteen area. Such places should be selected where students go frequently, and they get the opportunity to observe the entire system.
3. Rainwater Harvesting System - This system should be installed, and students should be responsible for its supervision. They should be given responsibility to take care of it.
4. Disaster management should be taught in a way that students understand its meaning, causes, types,

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precautionary steps that can be taken to prevent it, and also the steps that can be taken during and after a disaster. Students should be taught with the help of mock drills regarding this.

5. First Aid and medical awareness camps should be organised by schools at various public places by the eco club to get students acquainted with the ways and procedures of providing medical aid when required.
6. Students should be taught about various legal aspects related to the environment and asked to think of innovative ways which can help in the development process without causing any harm to the environment.
7. Recycling or reusing paper should not be limited to making various decorative items; instead, it should be elevated to the commercial level.
8. Plant-Parent relationship- Tree plantation should be more organised by making it compulsory for students to adopt one plant and take complete care of it as a parent till their last day in the school. The name of the plant and its parent should be written on a board and placed near the tree.
9. Cloth donation drives should be conducted in nearby areas. Students should be encouraged to reuse their clothes and later recycle it.
10. All classrooms should be equipped with various dustbins of different colours so that students learn to segregate waste materials, which is the first step in waste management.
11. Green garbage should be converted to green manure by using compost pits. If much space is not available in schools, the earthen pots should be used in the small areas, which will help the students understand the process and encourage them to use it at home.
12. Cleanliness should be in the habit, and therefore, they should be taught to use washrooms properly and not leave them dirty after use. They should be prepared to keep their Classrooms, corridors and furniture clean and well-arranged.
13. They should be encouraged to reflect their gratitude for various things they receive without any problem. They should be asked to offer prayers before having their meals.
14. Students should be provided with the opportunities to make their plans and to execute them the way they want. They should be guided and supervised by the mentor teachers.
15. Seminars, quiz competitions, debates, and guest lectures should be a part of the curriculum, and those guests should be invited to judge these events and work upon it.

CONCLUSION

Various efforts are being made by NCERT, SCERTS, and other organisations to develop schools capable of creating an environment that fosters sustainable practices. Concepts such as Green Schools, Education, and sustainable development, as well as green curriculum and school-community partnerships, have been discussed at length in various national and international conferences and documented. Still, the results are not being achieved at that level as expected. Multiple types of research have been conducted to assess the effect of such concepts on various variables, including academic achievement, study habits, and mental health. These studies have consistently reflected a positive impact, but overall changes have not been observed. Whatever has been done so far does not seem to be sufficient. There is a significant gap in the research and practice in education. Research is being conducted, but the results cannot be generalised, and new practices and methods are often not implemented due to a lack of time. In most schools, especially in our country, there is a race to complete the syllabus, and in this run, the conceptual understanding of sustainable practices and environmental education are left behind. Students are often pushed to cram the content without truly understanding it.

In many schools , especially government primary schools, there is a lot of paperwork and administrative responsibilities to be performed by teachers, which results in ignorance towards academic work. At the end of every situation, the sufferer is the student and, finally the environment.

Documents, policies and other resource materials should be prepared, but whether they are being utilised well must also be checked. The implementation of a green curriculum, the inculcation of environmental values, and the comprehension and reflection of various sustainable practices cannot be achieved solely by schools. The community will have to come forward and put extra effort into bringing these thoughts to action and then to the personalities of future citizens.

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