



Research Paper

Strategies for preserving the ecosystem in government upper primary school Varadiyam, Thrissur, Kerala- A case study

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ABSTRACT

An ecosystem is a community of living organisms in conjunction with the nonliving components of their environment, interacting as a system. These biotic and abiotic components are linked together through nutrient cycles and energy flows. All of the earth's plants and animals rely on ecosystems to provide food and habitat. Humans also rely on ecosystems to provide food and natural resources. Ecosystems must maintain a delicate balance in order to stay vital. The ecosystems of the earth can be protected through responsible use. The environmental friendly person is the person who moves through life with an awareness of how natural resources are used to create and support the life that they live. A teacher can adopt different strategies for enhancing the environmental awareness among their students. Teaching strategies involves the structure, system, methods, techniques, procedures and processes that a teacher uses during instruction. A teacher can employ these strategies to assist their students in learning. Therefore classroom strategies are very important in generating environmentally responsible generation. The present study focused on the strategies adopted by GUPS Varadiyam, Thrissur for preserving the ecosystem.

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INTRODUCTION

Conservation of nature is highly important for the good development of social and economic life. Biodiversity is the very basis of human survival and economic well-being and encompasses all life forms, ecosystems and ecological processes. So biodiversity is of incalculable value to human health and needs to be conserved. It is therefore necessary to come up with ideas and implement projects for the conservation of biodiversity. This is through education, information, and raising awareness regarding the importance of biodiversity and its conservation. Youth have a role to play in environmental and conservation efforts that will improve livelihoods. Youth are back bone of the nation. In an effort to address these issues, Environmental Education for Sustainable Development (EESD) is emerging as an important approach to encourage students to conserve and protect the natural environment in their schools and in their neighborhoods. The education system in India had incorporated certain aspects of environment in

school curricula as early as 1930. The Kothari commission (1964-66) suggested that basic education had to offer Environmental Education (EE) and relate it to the life needs and aspirations of the people and the nation. Every school is located in an ecosystem; a ready-made, complex world ripe for discovery, exploration, enquiry, documentation, communication and understanding. We draw upon a wide range of skills and knowledge from a range of disciplines these are naturally combined when education for sustainability is integrated into the curriculum. A lot of programme was introduced by Government of Kerala in association with Sarva Shiksha Abhiyan (SSA) for the conservation of environment through education sector. In the year 2017-18 Sarva Shiksha Abhiyan (SSA) aimed green initiatives in schools which include Rain Water Harvesting Programme, Mazha Koythutsavam- aimed to create 1,000 pits dug in schools. Venal Pacha Programme aimed to setting up of biodiversity parks in schools.

RATIONALE

Today we are living in a rapidly changing world. Our industries, technology, transport and communication all are developing. All these development on earth created a huge impact on our ecosystem. In such a circumstance it is great responsibility of teachers to be aware of young generation about changing ecosystem and its impact on environment and make them environmentally responsible.

OBJECTIVE OF THE STUDY

To find out different strategies used by teachers for preserving ecosystem and raising environmentally responsible generation.

REVIEW OF RELATED LITERATURE

The Millennium Ecosystem Assessment (2003) defined ecosystem as “a dynamic complex of plant, animal and microorganisms communities and the non-living environment interacting as a functional unit”. Chapin and Lyons (2011) said the interaction between the biotic components, and between biotic and abiotic components of ecosystems, transfer energy and materials through the system. This transfers of energy and materials can be described as ecosystems processes, underpinned by ecosystems composition and structure. Schmelzer and Wallace (2015) pointed out that the comprising types and abundance of the biotic and abiotic components of the ecosystem can be referred as ecosystems composition and the distribution and arrangements of this component can be referred as ecosystems structure.

METHODOLOGY

For the present study we use interviews, observation technique, questionnaires, document analysis alone be made. Population of the present study is Teachers of GUPS Varadiyam Thrissur. This case study is about Government upper primary school, Varadiyam established in 1912 in Avanoor panchayat. It is situated in a rural area 15 kilometers away from Thrissur. It is an eco-friendly green school which promote students building their science and geographical enquiry skills; practicing literacy and communication; using numeracy to process and analyze data; working together and building their critical and creative thinking, Information and Communication Technology (ICT) capabilities. These students are engaged, enthusiastic and empowered by these learning experiences. Their teachers report a strong connection between education for preserving our ecosystem, sustainability and student wellbeing. The principal and teachers of GUPS

Varadiyam endorse the incorporation of eco-friendly, sustainability education into learning and teaching because it is fun, engaging and empowering for their students. The natural environment can be seen as the backdrop to daily life whizzing by as we go from home to school. It can also provide students of all ages with real-life learning. Teaching learning strategies of curriculum units undertaken by the GUPS School, inside and outside classroom are very much interesting and eco friendly. It provides students opportunity toward understanding nature and makes them responsible for preserving it for future.

IMPORTANCE ECOSYSTEMS MAINTAINED IN GUPS VARADIYAM

- ② **Vegetable garden:** School authority provide a huge area for cultivating vegetables like peas, beans, tapioca, amaranth's, beetroots, cabbage, arrow roots, banana trees, etc. For maintaining vegetable garden they use organic fertilizers, bio-pesticides and natural predator mechanisms. Gardening helps in the development of new skills and knowledge in children.
- ② **Medicinal plant garden:** Mint, Thulasi, Neem, Karingali, Vayambu, Adalodakam, Koovalam, Karimthumba, Sathavari, Kanikonna Maramanjil, Neermathalam, Muthanga etc are the major medicinal plants in GUPS medicinal garden.
- ② **Butterfly park:** Creating a butterfly garden was a great way to connect classroom learning to the natural world.
- ② **Jaivavidya park:** This program gives importance to understand different types of plants, animals, herbs, shrubs, medicinal plants, etc.
- ② **Blue army:** This program is conducted under SSA programme as a part of people welfare programme. This program include preservation of water, rain water harvesting, storage of drinking water etc. are implemented by district panchayat.
- ② **Witham Kaikottum:** This programme brings agricultural activities to school level in 2007 -2008 period. This programme changed the attitude of the people in the society about agriculture.
- ② **Raising and observing plant cycles:** Fast growing seeds like peas, beans, rice almonds, etc provided in classroom for growing .These ideas help children in developing interest for seeds growing.
- ② **Eco friendly water filtering:** By combining different materials to create a filter, students can be able to clean dirty water. By the end of this activity students understand the importance of water filtration and how to filter dirty water.
- ② **Rain water harvesting system:** The main aim of rain water harvesting system is not only for saving water but also to help children to understand the need and provide them with the technical knowledge.

- ☒ **Lotus pond:** Lotus flowers attract birds and insects with their brilliant colors, so the animals can feed on the pollen and pollinate other flowers. Creating a lotus pond in every school develop observation habit of children.
- ☒ **Natural paintings:** Natural paintings of eminent personalities of India on the walls of GUPS Varadiyam school making the students proud of history of India.

OTHER ECO-FRIENDLY ACTIVITIES OF GUPS VARADIYAM

- ☒ Bird watching
- ☒ Formation of Prakrithi Sena
- ☒ Maintaining of herbarium
- ☒ Lunch without waste
- ☒ School cleaning up programme
- ☒ Special day celebrations related to environment
- ☒ Science diary maintenance
- ☒ Waste management
- ☒ Eco clubs/Nature clubs
- ☒ Field trip and excursions
- ☒ Nature rample
- ☒ Nature camps
- ☒ Plants and seed distribution to students

All these activities enable students to take an active role, contributing to their vision and actions for a sustainable future. The big picture perspective is that these eco-friendly teaching and learning strategies enables students to develop knowledge, skills, and motivations for action that contribute to their own wellbeing and that of their community and the planet, in an increasingly interconnected world. In the classroom, on a day-to-day basis, sustainability enriches and strengthens students' learning.

SUGGESTIONS

Ecosystem has become an integral part of our life and living. Now we cannot think of a world without our environment. The importance of our environment, ecosystem, greeneries etc, in school curriculum definitely changes the attitude and approach of students. GUPS Varadiyam is a living example for other schools.

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