

Environment education through Eco-club activities in schools: Relevance in planning modern India

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ABSTRACT : Considering the activities of humans damaging the environment, it is believed that environment education along with sound legislations and Eco-clubs can lead to sustainable management of resources and ensure responsible actions by young individuals. Eco-clubs are a part of schools in Delhi with their primary aim to generate environment consciousness among school and college students. They work with a belief that learning is more everlasting and enhanced during growing years. The present research highlights the Eco-clubs activities and their relevance in inculcating the right habits among young citizens of India. The exploration points out that educational institutions of Delhi involve themselves in activities by enhancing learning through observation, community interaction and cultivating a scientific temper. This paper is an attempt to illustrate the impact of environmental campaigns in educating the youth of this nation.

KEY WORDS : Environment conservation, Environmental education, National green corps (NGC), Eco-clubs

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INTRODUCTION

India has inherited a unique environment shaped by glorious past generations highlighting the rich history and good quality of life. The antiquity that Braus and Disinger (1998) surrounds this land gives its people a sense of place and helps them unite as a nation (Cadw, 2011). The elements of international significance, world heritage sites, rural landscape and the people have given India its global recognition (Cadw, 2011). Historical evidence suggests that ancient India was a creation of Lord Brahma and the various components of ecosystem followed the cosmic sequence from formation to destruction. It is an endless cycle of life and death succeeding from one era to another.

Even creation of new products is mere transformation of energy from one form to another. The diversity in nature allows every element to compliment each other. Mother nature has created enough to provide for every living creature, but there is an important element that humans tend to forget - the balance of nature. It is possible to attain gratification only when one attempts to contribute productively. The history of environmental consciousness and awareness viewed over the time shows an ever-increasing gap between man and his environment. The hedonistic human never realized what he has been doing to nature. His desires and self-indulgent activities have given way to indiscriminate hunting of animals, use of weapons and exploitation of natural resources beyond

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revival (Singh, 2013).

Environment is important to all living beings and its continuous degradation is a growing cause of concern. There is a need to bring a change in the knowledge, attitude and practices to recognize the significance of environment upon which depends the survival of human race and ecology (CEE, 2013).

For decades, educators around the world have accepted and acknowledged the potential of Environment education to sensitize people towards corrective environmental practices. The Inter-governmental Conference on Environment Education held in 1978 recommended the key goals of environmental education as awareness, knowledge, attitude, skills and participation (UNESCO, 1997; De Lavega, 2004). Even with this diverse attitude and application, there are some essential elements that characterize environmental education.

- It is based on awareness about social and ecological systems and draws on disciplines like social sciences, humanities and natural science.
- It has the potential to reach beyond the organic and physical phenomenon to contemplate other aspects of Environment like political, economic, social, cultural, aesthetic and moral.
- It understands the importance of exploration, analysis and resolution to support environmental issues like feelings, values and perceptions.
- It places emphasis on skills of critical thinking and the problem solving desired for taking personal decisions and public actions (Disinger and Monre, 1994).

History reveals that the oldest participation in the field of environment comes from the large network of NGOs (Non-Governmental Organization) actively participating in school programmes and management of activities. Many active NGOs have been involved with environmentally focused activities starting from school programmes to policy analysis and making a change in management practices. The oldest operational NGO in India working in this area is the Bombay Natural History Society, started in the year 1883 in Mumbai. They were the first to develop the concept of science club, including activities like bird watching, green conservation and wildlife protection. With changing times, numerous organizations and programs have been established to disseminate knowledge of science and environment and to impart ecological education and training for schools. Ever since then various NGOs have been associated with programmes concerning environmental education at different levels - local, state and national - with a wide variety of projects that has helped shape generations towards a healthy green environment (Sarabhai *et al.*, 2002; Roberts, 2009).

Emergence of Eco-clubs in India :

The collective realization of imparting environment related education over the past few years has made it necessary

to improve the concept of environment conservation in the world. However, the efforts put in by individuals and other agencies are limited and infrequent. Recently a new trend has been observed in the development of environmental awareness among children. The underlying concept here is that the most important target group in public education are children and school is the avenue to instil in them good practices (UNEP, 2014). It is believed that children are more proactive and caring; hence, they can make a difference by influencing adults with their thoughts and actions.

Educating students at school level is the most crucial investment in human development. Education related to environment can strongly influence improvement in health, hygiene, demographic profile and productivity; practically all these factors are interlinked with the quality of life. It plays a major role in improving social opportunities for people and enhancing their quality of life by building capabilities, enhancing skill levels and providing more productive employment (Economic survey of Delhi, 2005-06).

According to Article 48-A of the Constitution of India, The Government at state level is held responsible for protecting ecology and imparting environment education and it is the fundamental duty of all nationals to safeguard and improve the natural ecology including all flora and fauna. The first ever Prime Minister of India to attend the Conference of Human Environment at Stockholm in 1972 was Mrs. Indira Gandhi. It was after this conference in 1980 that Government of India established the Department of Environment and made it responsible to act as a nodal agency for development, encouraging, and coordinating with environmental programmes in the country (Sarabhai *et al.*, 2002).

During the sixth five year plan in 1983-84, the Government of India developed an Environment Education Awareness and Training (EEAT) Scheme under the Central Government Scheme. In lieu with the objectives of the EEAT scheme, numerous programmes were under taken to help conserve environment and facilitate development of educational and training material for formal education sector. It also emphasized on increasing people's participation and using different mediums for spreading the message of environment awareness (SCERT, 2012).

In order to meet the objectives and to bridge the gap between man and his surroundings, the Ministry of Environment and Forests (MoEF) conceptualized and introduced a nation-wide programme known as National Green Corps (NGC) to educate children and help to develop the feeling of oneness with environment and give mind training to students at their tender age (Krishnamoorthy, 2008). It was felt that children are unbiased and more open towards comprehending new information, which can lead to a powerful influence on family and society. The growing need to invest in children's education for environmental awareness and also to incorporate it as part of the school curriculum were the

driving factors to launch NGC to redirect young energy and actions towards a sustainable environment through different educational approaches (CEE, 2013).

Objectives of Eco-clubs :

The prime objective of Eco-clubs is to design and introduce programmes aiming at educating children about their immediate environment and giving them a clear understanding of the eco-system and their inter-dependence. Following are the objectives of Eco-clubs as given by MoEF:

- To impart knowledge to school children through hands-on experience about their immediate environment, interactions within it, and the problems therein.
- To develop requisite skills of observation, experimentation, survey, recording, analysis, and reasoning for conserving the environment through various activities.
- To inculcate the proper attitude towards the environment and its conservation through community interactions.
- To sensitize children to issues related to environment and development through field visits and demonstrations.
- To promote logical and independent thinking among children so that they are able to make the right choices in a spirit of scientific inquiry.
- To motivate and stimulate young minds by involving them in action projects related to environmental conservation.

The Eco-club network :

Young children are 'early adopters' and the aim of Eco-clubs in the country is to sow the seeds of awareness towards conservation of environment right in the beginning to evoke masses across the country. Eco-club is making an initiative to spread the message of sustainable environment where children are the primary medium that can motivate their families and then societies at large with a cascading effect on villages, towns and cities that in turn will have an effect on the state and the country at last (Fig. 1).

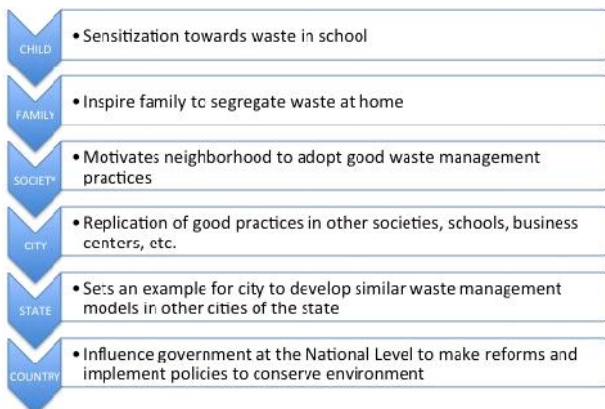


Fig. 1: Holistic approach through Eco-clubs

Eco-clubs have been established across the country in schools for imparting education up to class 12 in affiliation

with a recognized board. With more than 1,00,000 Eco-clubs in India, Eco-club is one of the largest networks of environment conservation currently operating in the country. The management framework followed by Eco-clubs in India is simple process starting from MoEF at the center to State and District levels and finally to individual Eco-clubs operating in schools.

The school member is required to assign a Teacher-in-charge selected based on her interest and credentials towards environmental activities. The teacher then involves 30-50 children interested in issues related to the environment. To promote the Eco-club activities the Government of India provides monetary support to schools for organizing and participating in various activities and safeguarding environment. Besides schools; Grants are also given to District Implementation and Monitoring Committee to facilitate programmes at District level (CEE, 2013).

It is not an easy feat for schools to balance Environmental activities with the regular curriculum. To assist educational institutions, Government provides a resource kit to the school in the preferred language and holds regular training workshops for Teacher-in-charge to help with the development of activities, implementation of programmes and collecting feedback. These activities are not limited to school, but have a larger impact on the district and state as a whole (SCERT, 2012).

Young children are the future of this country and promoting environmental education is significant for enriching their lives. However, it does not end at just imparting education but it is also important for students to have active participation at all levels. Studies have shown a strong evidence towards importance of student participation in involving them actively in the educational process and assist in enhancing the teaching process to bring life in classroom. Student participation helps in motivating students to become critical thinkers, have self reported gains and learn fast. They also show improvement in their communication skills and learn to function democratically in the society. Student participation is essential to sensitize them towards environment and instill sustainable practices. It has been observed that though many students like to participate but the actual figures of students involved is only a handful. Studies reveal that almost 90 per cent of the interactions in a classroom are made by a large number of students, while more than half distant observers (Rocca, 2010). due to support from teachers and interesting activities, it is possible to attract more students to participate. What is needed is a supportive classroom for working together for the cause of environment.

Increased participation means increased awareness. Student participation can not only benefit pupils but also the environment at large. It helps to develop new skills of debating and negotiating. It imparts knowledge to help students to understand how to make decisions and contribute effectively.

Participation in environmental education also promotes citizenship and social inclusion and increases the level of confidence, self-esteem and personal aspirations. Overall it helps in developing better relationships with teachers, guides, mentors and other students to develop a holistic community where all individuals work for the betterment of society.

Eco-clubs enabled students to engage in activities related to environment, which have been specially designed to increase their eco-consciousness and promote sustainable environment. With a variety of programmes and freedom to experiment, Eco-clubs across the country intend to play a major role in creating a sustainable planet. The creation of the programme and support of schools have led to a mass movement, which has made it possible to reach out to thousands of children across the nation; thereby transforming eco-consciousness and imparting environmental education (KEC, 2010).

NGC's plan received a great response from schools around the country. The number of institutions participating in Eco-clubs increased many folds since the programme was started in 2001-02 with only 100 schools. Eco-clubs have been playing an important role in creating awareness about environment among the youth (Kumar, 2009). In 2008, Eco-clubs in Delhi set the national record with almost 2000 active participation by Schools and Colleges including government schools (www.delhigovt.nic.in). Delhi alone has witnessed major transformation not only in the practices, but also changed mindset of the young environmentalists. The change is obvious: cleaner roads, well-maintained school gardens, waste segregation, recycling and composting, tree plantation, and many more. A change has been observed among students – they seem to exhibit a different attitude and behaviour and which was more sensitized to environmental problems and issues. Even the participation of students increased at the Local, National and International level (SCERT, 2012).

Activities of Eco-clubs :

The activities of Eco-clubs promoting Environmental education promote logical reasoning and independent thinking, which helps the young NGC to understand the spirit of scientific inquiry before making their choices. The accomplishments of Eco-clubs can be broadly divided under the followings heads (Table A).

METHODOLOGY

The empirical study included the following aspects:

- Document Review of the research study undertaken by Ministry of Environment and Forest (2004-05).
- Secondary data review and analysis of Eco-club activities in selected schools.
- Interactions with Eco-club coordinators from 9 zones of Delhi.

OBSERVATION AND ASSESSMENT

The experimental findings obtained from the present study have been discussed in following heads:

Focus points of MoEF study :

The Ministry of Environment and Forest conducted an Evaluation based research on the previous activities and experiences of Eco-clubs in India. The ministry appointed four organizations namely Centre for Media Studies (CMS), Development Alternatives (DA), The Energy Resources Institute (TERI), and World Wildlife Fund (WWF) to assess the effectiveness of Eco-Clubs in schools across the country in relation to the objectives set by MoEF and understand the impact of such activities on children.

- Identify the role of Teacher-in-charge (*i.e.* strengths and weaknesses).
- Impact of Eco-clubs on student members in terms of their sensitization towards the Environment awareness and practices.
- Understanding the usefulness of available resource materials.
- Developing coordination between nodal agency and resource centers.
- Determining the role of resource agency.
- Overall implementation and monitoring mechanisms.
- Suggestions for future improvement.

The research was conducted to identify the best practices and find ways to successfully replicate them in other institutions. The sample included 12 states with activity highlights from all states and Union Territories (UT). A sample size of 50-100 schools was selected from each state.

A '34 point' criterion was developed including Eco-clubs activities, availability of resource materials, initiatives for capacity building, etc. All NGOs involved in the study followed a mutually agreed procedure to identify sample and select districts and schools with active Eco-clubs. Tools developed for the evaluation ensured efficiency and consistency in the results. Thus, helping in acquiring first hand information from participating students, Teacher-in-charges, school management, local and state level coordinators and other decision makers like alumni associations, Parent representatives, Governing bodies, etc.

The overall findings of the evaluation revealed that the outreach and perception of Eco-clubs in schools across the country is better organized. The programme was active and participating in many schools around the nation. However, the functioning of the programme was different for different regions. While some districts performed very well, several others executed them moderately good and selected few were even in the category of unsatisfactory performance. Some discrepancies were observed among the four reports, owing to various barriers that impeded the programme effectiveness. However, suggestion and recommendations were provided

by the four agencies based on the results obtained. These included cost of training a Teacher-in-charge, financial assistance from government, uneven number of student membership, etc. Following the results of the report, the Government of India endeavored to allocate better

resources and provide monetary support to maintain the sustainability of Eco-clubs throughout the country.

Another key finding of the evaluation was the realization of the need to halt the expansion of the programme in order to first reorganize the available

Table A: Activities of Eco-clubs				
Sr. No.	AIM	Objective	Activites	Special events
1.	Observing environment and understanding the relationship between various elements	To Understand importance of trees in life To learn to protect, care and maintain green To spread awareness on conservation practices	Kitchen garden, herbal and organic garden	Vanmahotsav day (July 1)
			Tree plantation	Natural environment awareness day (Nov. 19)
			Seminars, workshops, talks and conferences	Environment awareness campaign
			Competitions and awards	Say no to plastic campaign
2.	First hand experience through field visits	To get exposure beyond classroom To familiarize with all living things in their natural surroundings To spread awareness on ecological sanitation and personal hygiene To motivate learning in real world	Mass awareness camps	World habitat day (Oct. 1)
			Organic farming methods	
			Sustainable agriculture	World fisheries day (Nov. 21)
			Wildlife parks	
			Aquarium, lakes, rivers and sea	
			Nature walks	
			Excursions to forest, mountains, etc.	
			Science centers and exhibitions	
			fold dance performances	
			street theatre	
Article writing for newspaper etc.				
3.	Community interaction and action projects	To learn resource conservation practices To interact with community to promote new methods	Preparation of documentary	Ozone day awareness (Oct 1)
			Construction of RWH plant	National energy conservation day) December 14)
			Setting up Gobar gas plant	Health and sanitation drive
			Vermi-composting pit	Water pollution and conservation week
			Mulchi machine	World day for water (March 22)
			STP / ETP	Earth day (April 22)
			Waste collection and segregation	
			Conservation of Energy	
Designing pamphlets / leaflets, etc.				
4.	Clutivating a scientific temper with research skills	To inculcate observational skills in young researchers To give hands on experience on conducting research To promote logical reasoning	Finding source of water pollution	Annual surveys by schools
			Water testing for pollution	Testing air quality as a part of school curriculum
			Noise pollution testing	
			Air testing for pollution	
			Soil testing for pollution	
			Indoor air quality test	
Conducting medicinal plant census				

organizational structure and manage the hierarchy of programme implementation. A number of districts and schools felt the programme was too cumbersome and there was a serious lack of communication between the institution and the Government. There was a need to understand both the sense of commitment and importance of time in order to make the programme run successfully.

Interactions with Eco-club coordinators :

A semi-structured interview schedule was designed to interact with Eco-Club coordinators from selected schools to understand the activities taking place in their respective schools and the level of student participation. The conversation was recorded and notes were prepared during the interview process. With a few exceptions the interview were conducted in both English and Hindi. In all 9 LEAD Eco-clubs coordinators were selected from different zones of Delhi namely North, North-east, North-west, South, South-west, Central, West, east and New Delhi.

Profile of Eco-clubs :

The Department of Environment, Government of NCT of Delhi has identified a list of 93 Schools and 2 Colleges as Lead schools to undertake the Eco-club programme in a more systematic way. Each Lead school was attached with about 15-20 other schools for proper coordination and better implementation of the environmental activities. Eco-club coordinators in these schools were selected based on their interest towards environmental activities and enthusiasm about participation in various programmes.

Activities and their positive impact on students :

The research showed students interest in participating in Eco-club activities. Informal interactions with Teachers-in-charges revealed interesting facts about contribution of schools towards environment conservation. Most of the organizations had an active Eco-club set up in their school premises for more than 12 years with equal participation by teachers and students. Some of the popular activities practiced by institutions included tree plantation, cleanliness campaigns and environment related competitions like quizzes and drawing competition. It was interesting to find schools investing in technologies like paper recycling machine and vermin-composting pits. Most of the schools had environmental education as a part of school curriculum starting from 3rd grade upto 10th grade with different activities every year. They take pride to be a part of such a great cause and expressed desire to do much more to promote environmental education and sensitize more students towards healthy living.

Coordination among Eco-clubs :

Lead Eco-club schools did not fare well in the area of coordination with other schools coming under them. A majority

of schools interviewed were not able to keep in regular contact with other schools. Their interactions were limited to annual training workshops, infrequent e-mails and invitations to Eco-club events. However, Student participation in Inter-school Eco-club activities was pretty high. Other than this, Lead Eco-club schools were found to be taking initiative to attend the annual meetings with MoEF and also ensure participation from their subordinate Eco-club schools.

Financial support :

Every school participating in Eco-club was receiving an annual grant from the Government.

Most of the Teacher-in-charges were quite satisfied with the grant and did not feel the need to raise more money. However, it was interesting to note that many schools were incorporating environmental activities into their curriculum and ensuring financial assistance to Eco-club coordinators for smooth functioning of the campaigns.

Suggestions and recommendation :

In spite of the considerable strides made in the area of environmental education, there are still enormous barriers that need to be reoriented to provide formal education on sustainability (Fig. 2). They are beyond the reach of individual teachers and schools, no matter how committed they might be. It is possible to overcome such barriers effectively if all the stakeholders in society work collaboratively including schools, families, business, grass-root organizations and Government at district, state and national level to develop processes and policies integrating social, cultural, economic, political and environmental goals together.

The role of formal education in school is to build a society that helps students determine what is best for environment and to nurture the values of conservation and strategy for sustainability while at the same time contributing to personal and national goals. It calls for a balanced approach that evades undue attention on changes in an individual’s lifestyle. It is important to understand that most of the environmental

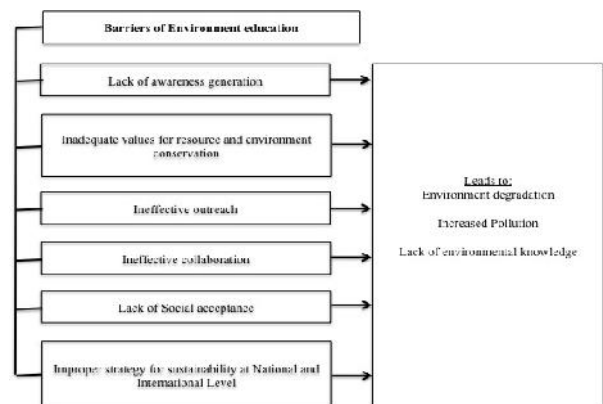


Fig. 2 : Barriers to environmental education existing system

problems are a result of the lifestyle of a common man. The solution to this problem lies in transforming the social condition of human beings as well as changing the existing style of living. It draws attention to the need to educate students to learn problem solving through comprehensive education (UNESCO, 1997).

Conclusion :

It was until recently that the planet was considered to be a large world where human and their activities were said to be compartmentalized within countries and inside the broad area of concern – social, political, economic and environmental. However, with global crisis and changing times, these compartments have started to dissolve. They are not separate now: The environmental crisis, developmental crisis, social crisis are all one. The growing concern for natural resources and nature as a whole is not a new concept for a country like India. Our culture has always taught us to respect environment and live in harmony with all natural resources. However, increasing practices of exploiting the nature has led to destruction all around the world. There is a need to pledge and sustain a movement from grass root level to national level with a commitment made towards sustainable Earth.

The Eco-clubs programme initiated by MoEF is one of the most successful programmes running in the county. It is spread across the length and breadth of the nation. However, there is a need to strengthen some of the goals undertaken by Eco-clubs. Schools participation has increased over the years but the fact cannot be ignored that there is a need for a stronger commitment from members for efficient implementation of the programme for effective results. Even with such high level of motivation, the actual work undertaken by Eco-clubs is limited to some schools. One of the reasons for this is the tight study curriculum set by the Government which doesnot allow schools to venture into new and sustainable activities. There is a need to incorporate environment management in the school curriculum and make it mandatory for institutions to imbibe healthy environmental practices in the young generations. For a nation with world's second largest population and diverse cultures, NGC is a student movement that is needed at this point of time to spread the message of sustainability and environment management. It is the right time to spread the nation wide drive and promote environmental education through Eco-clubs in India.

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