



Learning to Live Sustainably - Reflections based on the Paryavaran Mitra programme

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What is the difference between awareness and education? The reason we have been asking this question is due to the widespread realisation of environmental concerns, but not enough reflection on how the issues are to be addressed. But the moment we ask if awareness can solve the problem then why did most of the people who came on a two wheeler for the session, not wear helmets (this was in Ahmedabad but would be true for most of the places), there is an immediate realisation that we are talking about education that is internalised, solves problems and help take action instead of just being aware of the advantages of wearing helmets and writing essays on it.

Here, we are talking of education to save the only planet that is our home, saving a planet that not only sustains us, but houses million of species that interact in cyclic systems with abiotic components to make it possible, an education that allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. This means understanding the concepts and taking actions in form of handprints i.e. positive action towards sustainability.



Students learn how to make recycled paper

Education for Sustainable Development (ESD) means including key sustainable development issues at all levels of teaching and learning with an objective to empower learners to change their behaviour and take action for sustainable



development. To highlight attention to this, 2005-2014 has been dedicated as the Decade for Education for Sustainable Development (DESD) with UNESCO as the lead agency.

Education for sustainable development

- is based on the principles and values that underlie sustainable development
- deals with the well-being of all four dimensions of sustainability – environment, society, culture and economy
- uses a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills
- promotes lifelong learning
- is locally relevant and culturally appropriate
- is based on local needs, perceptions and conditions, but acknowledges that fulfilling local needs often has international effects and consequences
- engages formal, non-formal and informal education
- accommodates the evolving nature of the concept of sustainability
- addresses content, taking into account context, global issues and local priorities
- builds civil capacity for community-based decision-making, social tolerance,



environmental stewardship, an adaptable workforce and a good quality of life

- is interdisciplinary. No single discipline can claim ESD for itself, and
- all disciplines can contribute to ESD.

These essential characteristics of ESD are an opportunity as they can be implemented in various ways that take care of unique environmental, social, cultural and economic conditions of local context with global linkages and bring about a paradigm change in how teaching and learning happens in our education system. The only practical way is to get the children involved in projects designed to engage with real life issues as means of knowledge acquisition, developing values and higher cognitive skills leading to the desired sustainability behaviour. In conceptualisation it is very close to Nai Talim that advocates participation in productive work under conditions approximating to real-life situations.

Paryavaran Mitra – A ‘Handprint’ approach to education

Paryavaran Mitra brings to itself CEE’s learning of more than 30 years of working with schools systems in varied contexts. Designed as a Sustainability and Climate Change education programme employs ESD as a means of education. The programme launched in 2010 after a successful ‘pick right’ campaign with two lakh schools on climate change education and selection of Paryavaran ambassador. Dr APJ Abdul Kalam was chosen by children as the Paryavaran Ambassador and the enthusiasm generated by the campaign was an opportunity to focus on a programme with Project Based Learning as pedagogy. Handprint then became the symbol of the engagement of children from classes 6 to 9 in action towards sustainability. The programme has an outreach of over two lakh schools and works in

15 languages. The programme is enriched with the partnership of more than 160 organisations at various levels.

The emphasis of the programme is on ‘activities’ that are linked to the curriculum, replacing the conventional methods to help children understand the relevance of the Handprint approach in the local context or our lives, and apply it. In a way it challenges the role of a teacher to a fellow learner with no qualms in creating a new culture which says, ‘I do not know that, shall we find it together’.



Students cleaning the area around the hand-pump

The activities might include audits (surveys, interviews, etc.), demonstrations, games, field visits, performances, experiments, raising a medicinal garden or setting up a system of waste management that helps students to learn concepts through experiential learning in their immediate context. Such an approach helps children to actually ‘see’ different interconnections. It helps them see an issue from different perspectives of the people connected with the issue. The knowledge helps them to think of various possible ways to address the issue from the people who directly experience it. This is a different approach to what we call ‘problem solving’ where the emphasis is on the process than just environmental improvement. Where, all that matters is that one sees the details because, as J. Krishnamurthy said, ‘Understanding the problem is half the solution’. After gathering such important knowledge, perspectives on an issue it becomes easier for one to reflect and act.

Some experiences and ways to see work-based pedagogy

In one school project on the water theme, students were looking at different aspects of water like flow, usage, wastage, rainwater potential, quality, etc. The teacher distributed the tasks amongst groups of



Working at organic kitchen garden

students. Aspects include flow of water i.e. where the water comes from and how it is used and where it goes was connected to geography, water in our culture and literature to language class, math was linked to the rainwater harvesting potential of the school and wastage usage was connected to plain observation and thinking of ways to address wastage. If the students have discovered a leaking tap and calculated how much water drips in a day, it will lead to action which could be to convince a principal to fix the taps or even better to learn and teach to fix the taps. The students also looked at the quality indicators like pH, hardness, etc, which can be easily connected to several activities related to the use of water in the student's everyday life and health. This helps students to compare against the standards and say if the water in their context is good enough for drinking!. Through this process students continue to learn and this learning further empowers them to take action to fix/improve/sustain efforts. All of these things have one more thing in common; it is all a lot of fun, collaborative work, thinking and integration of concepts in subjects.

Different ways of seeing actions

We see a spectrum of worldviews. In some rural schools work is part of the learning atmosphere where environmental action projects are perceived as essential means of learning in the school. At the Dhablat Lakshman Paribesh school in Sagar island, West Bengal, several such initiatives are part of school life. The waste is managed by segregation where the wet organic waste is composted to yield manure which is used in the vegetable garden, with the produce being used in the school kitchens. Energy usage in the school is substituted with solar power which is maintained by the students that includes systems installed in the village. In another

school in Sagar island, students from the local community learn mango grafting at school. Through this they not only learn about biodiversity, good agricultural practices but also as it their source of income when they sell the mangoes in the open market, they also learn about markets, costs, supply and demand. In the school older students mentor younger students in this skill thereby continue to work and earn while they study. The two examples bring to light the aspect of entrepreneurship which instils in them the sense of empowerment. They seem to be confident in managing their school's energy consumption and in the other case they are confident of their skill in mango grafting which provides them with the skills to be able to contribute to their family income and to be able to make education possible, along with work.



Dhablat school - Vegetable garden

In many schools students carry out plantation drives on huge tracts of land where they do all the digging, planting, watering, etc. as there is still no culture of non-teaching staff and all the work in the school is divided amongst the students. The ESD challenge that the students who do all the manual work as passive doers understand the significance of plantation, knows the species they are planting, its significance in the local context, etc. Environmental action projects are a lot of work and its complexity increases as it proceeds from exploration, discovery, thought, action, and reflection. It is work that increases in complexity both at the cognitive and physical levels. For example, for a school to influence the community and some farmers to adopt practices like composting, using natural pesticides demonstrated by the students took four years. The key driver in this case and with our experience with many schools is the teacher who has the passion and commitment and is looking for ideas.

Overcoming challenges

One of the challenges in our formal education system is to recognise who can teach. Why shouldn't students consult with the school gardener on local plant species, their importance and survival rates? Wouldn't he/she be the best person to ask? Wouldn't the sweeper have valuable insights on how the school can handle its waste? The ability to empathise and more importantly to realise the value of the experience gained through project work and interaction with people needs to be recognised by teachers and parents. We have some examples of involving traditional healers, although these are rare and needs attention.

The other challenge is the multidisciplinary or interdisciplinary approaches requiring collaboration between teachers and grades to effectively benefit from the transformative process. The regimentation of environmental education as rallies, drives and events along with clubs is the biggest barrier. Also, there are not many examples of student -led initiatives and projects that are

spread over subjects and months. There is a need to learn and demonstrate to teachers what student led action projects would look like. For the whole learning cycle to complete itself requires supportive environments where students are given the guidance, role models and the freedom to explore their full potential. The learning process has to be flexible, adaptive and link global and local perspective.

ESD is a process-oriented approach and can strengthen education by giving importance to learners and the context. Smaller evidences lead to larger evidences. It takes time to see visible changes that are long term. In last few years, we are seeing more openness amongst schools and teachers to such initiatives. The big take home message from all the trainings that we do as part of the Paryavaran Mitra programme is for teachers to not only see the 'Environment' (read environmental outcomes) but the 'Educational' outcomes. Educational outcomes can make and sustain change out of an event of plantation, a campaign of saving paper, a day of conserving electricity.

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Paryavaran Mitra is an initiative of Centre for Environment Education in partnership with Ministry of Environment, Forests and Climate Change and ArcelorMittal, India. For details visit www.paryavaranmitra.in.



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