A Powerful Means of Integrated Holistic Learning

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Learning by doing – Our experience at Anand Niketan school, Sewagram, Maharashtra

It was for the first time that we had planned to plant onions as a single crop on separate beds for individual students of classes VI and VII. The seedlings were ready but the beds were to be prepared. Our gardening teacher was guiding students in preparatory work. Though a head teacher, I too was as new to this as were my students. I was curious to know and join the group. When I reached the garden I saw children totally enjoying the work. They had loosened the soil and the beds were flooded with water and were pounding soil and water with their feet to make it muddy and they were enjoying the whole process thoroughly. They were not bothered about their clothes getting soiled in the whole process. Finally, the prepared onion seedlings were transplanted. The school had got a good yield of onion crop last year. These organically grown onions were used in school kitchen and some sold to the teachers.

It was easy to learn that onion was the modification of stem and its bulb stayed underground during growth. So was easy to relate to other examples of modification of stem, root, etc. as they harvested turmeric, radish, carrot, and beet. Growing vegetables as an essential aspect of the school curriculum in the monsoon and rabbi seasons opened up an enormous scope of learning of a different kind for all levels. Just to list a few -

1. Observation of different kinds of plants- both crop and weeds. This meant observation of leaves, root system, stem and branching, flowering, fruiting, seeds, which further facilitated learning about the grouping, use and threats faced.
2. Preparation of land for different type of vegetables - fruit vegetables, leafy vegetables and tubers, sowing methods and other specifications.
3. Understanding the importance of soil fertility, role of insects, earthworms, fungi and microbes to keep the soil alive. Importance of social insects like ants, termites and honey bees in agriculture.
4. Importance of recycling of biomass through different methods, such as composting, mulching as well as preparation of compost, using cow dung, and nutritional organic supplements.
5. Observing and understanding pests and beneficial insects and their life cycles, preparing and spraying pest repellants.
6. Taking care of the vegetable plots/ gardens by regular weeding, hoeing, watering, adding manure, spraying etc. Learning to use different tools like sickle, fork, spade etc.
7. Understanding the role of sunlight in scientific processes like photosynthesis, transpiration, pollination etc.
8. Measuring and designing of plots for growing vegetables. Counting/estimating number of plants in a plot, using addition and multiplication, measuring the perimeter, area under cultivation, open space area, drawing maps, weighing the yield, keeping records of the yield, selling vegetables etc.
9. Keeping weather record, for example measuring minimum and maximum temperature, humidity, rainfall and presenting it graphically.
10. Knowing nursery techniques. Digging pits and planting trees. Use of simple drip method for watering tree saplings. Comparative understanding of irrigation methods.
11. Understanding the hazards of scarcity of water as well as excess water.
12. Understanding the larger issues related to

excessive exploitation of ground water, unequal access to water availability, market influenced crop planning leading to excessive use of water, mono-cropping, local nutritional un-sustainability etc.

13. Understanding the gender aspects, for example, what water scarcity means for women, who are traditionally allotted the work of fetching water.

14. Learning to work independently by taking care of one's own plot and learning to cooperate with others in order to perform well. Sharing work and the money earned, based on rules stated collectively. Exposure to the idea of traditional cooperative practices in some societies where such shared practices still exist.

15. Understanding larger issues related to soil degradation, pollution due to excessive use of pesticides and chemical fertilizers, food and nutritional security, biodiversity of food etc. through extra readings.

16. Understanding broader issues related to the market. The injustice farmers face due to lack of appropriate prices they get for their products, inappropriate import – export policies, the cost farmers have to pay for seeds, fertilizers and pesticides affect farmers' economics adversely. News items and articles from newspapers, books and websites and dialogue with experts can enrich the learning.

17. Broader issues related to crop planning, the high water requirement of some crops resulting into excessive extraction of ground water, salination of land etc.

18. Last but most importantly, to learn that the work is essential for our survival and thus needs to be honoured, as also the persons doing it.

This list can be elaborated age and level wise. Thus, what needs to be pointed out here is that farming , as a regular school activity, exposes children to integrated, rich and 'close to real life' understanding and skills on multiple aspects besides academic understanding expected through compartmentalized textbooks. It breaks the hierarchical authoritative relationship between teachers and students as both of them work together in the fields. There are a few more work based activities designed in the areas like cooking, vastrakala (art of fabric making) and energy that have a potential to facilitate learning and applied understanding. Many more could be designed based on school's situation and needs.

Work: A means for holistic learning

It is very important to point out that incorporation of work in education should not be looked upon merely as vocational education. It has much larger role in learning and can be used as a means for holistic integrated learning. There is a need to develop teacher's vision, motivation and capacity to facilitate such learning as it demands a lot more professional absorption than conventional subject teaching. Simple and basic crafts and work is more observable and manipulative, thereby providing a concrete context for learning. However, all things cannot be easily integrated with productive work. A good combination of activities related to environment and the local society can provide a very rich situation for learning. Running the school on a participatory model itself can be a good means of learning.

At the very beginning of the school, we had decided to incorporate physical work as an essential component of school education with the conviction that it has an immense potential of cognitive, physical, social and emotive development. Thus, the assumption was that systematically and scientifically carved learning experience will certainly help to develop holistic personality and responsible citizenship.

Like many others, we too were concerned about excessive bookish and competitive nature of schooling that dishonoured individual differences in children's abilities and potential. Similarly, we were disturbed by the differential treatment our society gives to all those who work manually. Here are some of our concerns:

- What makes us differentiate productive and physical work from intellectual work?
- Why is manual labour so lowly paid?
- Is it just the demand and supply that is responsible for the situation, or it has to also do with our skewed value system that has devalued some types of effort consciously in the interest of some people?

- Does productive work necessarily lack an intellectual aspect?
- Is only bookish knowledge enough to succeed and extract all creative faculties of a human being?
- Does physical work have any role in developing the intellect?

We think that it is important for both teachers and students to ponder all these questions. Involving parents in such discussions can help a lot to work more effectively.

Unclear purpose of education leading to a chaotic society

Education does not deal merely with the cognitive dimensions; it also has to deal with the social, cultural, political and economic dimensions of society, its purpose being to equip an individual for personal and social life and also to help individuals build an equitable, just and nonviolent society. Gandhi said the purpose of education is 'character building', obviously because then, and only then an individual derives the moral strength and confidence to act according to the welfare of a society.

After independence, as a republic state, we accepted the constitution which gave us certain rights - right to freedom, equality, fraternity and justice which cannot be enjoyed without committing to duties. How do we help our children learn all this? How do teachers and adults themselves become the learners on this path? We cannot escape from many of these questions while planning for education. We are living in a global world today which is technologically very highly advanced and centralized. We too as a nation have reached these technological heights. However, we, as a nation, have not yet been able to tackle basic issues of nutritional security, providing clean water, sanitation, primary education and basic health services to all our citizens. We, as a political and social system, have failed to respond sensitively and in prioritization of our needs.

All the intellectual community holding different powerful positions seem to be ineffective in acting and taking policy decisions in the interest of all. Rather most those benefitting from the system seem to be more and more concerned with their selfish motives, leading to increasing marginalization of rural and urban manual labourers. It is unpalatable to say that, even the positions held, such people are not able to understand what their decisions cause to the underprivileged and to the environment in the long run. The increasing severity of environmental problems means that we have to question the very understanding the words- 'development' and 'progress' that are being promoted globally by the market forces.

Both the rich and the poor worldwide need to revisit these concepts. It's high time for us to understand that 'humanness' lies not in the quantity we consume but the way we relate to each other and with the earth that has been helping us to survive. It's time to conserve and keep clean our soil, water and air for us and for the generations to follow. This can only help us in getting away from the excessive greed. We have to inevitably think of new lifestyles that are less energy intensive and environmentally more conservative that keep us healthy physically, mentally and spiritually at both the individual and societal level.

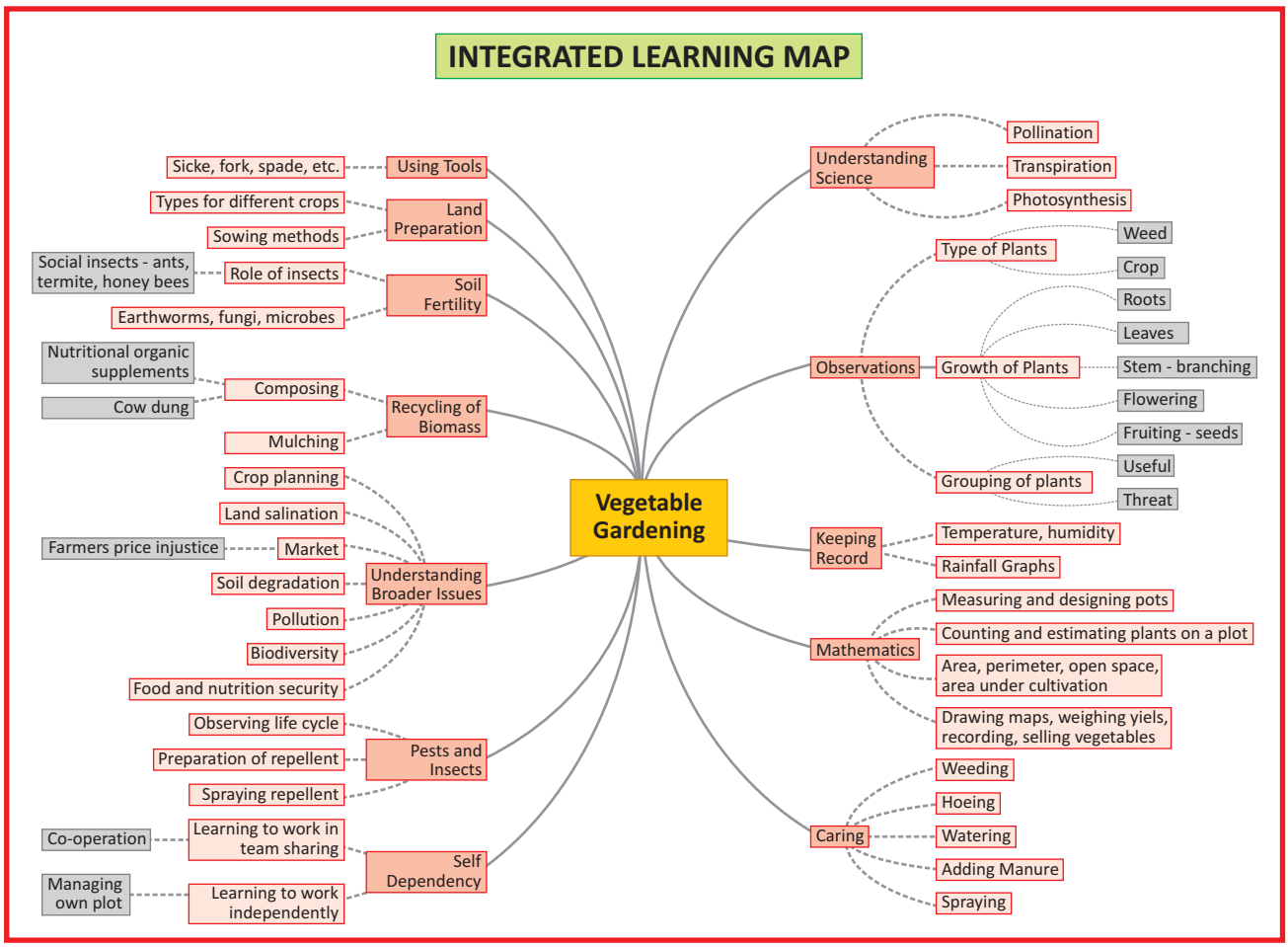
Education needs an integrated and holistic approach

Our children need to understand this reality, the need to address and respond to it creatively, responsibly and collectively in order to change the situation. Our educational system has been largely unresponsive and non-committing in practice. This has resulted in highly irresponsible attitude and very poor civic sense. Besides this, our education has also been deskilling our children from basic skills. There is an acute need to bring revolutionary changes in it. The challenge ahead of us is to make it holistic providing good foundation to lead life with skills, values and analytical ability.

Historically, societies have survived, flourished or collapsed for various reasons like environmentally unsustainable management of resources and imbalances in human relationships within and with outside societies. Ours is a country with complex issues. We need to learn from the past and change towards sustainable future for all and also for the future generation. To me, this would mean heading towards a way that will enable every individual and society to be productive, creatively responsive and

situated sustainably wherever they are. Science and technological innovations need to be directed towards this.

Let us not think 'basic human nature' is to be greedy and competitive. Let us not end up identifying ourselves as mere consumers. We can surely be imaginative and confident of evolving ourselves as an intelligent creed that is better organized as a species and is in tune with the spirit 'vasudhaiv kutumbakam (वसुधैव कुटुम्बकम)'.



Growing a nursery

Water conservation through experiment

Sushama is the Principal and Founder Member of Anand Niketan, Sewagram, Maharashtra. The school is inspired by the Gandhian Philosophy. Anand Niketan is a school for children from 3 to 13 years, started in 2005, in the premises of Gandhi Ashram, as a neighbourhood school. Deriving inspiration from Gandhiji's philosophy of education, Sushama, along with her team, has been trying to experiment and derive ways of holistic and work-based education on sound psychological and cognitive foundations. With an academic background of M.Sc. Anthropology (Pune University) and M.A. Elementary Education (Tata Institute of Social Sciences, Mumbai), she has been working in the field of education for last 25 years. She is basically an activist in orientation, and has worked for 15 years in rural areas of Wardha district through a voluntary agency. She has worked for integrated rural development with a special focus on education of pre-school and primary school children. She has also worked with women, youth and farmers with an integrated approach towards sustainable development. She may be contacted at sushama.anwda@gmail.com